

COMPASSIONATE RESPONSES TOWARD VICTIMS:  
DO PERCEIVED INNOCENCE, PROXIMITY  
AND SERIOUSNESS MATTER?

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## ABSTRACT

People have an innate tendency to feel compassionate toward others' misfortunes. As in the context of natural disasters, compassion toward disaster victims is one of the most important driven forces underlying individual helping behaviors. The current research examines individual compassion and its related constructs under the specific context of disaster communication.

By referring to Nussbaum's theory of compassion, this study proposes a model of compassion which states that individual compassion is an other-oriented emotional experience that contains cognitive assessment toward others person's suffering status. The cognitive assessment consist of three main dimensions: Perceived innocence, that the suffering is not caused primarily by the person's own culpable actions; perceived proximity, that one is possibly subject to a similar misfortune; and perceived seriousness, that the suffering is severe rather than trivial. These three cognitive perceptions are related to the way of media portrayal of disaster victims: Portrayal of disaster victims' age and gender influences people's perceptions of innocence; news reports of the cultural affiliation of victims impacts people's perceived proximity; and perceived seriousness varies according to the degree of physical severity of the victims' sufferings.

Two experiments were conducted and the results of which mainly supported the proposed model of compassion. In particularly, only cognitive assessments of the disaster victims, that is, only perceived innocence, perceived proximity, and perceived seriousness predicted the variances of compassion significantly and directly. Variables of news portrayal of victims

influenced compassion only through the mediation of corresponding cognitive responses. Only personal compassionate trait emerged as a moderator between perceived seriousness and compassion.

This research shed light on compassion and compassion-related studies from the perspective of communication research. Further scholars should examine the generalization of the model among diverse populations and multiple contexts.

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## CHAPTER 1

### INTRODUCTION

It is estimated that about 33 major natural disasters happened in the past century, each taking more than 25,000 lives. The deadliest one, the 1931 flood in China, had an estimated death toll of 2.5 million (Hall, 2011). Because natural disasters or crises usually cause widespread human, material, economic, and environmental losses (Davis & French, 2008), the victims of a disaster often need external assistance in terms of money, relief materials, and post-disaster recovery (Nott, 2006; United Nation, 2008; World Bank, 2010).

However, most disaster victims today are never seen by potential charity givers. Rather, their conditions are largely a mediated experience for the vast majority of people. For example, a telephone survey of 354 residents in New Castle County, Delaware, indicated that nearly 80% of respondents reported that they had no direct experience with a true natural disaster. Instead, the vast majority reported an overwhelming reliance on electronic media (74.4%) and newspapers (63.9 %) to access disaster related information (Wenger, Dykes, Sebok, & Neff, 1975). It is the mass media that build the bridge between victims and the majority of the public. Therefore, how a disaster is framed, constructed, and presented by the media significantly influences how it is be interpreted by the public (Seeger, Heyart, Barton, & Bultnyck, 2001).

For the perspective of audience members, ordinary individuals rely on media reports to know what has happened and to decide how to help. The following question is, why do people decide to help strangers they don't know and from whom they may never receive reciprocal

assistance? Social psychologists hold that people's innate tendency to feel compassionate toward others' misfortunes is one of the most important driven forces underlying individual help behaviors (Batson, Harris, McCaul, Davis, & Schmidt, 1979; Schroeder, Dovidio, Sibicky, Matthews, & Allen, 1988). It is reported that compassionate responses and pro-social behaviors have been observed among 2-year-olds (Zahn-Waxler, Robinson, & Emde, 1992) and remained consistent throughout adulthood (Eisenberg, Fabes, Shepard, Guthries, Murphy, & Reiser, 1999). Merely seeing the sad face of a child increases individual compassion, which in turn, increases the willingness of volunteering help (Small & Simonsohn, 2008) and actions of giving (Krebs, 1975; Small & Verrochi, 2009). Also, the more people felt compassion toward victims in need, the more likely they were to engage in helpful behavior (Coombs, 1999; Schroeder, et. al., 1988).

Studies of compassion has been proliferate in the field of sociology and social psychology, but little academic research has examined the mediating role of communication between disaster victims and individual spectators, and even less has focused on relationships between features of victims and compassionate feelings of individual readers or audience members. Given the increasingly important role of mass media in disaster communication, it is imperative to examine how mediated communication of natural disasters influences people's compassion toward disasters and disaster victims.

The current research addresses the above questions by referring Martha Nussbaum's theory of compassion as the guiding framework. Martha Nussbaum's model of compassion is to date one of the most popular paradigms of compassion and is widely accepted by scholars from various fields (e.g. Cates, 2003; Crisp, 2008; Gallagher, 2009; Lemmens, 2007; Maxwell, 2006; Weber, 2004). Crediting Aristotle, Nussbaum (2001) describes compassion as "a painful emotion occasioned by the awareness of another person's undeserved misfortune" (p. 360) that involves

three beliefs: (1) the judgment of size, that the suffering is serious rather than trivial; (2) the judgment of innocence, that the suffering is not caused primarily by the person's own culpable actions; and (3) the judgment of proximity, that one is possibly subject to a similar misfortune (Nussbaum, 1994, 1996, 2001).

This model, although populated among philosophers, sociologists, and scholars of communication studies, gets little empirical evidence from social scholars. Also, this model is a general model which does not address the uniqueness of individual compassion under the context of mass communication. Therefore, the first goal of the current research is to synthesize the existing studies of compassion and to propose a model of compassion from the perspective of communication research. Next, the study aims to empirically test the model through an experimental design. In particular, it examines how, or if, factors of mediated victims, such as the victims' age, gender, cultural background, and physical severity influence the antecedents—as proposed by Nussbaum—of compassion, such as perceived innocence, proximity, and seriousness. Because few empirical studies have explored the construct under the context of disaster communication, the current research explores the relationships between compassion and its related constructs rather than testing their generalizability. The author hopes that the basic model generated in this research will provide insight for future studies on media coverage of natural disasters.

### **Rationale for study**

This experimental study is important and needed for several reasons. First, compassion toward victims of natural disasters has been a frequent topic of media professionals, relief staff, and charitable organizations, but few studies in the field of communication research have focused on the topic. Most compassion-related research thus far was experiments in private

context, in which participants' compassionate responses usually target toward individual victims whom they could see or witness face-to-face (Batson, et. al., 1979; Batson, Fultz, & Schoenrade, 1987). The findings of these studies might not be applicable in the field of mass communication when most victims were seen through pictures or TV news.

This first goal of this study is to explore a model of compassion in the specific context of disaster communication. This model is based on one of the most popular paradigms of compassion proposed by Nussbaum (2001, 2003). Nussbaum's model, however, discussed mainly the relationships between compassion and its direct antecedents—perceived innocence, proximity, and seriousness, but does not explore the relations with media practice. The present research synthetically reviewed variables of disaster news coverage that related to the three antecedent factors. Putting Nussbaum's model and literature reviews together, this study proposes a model of compassion, which is, as far as the author's knowledge, the first theoretical model that examines the relationships between factors of disaster news coverage of victims (such as victim's age, gender, cultural affiliation, and physical severity), antecedents of compassion (such as perceived innocence, perceived proximity, and perceived seriousness), and individual compassion.

Second, there is a huge disparity between the popularity of compassion-related research in the qualitative approaches and the scarcity of such studies using quantitative methods. The proposed model of compassion is mostly a theoretical paradigm based on Nussbaum's model as well as previous research concerning the relationships between variables of news coverage and antecedents of compassions. Nussbaum's model was widely accepted by qualitative scholars (e.g. Cates, 2003; Crisp, 2008; Gallagher, 2009; Lemmens, 2007; Maxwell, 2006; Weber, 2004) but get little empirical evidence. The reviews of previous research contain both qualitative and

quantitative studies, the comparability of which is still in question. The current research, therefore, tests the theoretical model through experimental design, so as to provide empirical evidence to the model and to enrich the quantitative studies of compassion-related research.

Third, even though qualitative research about compassion is flourishing, the use of this construct is still plagued with ambiguity and disagreement. Among a small number of existing quantitative studies about compassion (e.g. Batson, et. al., 1979; Batson, Duncan, Ackerman, Buckley & Birch, 1981; Batson, et. al., 1987, Fultz, & Schoenrade, 1987; Post, 2003), this construct is used interchangeably with synonymous constructs, such as empathy, sympathy, and pity. Definitions, measurements, and scales are different, overlapping or misused across different studies, which cause even more problems in quantitative research regarding compassion. Thus, another goal of this study is to synthesize quantitative research related to compassion by clarifying basic concepts and unifying measurements of primary variables.

Finally, by using variables of news coverage that is easy to be operationalized, such as victims' age, gender, cultural background, and physical severity, Findings of the current research are expected to provide insight to social scientists, public relations professionals, humanitarian organizations, and policy makers.

### **Outline of dissertation**

This dissertation has five chapters. The first chapter provides a brief introduction to compassion studies, the research interests, the reasons of focusing on compassion in the context of disaster communication, and the rationale for the study. Chapter two presents a comprehensive review of the literature, including the history, nature, and definition of compassion, as well as previous research on factors of news coverage that related to antecedents of compassion. The third chapter describes research methods including participants recruitment,

experimental design, procedure, stimuli manipulation, and measurements. Chapter four presents results of hypotheses and research questions testing. Discussions, interpretations, and summary from each experiment are also presented. The last chapter provides a comprehensive discussion of the study, the implications for theory development, the strengths and limitations of the study, as well as directions of future research. The Appendices includes copies of the internal review board approval from the university, the informed consent form, the experimental stimuli, and the measurement instruments.

## CHAPTER 2

### LITERATURE REVIEW

There is plenty of literature on compassion, but the amount of empirical research is slim. This may be contributed to the lack of an agreement on the definition of compassion, which otherwise can serve as the basis for systematic conceptualization and standard measurements (Landsman & Clawson, 1983). In fact, the daily use of compassion is based on a loose definition which includes components of benevolence, charity, kindness, soft-heartedness, sympathy, tenderness, and empathy (Bierhoff, 2005). This is in part due to the fact that both the connotation and denotation of compassion have evolved through the centuries.

Analytical philosophers claim that the wording of compassion originated from Christianity, developed by Romanticism, especially by the German Romantics (Blum, 1980), and evolved into the modern concept in British and American cultures in the eighteenth century (Fiering, 1976). Compassion was originally defined as a broad human phenomenon, which encompassed awareness of others, the personal experiences entailed by such awareness, and any actions inherent to the encounter (Lampert, 2005). However, over the centuries, the original definition of compassion has been modified, changed, and even fragmented.

Starting in the sixteenth century, the “fragmentation of compassion” (Lampert, 2005, p. 124) indicated a process when the single, all-inclusive conceptual model of compassion was replaced with logically connected constructs in different fields. For example, the interest in compassion as a process of identification and imagination became a major domain of

psychologists, who investigated the subconscious basis to the individual human experience and behavior. The interest in compassion as a social sentiment fell to sociologists, who primarily regarded compassion as an irrational emotion, and incorporated it into theories explaining the irrational forces of human society. The altruism accompanied by compassion was taken over by biologists and sociobiologists, who sought to refute the idea that an organism operates only for its own survival interests (Lampert, 2005). Until the end of the nineteenth century, the original definition of “compassion” has disciplinarily fragmented into a number of modern entities used by scholars in different fields.

Due to the complicated evolutionary history of compassion, a lot of misused concepts, overlapping, and ambiguity exist in compassion-related research. This chapter starts with a review of the literal definitions and conceptual clarification of compassion, followed by its etymological and the historical debates of compassion. Next, the antecedences of compassion are discussed, from the Aristotle traditions to modern philosophy studies. Finally, existent literature concerning factors of news coverage of victims and antecedences of compassion is reviewed.

## **2.1 Compassion: History, nature, definitions, and clarification**

### **2.1.1 The history of “compassion”**

The construct of compassion has endured a long held debate between two divisions: one argues that compassion is essentially a *feeling*, which harms the rationality of human beings and the justice of human society; the other views compassion as a construct containing a cognitive dimension and thus a form of *reason*. This debate can be traced back to ancient Greece and has been continually ongoing. Participants in one side of the debate include Plato, the Stoics, Immanuel Kant, and Friedrich Nietzsche, all of whom viewed compassion as negative for both the morality of individual and the justice of society; the other side of the debate consists of

Aristotle, the Christian philosophers, Adam Smith and Max Scheler, who regarded compassion as a positive construct of social development (Davies, 2001).

In the *Republic*, Plato (1713) stated that the feelings of pity and compassion are in conflict with justice and reason, and thus are not desirable characteristics of citizens. Aristotle (1449), however, valued pity and compassion as powerful emotions that are inspired by the suffering of others and can also arouse one's hatred to the crimes and longing for justice. The Stoics echoed Plato's statements, regarding compassion as a result of rationality succumbing to emotionality, which indicated the "weakness of the mind" and "the failing of a weak nature" (Seneca, 1928, iv.4-v.4). Since the third century, Christian philosophers have been criticizing the Stoic's view of compassion. The Old Testament, New Testament and all the other philosophical/religious texts view compassion and mercy as paramount virtues and the "bond of human society" (Lactantius, 1993, p. 11).

The role of compassion and empathy was emphasized in the eighteenth century as a number of thinkers rediscovered its functions from political and moral perspectives. One of the classic discussions of compassion from this period was given by Adam Smith. In his *Theory of Moral Sentiments*, Smith (1759) noted that compassion, which he named "sympathy", was a ubiquitous virtue of human beings. People sense the suffering of others by imaginatively reconstructing their misfortunes. It is through this vicarious process that one becomes socially bonded with others. This statement was echoed by Jean-Jacques Rousseau who advocated that by seeing others' weaknesses we realize our own vulnerabilities. The ability of a young person to empathize with others is the first step in realizing he/she is a member of the human species and a citizen of a civil society (Rousseau, 1762). Immanuel Kant (1797) distinguished two kinds of empathy: A rational empathy based on the sharing of others' feelings through free will, and an

emotional empathy, which refers to empathy that is rooted in human nature. Going back to the Stoics tradition, Kant (1797) argued that emotional empathy was an offensive kind of benevolence that should not occur among men. Rational empathy, on the other hand, is a form of reason that helps to fulfill our duty as both citizen and man. Friedrich Nietzsche's (1895) reflection upon compassion echoed the Stoics and Kant, but it was mainly embedded in an attack toward Christian morality. He noted that compassion is a sin with a depressive effect because "we lose strength when we feel compassion" (Nietzsche, 1895, p. 572). The death of Christ himself, in his opinion, was an example of the unnecessary spread of suffering through compassion.

In the twentieth century, Max Scheler (1913) systematically distinguished five kinds of compassionate responses in *The Nature of Sympathy*. His work set up the foundation for modern sociological and psychological research toward compassion and compassionate responses. Following this tradition, Martha Nussbaum (1996, 2001) comprehensively reviewed the literature of both traditions since the mid-1990s and drew a comprehensive picture of compassion and compassion-related research with both qualitative and quantitative approaches. The current study refers to her work as the primary framework for construct definition, concept quantification, and relationship assumption.

### **2.1.2 The nature and definition of compassion**

The historical debates of compassion essentially consists of two ideas: what is compassion and what is compassion about. While the early philosophical debates of compassion mostly resided on its functions to human beings and human society, more arguments emerged after "the fragmentation of compassion" (Lampert, 2005, p. 124) as scholars from other fields tried to define compassion from diverse perspectives.

Since the 1990s, compassion has been considered a virtue (Crisp, 2008; Cavanagh, 1995; Miller, 2009); an act of caring (Kumar, 2002); a reaction to another person's emotion (Ekman, 2003); a passion, which stands opposite reason (Cassell, 2002); a system of morality (Goldberg & Crespo, 2004) as "the moral foundation of social justice" (Williams, 2008); an emotional attitude with "an irreducible affective dimension" (Blum, 1980, p. 506); an innate human instinct, the seeds of which "are sown in our very nature as human beings" (Bennett, 1992, p. 323); an ability, or the "tendency or ability to feel whatever another person is feeling" (Forgas, 2003, p. 862); a state of mind, "that is peaceful or calm but also energetic, in which one feels a sense of confidence and also feels closeness with or affection for others" (Ladner, 2004, p. 15), and so on.

Moving beyond the various definitions, one can discern four distinct treatments of compassion. The first is to view compassion as an innate human instinct, a trait-like character that can be cultivated but is mainly inborn because of human nature. This includes the approaches that view compassion as a virtue (e.g. Crisp, 2008), a characteristic (e.g. Cavanagh, 1995), and a global/universal trait (e.g. Miller, 2009). The second perspective views compassion as a human capacity, which is more like an attitude or value that is mainly determined through conscious reflections. This includes approaches that describe compassion as an ability to experience vicariously (e.g. Forgas, 2003), a state of mind (Ladner, 2004), a response towards others' emotional reactions (e.g. Ekman, 2003), an act of caring (Kumar, 2002). This perspective does not deny the innate nature of compassion, but more preferably emphasizes it as an educated and enlightened cognitive disposition that requires learning and socialization (Goetz, 2004).

The third account views compassion as a pure emotion that is a spontaneously response to external stimulus with or without comprehensive cognition. This includes those who defined

compassion as a passion (such as Plato), an irrational state of mind (such as the Stoics), and an attitudinal emotion (e.g. Blum, 1980). This approach opens the gate to integrate compassion as a psychological construct that has drawn the attention of psychologists for decades. The deficiency of this approach resided in the fact that emotions, such as happiness, sadness, excitement, and anger are typically viewed as “one type of impulsive force that moves now in one way, now in another” (Nussbaum, 2001, p. 453). Thus, viewing compassion as a pure emotion limits its possibility of being integrated into the established model of social cognition and perception. Because cognition oriented research is one of the dominant approaches in current communication studies, scholars in various communication fields focused little on compassion when it was viewed as a discrete emotion. This condition remains unchanged until the fourth perspective appeared.

The fourth perspective views compassion as an other-oriented emotional experience that contains both cognitive assessment and affective feeling toward another person’s mental status (Cavanagh, 1995; Nussbaum, 1996, 2001). This account combines the second and third approaches, which allows its emotional components and also emphasizes the predictable factors based on relatively stable patterns of cognition (see Table 1 for theoretical positions on different definitions of compassion). This perspective has been widely adopted since the 1990s. Cavanagh (1995), for example, defines compassion as a three-folder construct: the cognitive, which is the ability to recognize and perceive another’s psychological state; the affective, which refers to one’s emotional responses in line with another’s feelings; and the behavioral, which indicates a behavioral action, or intention, to respond to another in a way that is helpful. The current research adopted this approach and defined compassion as an emotional experience that is both

Table 1  
*Theoretical positions on definitions of compassion*

	Definition	Theoretical Position			
		Innate disposition	Cognitive capacity	Discrete emotion	Vicarious emotion
Batson (1991)	Empathy refers to one particular set of congruent vicarious emotions, those that are more other-focused than self-focused, including feelings of sympathy, compassion, tenderness, and the like. (p. 86)			X	X
Bennett (1992)	Compassion is a virtue that takes seriously the reality of other persons, their inner lives, their emotions, as well as their external circumstances. ...The seeds of compassion are sown in our very nature as human beings. (p.323)	X			
Davidson, Harrington (2002)	Compassion is humans' natural ability to connect spontaneously and deeply with the suffering of others (p.73).	X			
Ekman (2003)	Neither empathy nor compassion is an emotion; they refer to my reactions to another person's emotions. In cognitive empathy I recognize what another person is feeling. In emotional empathy I actually feel what that person is feeling, and in compassionate empathy I want to help the other person deal with his situation and his emotions. (p.180)		X		X
Forgas (2003)	Empathy is not an emotion at all; it is a tendency or an ability to feel whatever another person is feeling, empathy is not an emotion at all; it is a tendency or an ability to feel whatever another person is feeling, including happiness, anger, or boredom (p.862)		X		

Table 1 (continued)

	Definition	Theoretical Position			
		Innate disposition	Cognitive capacity	Discrete emotion	Vicarious emotion
Hoffman (1977)	Empathy is an affective response appropriate to someone else's situation rather than one's own (p. 44)				X
Lazarus (1991)	Compassion is not a sharing of another person's emotional state, which will vary depending on what the other person's emotional experience seems to be, but an emotion of its own (p.289)			X	
Sprecher & Fehr (2005)	Compassionate love is an attitude toward other(s), either close others or strangers or all of humanity; containing feelings, cognitions, and behaviors that are focused on caring, concern, tenderness, and an orientation toward supporting, helping, and understanding the other(s), particularly when the other(s) is (are) perceived to be suffering or in need. (p.630)		X		X
Trivers (1971)	I suggest further that the emotion of sympathy has been selected to motivate altruistic behavior as a function of the plight of the recipient of such behavior; crudely put, the greater the potential benefit to the recipient, the greater the sympathy and the more likely the altruistic gesture, even to strange or disliked individuals. (p.49)		X		

an affective and cognitive reaction having to do with perceiving suffering and needs of others (Höjer, 2004).

### **2.1.3 The clarification of compassion**

The above literature has delineated the various perspectives regarding the nature of compassion. Most scholars today prefer to view compassion as either an emotion (the third approach) (e.g. Batson, 1991; Blum, 1980; Lazarus, 1991) or an emotional response (the fourth approach) (e.g. Cavanagh, 1995; Ekman, 2003; Hoffman, 1977; Nussbaum, 1996, 2001).

However, because of the lack of universal agreement on the nature and definition of compassion in the past centuries, a lot of ambiguity, overlapping, and misuse remained in both daily life and academic studies. For example, compassion and its synonyms, such as empathy, sympathy, and pity are often used interchangeably in oral English. Previous research either used the term “compassion” to present what was actually mercy, pity, or sympathy, or used synonymous words, such as “compassionate love” and “empathy” instead of compassion. Therefore, before discussing the model compassion, it is necessary to clarify the construct of compassion out of many synonyms so as to reach an unambiguous definition of this construct.

Dictionary definitions have a hard time separating compassion from its synonyms, such as empathy, sympathy, and pity. The three constructs are interchangeably used in numerous literatures and are often cited to define each other. The word compassion in written English was borrowed from mid-14<sup>th</sup> century Old French, which originated from the Latin “*compassionem*”, which means “sympathy, to feel pity,” and the Greek “*sympatheia*,” which means “having a fellow feeling, affected by like feelings” (The Oxford English Dictionary, 1989) . Accordingly, etymology research indicated an interchangeable use of compassion and its related constructs—

sympathy, empathy, and pity historically and practically. To date, almost all modern English dictionaries define compassion by synonymously using the related constructs mentioned above (see Cambridge Dictionary, 2008; Merriam-Webster, 1989, p. 229; Random House Webster's Unabridged Dictionary, 1998; World English Dictionary, 1999).

Besides the dictionary definitions, a considerable amount of academic research focusing on peoples' responses toward other's misfortunes also used the three constructs interchangeably. Early social psychologists viewed compassion as a special form of empathy. For example, Fultz, Schaller and Cialdini (1988) regarded compassion as a "vicarious affective response to another's suffering" (p. 313), while Bagozzi and Moore (1994) categorized compassion as "other-oriented feelings such as concern" (p. 59). Batson and his colleagues, who are pioneering psychologists in compassion-related research, also misused the three constructs together. Batson, et. al. (1987) admitted that *empathy* in their research was interchangeable with that of compassion: "the other-focused congruent emotion produced by witnessing another person's suffering that involves such feelings as sympathy, compassion, softheartedness, and tenderness... We are calling it empathy, but it has also been called sympathy, compassion, and the tender emotion" (p. 20).

Kinnick, Krugman, and Cameron (1996) also argued that it was difficult to empirically isolate compassion from empathy and sympathy, and the terms were often used synonymously in compassion/empathy literature. Post (2003) equated compassion with empathy, and considered compassion to have a morally beneficent direction apart from containing an awareness of suffering. Nursing research used terms such as caring, empathy, sympathy, compassionate care, and compassion interchangeably, implying that these words are synonymous (Schantz, 2007).

Although it is hard to distinguish these three constructs, many scholars still attempt to explain them. Generally speaking, empathy is the broadest construct, which refers to one's

ability of vicariously experiencing feelings, thoughts, and experience of others (Nussbaum, 2001). The object of an empathetic experience is the other's emotions or emotional feelings, whether that feeling is happy, sad, pleasant, painful, or neutral, and whether the person thinks the other person's situation is good, bad, or indifferent (Nussbaum, 2001). In other words, empathy is more about a particular set of congruent, vicarious emotional experiences (Batson & Shaw, 1991). Empathy is both an innate and learned ability. Previous research has reported that women are usually more empathetic than men (Davis, 1983; Hoffman, 1977; Mestre, Samper, Frías & Tur, 2009), and people could learn empathy after specific training programs, such as perspective-taking (McDonagh & Ljungkvist, 1999), modeling (Payne, Weiss, & Kapp, 1972), and interacting (McQuiggan & Lester, 2007).

Sympathy, on the other hand, is an emotional reaction “that is based on the apprehension of another's emotional state or condition and that involves feelings of concern and sorrow for the other person” (Eisenberg, 1994, p. 776). Literally, it is a communal feeling, and requires a certain degree of equality in situation or circumstance (Eisenberg, 2002). This is in contrast to pity, which regards its object not only as suffering, but weak, and hence, as inferior (Geotz, 2004). Compared with empathy, sympathy is an empathizing experience specifically with someone else's emotionally negative state (Loewenstein & Small 2007; Small & Verrochi, 2009). Unlike compassion that contains cognitive evaluation towards the subjects in suffering, sympathy does not involve moral evaluations of the sufferer as free from fault or guilt (Weber, 2004).

Compassion, as argued above, is a three-fold construct containing cognitive, affective, and behavioral experience of others' suffering. From an affective perspective, compassion is a deep sympathy, which is more “intense and suggests a greater degree of suffering, both on the

part of the afflicted person and on the part of the person having the emotion” (Nussbaum 2001, p. 302). Being compassionate implies a deep sympathy stemming from the suffering of another, but it also includes the need or desire to alleviate suffering (Eisenberg, 2002). That is to say, compassion implies not only a feeling of sorrow (sympathy), but also a behavioral tendency to alleviate or remove another’s suffering or pain (Schantz, 2007). This behavior-generated dimension is the key point of distinguishing compassion from empathy and sympathy. For example, Goetz, Keltner, & Simon-Thomas (2010) defined compassion as “the feeling that arises in witnessing another’s suffering and that motivates a subsequent desire to help” (p. 351). Clark (1997) identified compassion as a three-part process: Noticing another’s suffering, experiencing empathetic concern for the other’s pain, and responding to the suffering in some way (Clark, 1997; Frost, Dutton, Maitlis, Lilius, Kanov, & Worline, 2006).

This approach to distinguish the three constructs was increasingly adopted by scholars to standardize their research or to critique previous studies. For example, Darwall (1998) and Eisenberg (2002) both proposed that the “empathy” measured in Batson’s (1979, 1987) research was actually compassion, which contained an empathetic feeling and a behavioral tendency to relieve the suffering. Batson (1979) also admitted that he grouped traditional synonymous terms, *sympathy* or *compassion*, together into *empathy* because it was less moralistic than *compassion* and less confusing than *sympathy*. Instead, he replaced empathy with “perspective-taking” in his research. Given the ambiguous use of the three constructs in previous research, compassion measured in many previous studies was used interchangeably with empathy or sympathy. The reviews below would cite the original term of “empathy,” “sympathy,” and “compassion” as they were in each study, but readers should bear in mind that most of the cited research below

measured compassion. For those that measured empathy and/or sympathy only, specific notes were made.

## **2.2 Compassion: Antecedences and indicators**

Anglo-American philosophers commonly see Aristotle as the most formative influence in detailing the nature of compassion (Reilly, 2008). It is Aristotle who first characterized compassion as a feeling of empathy and who identified its basic components (Brown, 1996). In his *Rhetoric*, Aristotle described compassion as a painful emotion directed at another person's misfortune or suffering:

“Let compassion be a sort of distress at an apparent evil, destructive or distressing, which happens to someone who doesn't deserve it, and which one might expect to happen to oneself or someone close to one, and this when it appears near.” (Aristotle, 1385, b13–16)

This statement identified several key factors of compassion, such as seriousness, that the objective should suffer “a sort of distress” that was “evil, destructive or distress”; innocence, that the sufferer “doesn't deserve it”; and proximity, that the same misfortune might “happen to oneself or someone close to one”.

Following this general line, Western philosophers have extensively analyzed the antecedents, components, and consequences of compassion, the paths they paved were followed by modern social sciences and social psychologies. For example, Adam Smith (1759) viewed the proximity between the sufferers and the onlookers as the primary predictor of compassion. Schopenhauer (1819), in *On the Basis of Morality*, identified six components of compassion, including the presence of a suffering other, the ability to have empathetic experiences, the

process of participating with others' suffering, grief or sorrow, a desire for the sufferer's well-being, and a motivation to relieve the other's misfortune. This model was further complemented by Max Scheler (1913) in *The Nature of Sympathy*, who further distinguished five kinds of compassionate feelings: *Miteinanderfühlen* (such as the father and mother share the same grief at the loss of their child), *Mitgefühl* (empathy-compassion), *Gefühlsansteckung* (emotional contagion), *Nachfühlung* (the imaginative reconstruction of another's experience), and *Einfühlung* (identification with another) (Scheler, 1913, p. 51). Scheler held that identification with another grounded the imaginative reconstruction of another's experience, which further enabled the emotional contagion. The contagious experience, in turn, grounded *Menschenliebe*, the love for all fellow human beings (Davies, 2001).

The line from Aristotle— Smith— Schopenhauer—Scheler was followed by Blum Lawrence (1980), Cartwright David (1988), and Nancy Snow (1991, 1993), and was comprehensively articulated by Martha Nussbaum. As mentioned in the introduction, Nussbaum (2001) identified three antecedents of compassion: The judgment of size, or perceived seriousness; the judgment of innocence, and the judgment of proximity (Nussbaum, 1994, 1996, 2001).

Research from a variety of different fields used one or more of the three cognitive constructs in compassion/empathy related studies even before Nussbaum's comprehensive work, and an increasing number of recent research relied on Nussbaum's model as instructive framework. This model has not yet received much attention from communication scholars given the fact that compassion is not the focal point of communication research. However, the three antecedents of compassion were widely examined and were reported as closely related with several commonly-used factors of news coverage, such as objective's age, gender, cultural

background, etc. The next three sections will synthetically review literature concerning the variables of disaster news coverage that related with the three antecedents of compassion as well as people's compassionate responses.

### **2.2.1 Compassion as related to perceived innocence**

As reviewed above, one key distinction between compassion and sympathy is that compassion contains a moral evaluation of the victim "as free from fault or innocent of guilt" (Weber, 2004, p. 493). The judgment of victims, therefore, is a mixed evaluation of both the actual seriousness of their condition (see section 2.2.3) as well as their social, cultural, and historical circumstances (Hojjer, 2004). As Aristotle stated, only undeserved suffering should elicit compassion, whereas deserved suffering should lead to blame and reproach (Nussbaum, 1996, 2001). Weiner's (1985) attribution of blame model echoed Aristotle's analysis and suggested that appraisals of blame were important to whether or not compassion arises.

A purely innocent victim should be inculpable of what happened to him and should be incapable of controlling the misfortunes (Haaken, 1999; Moeller, 1999, 2002). Inculpability was the first factor in identifying innocence. Previous research about the perceptions of rape victims reported that people perceived female victims who were sexually dressed, overly intoxicated, and voluntarily went to the assailant's apartment as less innocent than their counterparts (Acorn, 2004). Burczyk and Standing (1989) found that male victims of rape were perceived as less worthy-of-pity than female victims, because they were stronger and should have been able to defend themselves against perpetrators but failed to do so. Even among female victims, those who were rational, assertive, and angry were perceived as less innocent than those who were seen as vulnerable, upset, and weak. Strong and rational women were somewhat perceived to be responsible for their misfortunes in that, like men, they should have been capable of protecting

themselves but failed to do so (Bodey, 2007). In all situations, the more innocent victims garnered more empathy than their counterparts.

Controllability, or the capability of control, is the second factor in identifying innocence. In a meta-analysis of 39 helping studies and 25 aggression studies, Rudolph, Roesch, Greitemeyer, and Weiner (2004) found a close relationship between victims' controllability and perceivers' compassion; particularly, plights or misfortunes beyond the control of victims increased sympathy toward the victims, which had a positive impact on support, whereas controllable misfortunes increased anger, which had a negative impact on support. Targets who had greater control over the source of their suffering elicited less sympathy, which was associated with less helping behavior. In a particular study by Weiner, Perry, and Magnusson (1988), it was observed that stigmas such as paraplegia, blindness, cancer, Alzheimer's, and heart disease were rated low on controllability and elicited more pity (and by implication, compassion) whereas stigmas such as obesity, child, and drug abuse were rated high on controllability and elicited anger rather than pity.

This model was supported by research regarding victims of natural disasters. Kahle, Yu, and Whiteside (2007) observed that Katrina victims were viewed as responsible for their fate because they failed to heed hurricane warnings and take appropriate measures to assure their safety. For example, they might have carelessly disregarded hurricane warnings, or they may have been restricted by poor financial conditions (e.g. no automobile, lack of financial resources, nowhere safe to evacuate) to evacuate New Orleans in time. This pattern was also evident in the public's response to the Haiti earthquake. When participants were informed that the destruction in Haiti was caused by controllable factors (faulty construction despite earthquake warnings), they were less likely to empathize with the victims than their counterparts who were told the

destruction was due to uncontrollable elements (depth of the earthquake's epicenter and its proximity to Port-au-Prince, the capital) (Jeong, 2010).

Based on the above literature, the current research hypothesizes that:

H1: Individual compassion will be positively related to perceived innocence toward the victims. That is, the greater perceived innocence, the higher the compassion.

### **Perceived innocence as related to age and gender**

Perceived innocence is closely associated with victims' characteristics, particularly age and gender. Children, women, and seniors are often viewed as helpless in an unfortunate circumstance while seemingly enduring more suffering and miseries than men (Christie, 1996). Moeller (1999) noted that

Men associated with violent political factions can starve by the thousands without creating a flutter of interest in their victim status. The men are culpable, it is assumed, in not only their own deaths, but in the deaths of the truly blameless. Only when victims have been identified as 'bona fide' are they candidates for compassion. (p. 107)

In most modern cultures, children, women, and the elderly are regarded as more innocent than males (Höjjer, 2004; Moeller, 2002). In a group interview about participants' emotional reactions of the Kosovo War, all respondents preferably viewed children, seniors, and women as helpless and innocent and expressed overwhelming compassion toward them. In contrast, a crying middle-aged male refugee who begged to be brought to Norway was regarded as selfish because "we do not regard him as helpless and innocent enough. Instead he should be active in fighting the enemy or helping the helpless ones" (Höjjer, 2004, p. 521).

Moeller (1999) observed the phenomenon of "hierarchy of innocence" of media reports regarding victims of wars. The hierarchy referred to an operative ordering of who was

considered to be most deserving of protection. Primarily influenced by demographics of age and gender, the hierarchy began with infants and then includes, in descending order, children up to the age of 12, pregnant women, teenage girls, elderly women, all other women, teenage boys, and all other men (Moeller, 2002). From the dimension of age, the young were perceived as more innocent than adults because infants and children are obviously too young to be seen as anything but victims. Seniors, similarly, are frail and deserve care and help. In terms of gender, women were always perceived as more innocent than men. Girls and adult women were all perceived as more innocent than their same-aged male counterparts. In summary, adult men were seen as the least innocent victims while women and children were perceived with higher degrees of innocence. Moller (2002) thus stated that “men can be murdered or can die by the thousands without creating a flutter of interest in their victim status” (p. 49).

Based on the above literature, the current research hypothesized that:

H1a: Children and senior victims will be perceived as more innocent than adult victims.

H1b: Female victims will be perceived as more innocent than male victims.

RQ1: How are the victims’ age and gender related to compassion?

### **2.2.2 Compassion as related to perceived proximity**

Although it is regarded as a human virtue to “love your neighbor as yourself,” abundant empirical studies only reveal a circumscribed compassion that is particularly biased by perceived similarity and proximity; compassion is shown more generously to in-group members than to out-group members, to natives than to strangers, to the similar than to the alien (Batson, Eidelman, Higley, & Russell, 2001; Batson, Floyd, Meyer, & Winner, 1999). When viewing the other’s misfortune, perceived proximity between the spectator and the victims is another key antecedent of compassion.

According to Aristotle, compassion concerns those misfortunes “which the person himself might expect to suffer, either himself or one of his loved ones” (Aristotle, 1385, b14-15). Rousseau agreed with Aristotle that an awareness that these unfortunate fates could be his or her own was a necessary condition for *pitie* (Rousseau, 1979). If one thinks that one was above such suffering, like the aristocrat towards the slaves, one would likely have an arrogant harshness instead of compassionate concerns. Individuals motivated by social dominance, especially for their group to be superior to other groups, could hardly endorse compassion to out-groups (Pratto, Sidanius, Stallworth, & Malle, 1994). It was only through recognizing that one might encounter such misfortune as well, that one would generate compassion toward the suffering others.

### **Compassion as related to perceived proximity**

Bio-psychological scholars have observed that human beings have an innate nature to feel compassion toward those closest to them, either self-relevant or goal-relevant others who are vital for the survival of oneself (Goetz, et al., 2010). Perceived proximity was first related to self-relevant others, particularly families and friends. Kin selection theory has shown that people were more willing to help relatives than strangers (Barrett, Dunbar, & Lycett, 2002) mainly because kin were potential reciprocators of helpfulness than non-kin and those we do not know or like (Burnstein, Crandall, & Kitayama, 1994). Compassion emerged as a desired attribute of human beings because it meets the needs of vulnerable offspring, potential mates, and non-kin partners (Goetz, et al., 2010). For the caregiving of offspring, the trait of compassion to reliably experience the feelings of vulnerable young offspring in moments of need or suffering would have directly increased the chances of offspring surviving and ultimately reaching the age of reproductive viability (Goetz, et al., 2010). For mate selection, choosing compassionate

reproductive partners who would be more likely to provide physical care to spouses or mates in terms of protection, affection, and touch was vital to the survival of offspring (Goetz, et al., 2010). For non-kin cooperation, the most compassionate individuals were more likely to help his peers, which further enable non-kins to initiate, maintain, and regulate reciprocally altruistic relationships (Axelrod, 1984; Frank, 1988; Nesse, 2007; Trivers, 1971). Thereby, the whole species could survive in competitions against others.

In particular, individual compassion was most sensitive to self-relevant victims, including offspring in particular and genetic relatives in general (Bowlby, 1969; Hamilton, 1964), as well as reproductive partners (Frank, 1988), friends, reciprocal alliances (Trivers, 1971), and group members (Henrich, 2004; Sober & Wilson, 1998).

Experimental research has reported that people felt emotionally closer to those whom they were more closely related, particularly families and friends (Korchmaros & Kenny, 2001; Neyer & Lang, 2003). Out-group members were described in a more abstract way than in-group members and were less likely to be empathized or charitably assisted (Lieberman, Trope, & Stephan, 2007). For example, Cialdini and his colleagues (1997) found that people reported more perceived overlap with family and friends than with strangers, which further mediated a greater willingness to feel empathy for—and to help—family and friends rather than strangers (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). Graziano, Habashi, Sheese, and Tobin (2007) reported that perceived relatedness (sibling, friend vs. strangers) and perceived similarity (in-group vs. out-group members) strongly influenced peoples' empathetic response. In ordinary circumstances (such as car trouble), participants high in agreeableness were more likely to help a friend and a sibling, but were not different in willingness to help strangers compared with the participants of low agreeableness. In extraordinary circumstances (saving people from a burning

house), all participants were equally willing to risk their lives to save either a friend or a sibling, whereas people high in agreeableness were somewhat more likely to help a stranger. Also, participants were all highly likely to help in-group members, and high-agreeableness was associated with higher empathetic concern for out-group members only. The research demonstrated a different empathetic response based on psychological relatedness—in terms of both kin (sibling) and social norms (friends, memberships).

Second, perceived proximity also favored goal-relevant others who shared similarities in terms of personal values, preferences, behaviors or physical appearances (Eisenberg & Miller, 1987; Oveis, Horberg, & Keltner, 2010). It is a natural tendency for the species, particularly for social animals, to be compassionate to close or similar others because they are more likely to be potential mates, partners, and coworkers who are more likely to facilitate personal goals than dissimilar ones (Burnstein et al., 1994; Hamilton, 1964; Sober & Wilson, 1998). The core of compassion, as argued by Cassell (2002), is “a process of connecting by identifying with another person” (p. 436). In an experiment by Krebs (1975), participants were led to believe that they were high or low in similarity with a stranger (a confederate) in terms of values and traits. When the stranger was ostensibly about to receive punishment (electric shock), participants in the high similarity conditions showed greater physiological response (skin conductance, heart rate acceleration, vasoconstriction), reported feeling worse, and behaved more altruistically (by paying more money to reduce the number of shocks that the performer received) than those in the low similarity conditions. The results suggested perception of similarity strengthened or mediated perceived empathy between the onlookers and the stranger. Further research by Batson and his colleagues indicated that individuals who believed a high similarity with the subject were more willing to forgo personal rewards to alleviate the suffering of that individual (Batson, Turk,

Shaw, & Klein, 1995) and were more willing to receive shocks on behalf of the suffering participant (Batson et al., 1981).

Thus, the current research proposes that:

H2: Individual compassion will be positively related to the participants' perceived proximity toward the victims. That is, the greater perceived proximity, the higher the compassion.

### **Perceived proximity as related to culture similarity**

Culture, ethnicity, societies, and nations are fundamental factors that are related to psychological closeness (Goetz, et. al., 2010). In the context of disaster communication, because most people access natural disasters through mass media, the victims are usually remote strangers from different countries, cultures, and societies. The natural question is if, or how cultural similarity matters for perceived proximity and compassionate responses. Much previous research confirms that individual compassion is positively related to cultural similarity. For example, Nussbaum (2001) argued that cultural distances were usually exhibited in multiple terms such as race, religion, and language that usually prove recalcitrant to the imagination of others, and thus served as social barriers to the compassion. Psychological distances based on social markers, particularly culture, impeded compassion by abbreviating possibilities for those within certain social/culture circles to recognize their own possibilities in endeavoring the same misfortune as the victims who stand out of those circles (Rousseau, 1974).

Adam Smith (1759) warned against the difficulty for ordinary people to keep a fair mind toward the sufferings of those who live in other countries:

Let us suppose that the great empire of China, with all its myriads of inhabitants, was suddenly swallowed up by an earthquake, and let us consider how a man of humanity in

Europe, who had no sort of connection with that part of the world, would be affected upon receiving intelligence of this dreadful calamity. He would, I imagine, first of all, express very strongly his sorrow for the misfortune of that unhappy people, he would make many melancholy reflections upon the precariousness of human life... And when all this fine philosophy was over...he would pursue his business or his pleasure... as if no such accident had happened. (p. 211)

To put it simply, people were easily affected by the small misfortunes of similar others, such as families and friends, but rarely showed the same amount of compassion across national boundaries (Nussbaum, 2003). When disasters struck Rwanda, Ethiopia or Congo, Westerners may not extend similar concerns for the victims as what they did for fellow Americans or the Anglo-Saxons, partly due to the reduced similarity between the Westerners and the Rwandans. Among the different ways of categorizing cultural similarity, a polarized but basic approach was to divide cultures as “us” and “them” (Adam, 1759; Nussbaum, 2003) according to factors such as race, country, languages, historical connections, etc.

The current research introduced two disasters that occurred in two countries: Hurricane Ika in Florida, U.S. and the Indian Ocean Tsunami in south Asia, particularly Indonesia. Victims of the former disasters were American citizens that shared great similarities with the participants in terms of country, race and language, whereas victims of the Indian Ocean Tsunami were typical “others” that belonged to different races and countries. The author hypothesizes that

H2a: Participants’ perceived proximity will be associated with cultural similarity. That is, victims of Hurricane Ika would be perceived as more proximate than victims of the Indian Ocean Tsunami.

RQ2: How is cultural similarity related to compassion?

### 2.2.3 Compassion as related to perceived seriousness

Perceived seriousness concerned with the “size” of a misfortune, which is an objective estimation of to what extent “the situation matters for the flourishing of the person in questions” (Nussbaum, 2001, p. 307). While perceived innocence and proximity are primarily subjective perceptions depending on individual evaluations, perceived seriousness is more complicated. It is a subjective evaluation closely based on objective severity. It is relatively obvious to predict a positive relationship between the physical severity of suffering and the judgment of seriousness. For example, people usually agree that a life lost is more serious than an injury, that physical damage is more disastrous than economic loss, and that permanent pains are worse than temporary sufferings. In other words, the judgment of seriousness involves an evaluation of values: That the situation matters for the flourishing of the person in question (Nussbaum, 2001).

The kinds of serious suffering identified by Aristotle were death, experience of bodily assault or ill-treatment, old age, illness, lack of food, lack of friends, physical weakness, disfigurement, and immobility (Aristotle, 1385), all of which are antecedences of compassion. Clark’s (1997) study of compassionate appeals in *American Blues Lyrics* reported similar results. As she argued: “For a person to be considered unlucky, his or her plight must fit prevailing standards of direness—that is, it should be considered sufficiently harmful, dangerous, discrediting, or painful” (Clark, 1997, p. 82). The most commonly depicted plights in American blues music include poverty, partner’s infidelity, death of loved ones, illness, physical or mental disabilities or deformities, injury, and pain.... ones that are either permanently or temporarily life altering, either involve physical pains or emotional distress. Across time and culture, people seem to have universal standards of harm and loss. Therefore, the current research proposes:

H3: Perceived seriousness will be positively related to the physical severity of the suffering. That is, the greater the physical severity, the higher perceived seriousness.

Compassion has been reported as positively related to physical severity and the corresponding perceived seriousness. For example, Weiner, Graham, and Chandler (1982) found that when asked to describe a recent experience of pity, participants mostly mentioned individuals suffering from physical disabilities, victimization by environmental circumstances such as poverty, and catastrophic events such as serious misfortunes. Likewise, photographs of crying babies, malnourished children, homeless individuals, and adults expressing sadness have all been shown to induce heightened levels of compassion (Oveis, et. al., 2010). Experimental academic research also documented that people reported strong compassion when witnessing the sufferings of crying babies (Zahn-Waxler, Friedman, & Cummins, 1983), electrically-shocked peers (Batson, et al., 1979; 1991), diseased or ill others (Eisenberg, et. al., 1996), physical or mental disabilities (Eisenberg, et. al., 1999), homeless and poverty (Oveis, et. al., 2010), and victims of catastrophe or loss (Eisenberg, et. al., 1994). In other words, compassion arises in response to suffering and harms that are correlated to a somewhat universal harm-detection moral system, and only those serious ones could elicit compassion (Haidt, 2003, 2008).

H3a: Individual compassion will be positively related to perceived seriousness of suffering. That is, the greater perceived seriousness, the higher the compassion.

H3b: Individual compassion will be positively related to the physical severity of the suffering. That is, the greater the physical severity, the higher the compassion.

### **2.3 Compassion-related constructs in crisis communication research**

The above literature has extensively reviewed previous research about compassion. However, most of the research is in the field of sociology or social psychology, while few are

conducted from the perspective of communication research. As mentioned above, this is partially because compassion is regarded as a trait, a personal characteristic or a pure emotion for a long time, all of which were not the primary objects of communication research. Only when compassion was regarded as a construct with both cognitive and affective dimensions recently, did it become a possible object of communication research such as the media effects on compassionate response. It is important to have a justification for the current study by reviewing compassion-related studies in the field of communication research, even though most research thus far have followed the approaches of psychological studies or addressed only pertinent topics rather than the construct of compassion.

Scholars in communication research explored the antecedents and consequences of compassion following similar approaches of psychological studies. For example, Jeong (2010) used perceived controllability as a predictor of compassion and found that participants were more likely to help victims of the Haiti earthquake when they perceived it as uncontrollable than if they viewed it as controllable. This is partially because the uncontrolled, unexpected misfortune was regarded as no fault of the victims. The uncontrollability of the disaster was associated with a sense of innocence, which further led to a high level of compassion and more willingness to help. Regarding the behavioral consequences of compassion, disaster relief workers generally observed that donations were usually strong at the early stage and then dropped significantly later (International Federation of Red Cross and Red Crescent Societies, 2005). It might be due to dwindling amounts of media coverage and the diminished amount of information input that resulted in lower levels of compassion. Schweitzer and Mach (2008) examined tsunami donations for several charitable organizations in Germany and Switzerland

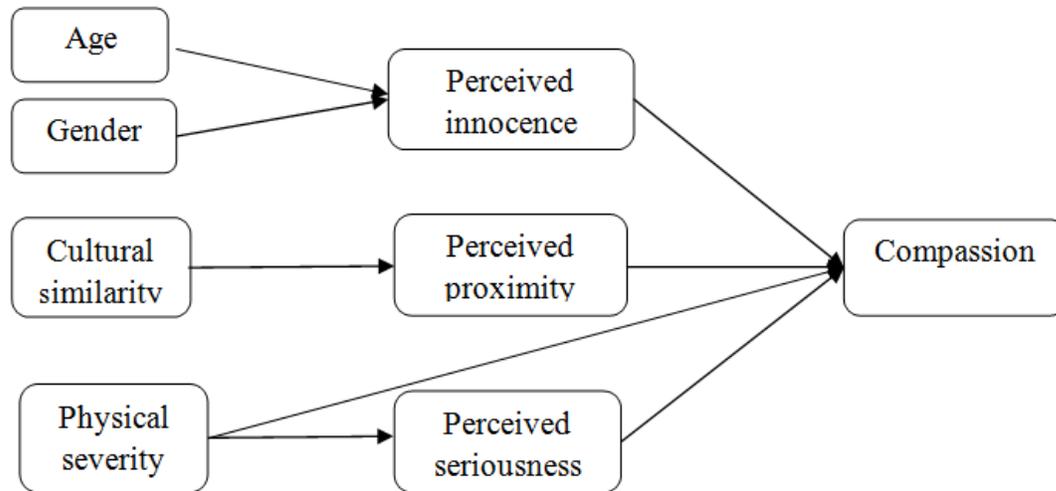
and found that peoples' compassionate response varied by the input information and outside context was the key factor of the change in donation behavior.

Although compassion was not extensively studied by communication scholars, a pertinent topic—compassion fatigue was very popular in communication research. Compassion fatigue referred to the phenomenon that continual exposure to images and/or messages concerning extreme violence or harm to victims of disasters resulted in tendencies toward less compassion and reduced helping behaviors (Moeller, 1999; Höjer, 2004). Most research concerning compassion fatigue argued that overt exposure of violence-related information was associated with negative emotions (such as anxiety and fear), inhibited cognitions, and an avoidance of information selection behaviors (e.g. Kinnick, et., al., 1996; Linz, Donnerstein, & Adams, 1989; Mullin & Linz, 1995). Such research implied a clear inverted U-shape relationship between the amount of information input and individual compassion: That is, at one point people are compassionate and go through some type of process whereby they lose their compassion and become fatigued (Tester, 2001; Sheetal, 2010; Smith, 2009). Recent research found that both the content (frames and exemplars) and characteristics (pervasiveness, saturation, and repetition, see Kinnick, et. al., 1996; Moeller, 1999) were influential factors of compassion fatigue. In other words, once the media content and characteristics do not overrun the threshold, they are positively related to individual compassion. This particular section before the threshold breaking point is the same as the research interest of the present study.

In addition, antecedents of compassion, such as the perceived innocence, perceived proximity, and perceived seriousness were commonly-used variables in crisis communication research. For example, the degree of seriousness, as measured in terms of death toll and economic loss, was closely related to the amount of media coverage on a particular disaster.

Previous research indicates that it is the human and physical losses incurred rather than the magnitude of a disaster that predict the amount of news coverage of natural disasters (Gaddy & Tanjong, 1986). A recent content analysis of U.S. news coverage on worldwide natural disasters in 2010 showed that the number of dead is the primary predictor of both the amount and the length of newspaper reports. No other factors stand out as the persistent predictor (Yan & Bissell, 2012). Proximity is another factor that influenced the amount of media coverage of a particular disaster. A handful of studies confirmed a negative correlation between geographic distance and the amount of news coverage of a particular event (Buckman, 1993; Tunez, & Guevara, 2009; Wu, 1998). Adams (1986) analyzed the amount of airtime the three major U.S. TV networks devoted in their evening newscasts to 35 natural disasters worldwide from January 1972 to June 1985 and found that the degree of seriousness and the proximity between U.S. and location of the disasters were the most important factors of news coverage (Adams, 1986).

In summary, compassion as a construct has been discussed by scholars from various fields for centuries. It was not until recently that compassion was regarded as an emotional experience containing both cognitive and affective dimensions and only since then that scholars in communication research conducted studies about the cognitive antecedents of compassion. Based on the literature above, the current research proposes a compassion model as follows:



*Figure 1* The proposed model of compassion

The model was based on the theoretical framework raised by Aristotle (1385) and extended by Martha Nussbaum (1996, 2001), as well as previous research concerning the relationships between mediated victims and individual compassions. As figure 1 shows, the model proposed that individual compassion had a direct association with cognitive perceptions, such as perceived innocence, perceived proximity, and perceived seriousness. These three antecedents were responses toward different ways news coverage of disaster victims occurred. In particular, perceived innocence was associated with the news portrayal of victims' age and gender; perceived proximity was influenced by the extent of cultural similarity between the viewers and the victims; and perceived seriousness varied with the physical severity of the victims.

Because so many variables were contained in the model, it would be too complicated to test all factors in one experiment. Thus, two related experiments were conducted to examine the proposed model. Although the research could not present the relative contributions of each factor to the whole model, it provided evidence for the relationships between variables, as well as

examined the applicability of the compassion model under the particular context of disaster communication.

## CHAPTER 3

### METHOD

This study explores the relationships between compassion and its antecedents, such as perceived innocence, perceived proximity, and perceived seriousness. Participants viewed different photographs of victims who varied in terms of age, gender, and cultural background, and reported their perceived innocence, perceived proximity, perceived seriousness, and compassion while viewing different news portrayal of disaster victims. An experimental design was used in order to test the hypotheses and research questions of the current research.

#### **Participants**

For the current study, 180 undergraduate students were recruited from introductory journalism and mass communication courses at the University of Alabama. The samples consisted of both male and female participants. Participants were recruited through course instructors and received extra credits in exchange for their participation.

#### **Procedure and design**

The investigator went to classrooms to recruit participants. The investigator first introduced the purpose and design of the experiment (see Appendix B) and asked for voluntary participation. Students who were interested in participating received the questionnaires. At the beginning of the study, participants were presented the consent form (see Appendix C), which contained details of the experiments. They were informed that the study aimed to test their perceptions of the victims of two natural disasters. They were asked to give their consent by

signing their name and date at the end of the form. Due to different class policies of different instructors, 22 (or 12.22%) of the participants completed the questionnaire at home and brought it back to the instructor the next class day, whereas 87.78% completed the experiment at class and returned it to the investigator immediately. Results of Krippendorff's alpha test indicated that data collected from the 22 participants was consistent with the other samples ( $\alpha=.87$ ), and thus, included in the final analysis. However, the author admitted that this should have impacted the external validity to certain extent. The details of this limitation will be discussed in Chapter 5.

The research contained two experiments. Participants first responded to a series of demographic questions, including their age, gender, and race (see Appendix E.1). Next, they were asked to read stories, view pictures, and answer questions about their perception of the victims displayed in the picture. Upon the completion of the study, control variables, such as participants' compassionate traits, past experiences of natural disasters and consumption of disaster-related news were measured (see Appendix E. 8) .

Experiment 1 was a 3(age: children, adult, senior) X 2 (gender: male vs. female) factorial design. Participants were asked to read one story about a Texas tornado and view one image of a tornado victim that varied in age and gender. After that, they were asked to report their perceptions of innocence and feelings of compassion toward the victim. This was the end of experiment 1. Next, they were re-assigned to one of the test conditions in experiment 2.

Experiment 2 was a 3 (physical severity: dead, injured, survived) X 2 (cultural similarity: high vs. low) factorial design. In this part, participants were asked to read a personal story of two natural disasters as well as view a photograph pertaining to the story. Half of the participants read a story concerning a victim of Hurricane Ika, and the other half read a similar story of an Indian Ocean Tsunami victim. Background information about the two disasters was introduced,

with a particular emphasis on the locations, countries, and cultures. The victim of each disaster was described as either deceased, injured or had been rescued. After reading the story and viewing the picture, participants were asked to report how they perceived seriousness, proximity, and compassion toward the victim. Finally, participants were given the option of writing down comments about the stories, the victims or the disasters at the end of each experiment.

Each packet contained two tests, one from experiment 1 and the other from experiment 2. In order to randomly assign the participants, all conditions were numbered and randomized through a random number generator (<http://www.random.org/>). Specifically, conditions in experiment 1 was numbered as 1 = boy, 2 = girl, 3 = adult man, 4 = adult women, 5 = old man, and 6 = old woman; conditions in experiment 2 was numbered as dead American = 1, injured American = 2, rescued American = 3, dead Asian = 4, injured Asian = 5, rescued Asian = 6. Because the two experiments in the study used the same compassionate scale to measure individual compassion, the order of the two experiments was also randomly organized so as to reduce the possible sensational fatigue due to repetitive measure. Specifically, experiment 1 was numbered as 1 and experiment 2 was numbered 2. Each packet was compiled by running three set of random numbers. For example, if a random number set came out as 3/6/2, the corresponding packets began with demographics questions, then, a rescued Asian boy in experiment 2, followed by an adult man in experiment 1, and ended with a test of covariates such as disaster experiences and personal compassionate traits, etc.

Stories in both experiments were openly published news items, which represents news coverage of natural disasters in real life. The details of stories were tailored by deleting the irrelevant information and emphasizing the manipulated variables, such as the age and gender of the victims, the cultural background of the disaster, and the physical status of the victims.

The whole study took around 20 minutes. After completion of the experiment, participants were thanked and debriefed (see Appendix F). To reduce influences of social desirability, all participants were asked to be as honest as possible in their ratings and were told that there were no right or wrong answers.

### **Independent variables and manipulation**

*Age and gender* of victims were manipulated through the image of victims in experiment 1. Participants read the same story about the Texas tornado, which included a general description, an estimation of fatalities, and a scientific prediction of the futures of the tornado season (see Appendix D, experiment 1 story). Then, they viewed a picture of a tornado victim varying in age and gender across six conditions (see Appendix D, experiment 1\_picture). The six manipulated images included a girl, a boy, an adult man, an adult woman, an elderly man, and an elderly woman. All pictures were equivalent sized busts of the victims, who were all facing the camera, with no direct eye-contact with the viewer. To control the possible confounding caused by other features such as mood, the look, and/or the appearance of the victims displayed in the pictures, variables that were reported as related to perceived innocence and compassions, such as perceived sadness, attractiveness, and likeness were measured and controlled in a statistical analysis.

*The degree of cultural proximity* was manipulated through the location of disasters. Two stories about two natural disasters were presented in experiment 2, one domestic disaster (Hurricane Ika) and one foreign disaster (Indian Ocean Tsunami). The two disasters were comparable in many features that helped to reduce the potential confounds caused by characters of disasters. For example, both disasters were typical weather related disasters that were less predictable and less controllable, as predicted by the theory of attribution, victim's misfortunes

should be more attributed toward the nature rather than the victims' own responsibility (Weiner, 1985). Second, the two disasters were close in date and similar in the degree of seriousness (indicated by death toll and economic loss). The story of Indian Ocean Tsunami was a true story adapted from openly published news reports. The story of Hurricane Ika, however, was a fictitious story based on factual events surrounding the 1900 Galveston hurricane, the deadliest hurricane in U.S history. The reason for making a fictitious story is due the fact that no true disaster in the U.S. during the recent decades was comparable to the Indian Ocean Tsunami in terms of seriousness. Thus, the investigator composed a fake story so as to control the possible confounds caused by factors such as time closeness, death toll, and economic impact. The story of hurricane Ika borrowed from accurate details of the Galveston hurricane, such as its causation, wind speed and power, number of evacuees and fatalities, but changed the date to September, 10, 2002 (which is close to the date of the Indian Ocean Tsunami, December, 26, 2004), and the landfall place to Florida key, Florida, which is generally seen as being in the same cultural region with Alabama (e.g. Holt, 1940; Marrinan & White, 2006; Paredes, 1995). Although the story of Hurricane Ika matched the story of the Indian Ocean Tsunami in terms of time closeness and seriousness, its nature of a fictional story might result in a negative impact on internal validity in that participants might question the reality of the story. The details of the limitation will be further discussed in Chapter 5.

Each story contained a general background description, estimated fatality numbers, and a personal story about a boy victim in the disaster. Each story has an accompanying picture of a boy carried by an adult man. The picture from the Hurricane Ika story portrayed a boy being carried by a white man, whereas the picture from the Indian Ocean Tsunami story portrayed the boy being carried by an Indonesian adult man. The faces of the two boys were also shown as a

pull-out face-portrait so that the participants could clearly view the faces of the victims. The original images were separate pictures selected from openly published news outlets about each disaster respectively, and were manipulated by a professional photo editor through Adobe Photoshop.

*The degree of physical severity* was manipulated through the text of the stories. For the two stories in experiment 2, each had three versions that described the boy as dead (i.e. “John Stevenson/ Grasion Rodrigo, 12 years old, was fatally injured by a falling tree when he tried to climb to the attic of his one-story house. He was the first child to die at the local medical center after Hurricane Ika/the Indian Ocean Tsunami”), injured (i.e. “John Stevenson/ Grasion Rodrigo, 12 years old, was seriously injured by a falling tree when he tried to climb to the attic of his one-story house. He was the first child to be taken to the local medical center after Hurricane Ika/the Indian Ocean Tsunami”), or rescued (i.e. “John Stevenson/ Grasion Rodrigo, 12 years old, was rescued from the attic of his house, the first floor of which was submerged by the flood waters. He was the first child rescued by the Federal Emergency Management Agency in Hurricane Ika/by the local citizen in the Indian Ocean Tsunami.”). To emphasize this manipulation, the status of physical severity was repeated in both the body text and the illustrations of the pictures.

*Manipulation check.* At the end of each experiment, the participants were asked to answer questions about the content of the stories, the images of the victims or both questions according to the dependent variables measured in each experiment.

The age and gender of the victim in experiment 1 was examined through questions such as “Who is the person being portrayed in the picture?”, while participants were asked to choose the right answer from six options including a boy, a girl, a man, a woman, an elderly man, and an elderly woman.

The physical location of the disaster and the severity of the victims' injuries in both experiments were examined. The participants were asked to answer questions such that "How physically close are you to the disaster?" and "How much do you think the person suffered from the disaster?" through a seven-point likely scale, with 1 = "Not at all" and 7 = "Very much" (see Appendix E.6).

The purpose of the manipulation check was to make sure that the participants paid attention to the manipulations of victims' the age and gender, disaster location (domestic vs. foreign disaster) and physical severity (dead, injured, survival), and that their responses were based on conscious perceptions. Those who cannot correctly identify the questions were excluded from the final data.

### **Measurements**

*Compassionate response* was measured using Batson's *Empathetic and Personal Distress Scale* (EPDS) (Batson, 1991; Cialdini, Schaller, Houliban, Arps, Fultz, & Beaman, 1987) and an adapted version of Sprecher and Fehr's *Compassionate Love Scale* (CLS). EPDS was a widely used self-reporting scale measuring the empathy and personal distress toward others' suffering. This scale was a measurement of compassion but was replaced with the term of "empathy" because Batson, et. al. (1979, 1987) thought the word *empathy* was "less moralistic than compassion and less confusing than sympathy" (pp. 86-87). The empathetic concern items in EPDS include "compassionate," "sympathetic," "warm," "touched," and "moved". Participants were asked to indicate how much they experience each feeling toward the images of victims on a seven-point scale (1 = "Not at all" and 7 = "Extremely") .

CLS was a self-compassion scale assessing compassion towards non-intimate others. Sprecher and Fehr (2005) used the term "compassionate love" rather than "compassion" to

encompass emotional and transcendental nuances, although they acknowledged that their construct should be named “compassion” (p. 630). The abbreviated version of CLS was tested by Hwang, Plante, and Lackey (2008) which contained five questions such as “I feel a great deal of compassion for him,” “I would rather suffer myself than see him suffering,” “I would rather engage in actions that help him than engage in actions that would help me,” “I want to spend time with him so that I can find ways to help” and “I very much wish to be kind and good to him.” Participants were asked to identify their helping intentions of each person through a seven-point scale (1 = “Not at all” and 7 = “Extremely”)(see Appendix E.2).

*Perceived innocence* was measured in accordance with the two dimensions of definition: inculpability and uncontrollability. Questions measuring inculpability included statements such as “I think the person portrayed is partly self-responsible for his own plight;” “I think what happened to the person portrayed in the photo is no fault of his/her own;” and “I think the person portrayed in the photo is incapable of avoiding the misfortune.” Questions measuring the perception of uncontrollability were adopted from Russell’s (1982) *Causal Dimension Scale*. This was a scale developed from Weiner’s (1985) theory of attribution and specifically measured the attribution of controllability. The current research adapted this scale and asked questions such as “I think the person portrayed in the photo is not able to change the current situation alone;” “I think the situation depicted is manageable by the person portrayed in the picture” and “I think the situation is overpowering the person who is portrayed in the photo.” Both dimensions were measured on a seven-point scale that ranged from 1 = “Totally disagree” to 7 = “Totally agree”(see Appendix E.3).

*Perceived proximity* was measured using two instruments (Batson, Lishner, Cook, & Sawyer, 2005). First, participants were asked to assess their perceived similarity to the person

portrayed in the picture on a scale of similarity (Batson et. al., 2005). There were seven-point rating scales (1 = “Not at all” to 7 = “Very much”) including questions such as “Do you feel that you are similar to the person portrayed in the photo?” “To what extent did you perceive yourself and the person in the picture to be part of the same group?” and “To what extent would you use the term ‘we’ to describe yourself and the person in the picture?” The fourth item was a modified version of the *Inclusion of Other in Self scale* (Aron, Aron, & Smollan, 1992). This measurement consisted of seven pictures in which two circles, one representing “Self” and one representing “Other”. The pictures, photocopied from Aron et al. (1992), ranged from circles touching but not overlapping at all to circles almost completely overlapping. Participants were asked to “circle one of these seven pictures that best indicates the extent to which you feel that you and the person portrayed in the photo are connected” (see Appendix E.5).

*Perceived seriousness* was measured through an adapted version of the *Measurement of Risk Perception* (Gibson & Zillmann, 2000). Respondents were asked to complete a four-item scale measuring their beliefs about the seriousness of suffering that the person portrayed in the picture was experiencing. The four items include questions such as “Do you believe that the situation portrayed in the photo is serious?” “How much suffering is the person in the photo experiencing?” “To what extent do you think it is necessary to help the suffering person?” and “How urgently in need is the person portrayed in the picture?” Respondents rated their perceptions on seven-point scales ranging from 1 = “Not at all” to 7 = “Extremely.” (see Appendix E.4)

*Subjective comments.* Participants had the option to record their comments about the story, the picture, the victim, and even the experimental design at the end of each experiment. This was to collect subjective thinking that was not measured by the scales, or details that cannot

be reflected from choice questions. This was not mandatory, so that participants could feel free to express themselves (see Appendix E.7).

Because variables such as perceived attractiveness (Batson, et. al., 1981, 1983; Raina, 2006), likability (Batson, et. al., 1981, 1983), and sadness of the victims (Small & Verrochi, 2009) were found as influential factors of perceived innocence and compassion, they were thus measured in both experiments. Participants were asked to identify their perceived level of attractiveness, likability, and sadness of the victims being portrayed in the picture through seven-point scales, with 1 = “Attractive/ Likable/Sad” and 7 = “Unattractive/Unlikable/Happy” (see Appendix E. 8).

*Covariates. Personal disaster experiences.* Because the University of Alabama was severely impacted by a strong tornado a year before the study, some participants might have strong personal experiences with natural disasters, whereas others, particularly freshmen from other states might have little experience. Considering the possible confounds caused by personal experiences of disasters, peoples’ disaster experiences were measured as covariates. Participants were asked to answer questions such as “I could easily remember the scene of several recent natural disasters,” and “I could easily understand the feelings of disaster victims” through seven-point scales, with 1 = “Not at all” and 7 = “Extremely”.

Individual responses toward media message was reported as varied by one’s media using habits (e.g. Ajzen, 2002; Bamberg, Ajzen, & Schmidt,2003; Neil, 2011; Ouellette & Wood, 1998), thus participants’ *disaster news consumptions* were measured through questions such as “I’m highly concerned about disaster news” via seven-point scales, with 1 = “Not at all” and 7 = “Extremely”.

Finally, *personal compassionate traits* were measured through the *Interpersonal Reactivity Index* (Davis, 1980, 1983). This was a commonly used instrument measuring dispositional empathy. It contained four seven-item subscales, each measuring a separate facet of empathy: The perspective taking scale, the empathic concern scale, the personal distress scale and the fantasy scale. The current research used this measurement to control the influences of participants' dispositional empathy on their compassionate response toward the victim. A final personal compassionate score was calculated by averaging the score of all twenty items after negative items were reversed-coded (see appendix E.8).

For all the measurements, negatively phrased items were reverse-coded before entering the analysis.

## CHAPTER 4

### RESULTS

#### **Descriptive statistics**

The current study collected data from 180 undergraduate students from the College of Communication and Information Sciences at the University of Alabama. Two participants did not complete the survey and four made incorrect answers about the content of the stories, so the data collected from the six participants was excluded from the final analysis. Finally, valid data from 174 participants were entered into the final analysis.

The demographic data revealed that women comprised 64.4 % of the sample ( $N = 112$ ) and men comprised the remaining 35.6% of respondents ( $N = 62$ ). The sample was somewhat racially homogenous, with 82.2% self-reporting as White/Caucasian ( $N = 143$ ). African Americans comprised 16.7% ( $N = 29$ ) and Hispanics took 1.1% ( $N = 2$ ) of the sample. As for the religious affiliation, 88.5% identified themselves as Christian ( $N = 154$ ), 6.5% self-identified as Agnostic ( $N = 11$ ), and the remainder of the sample was 2.3% Jewish ( $N = 4$ ), 1.1% Atheist ( $N = 2$ ) and 1.7% others ( $N = 3$ ). Respondents ranged in age from 17 to 24 years old, with a mean age of 20.65 ( $SD = 1.25$ ), which is the general age distribution of undergraduates.

In terms of participants' characteristics that were measured as covariates, personal disaster experiences indicated a homogeneously high level ( $M = 5.91, SD = .97$ ). In particular, 92.4% participants reported a disaster experiences as more than 4 (mid-point of the seven-point

scale); 25.7% participants identified themselves as having the highest degree of disaster experiences (7 out of the seven-point scale).

Table 2.1  
General descriptions of participants' objective perceptions toward victims in experiment 1

Conditions	Compassion	Perceived innocence	Perceived attractiveness	Perceived sadness	Perceived likability
Boy	5.13(1.43)	6.42(.88)	5.05(1.56)	5.67(1.35)	5.05(1.99)
Girl	5.45(1.32)	6.54(.86)	4.71(1.12)	5.54(1.58)	5.13(1.68)
Adult man	3.56(1.71)	5.33(1.19)	4.96(1.88)	5.44(1.47)	5.96(1.06)
Adult woman	3.98(1.44)	5.23(1.14)	4.26(2.18)	5.35(1.50)	5.61(1.37)
Elder man	4.51(1.35)	5.32(1.09)	3.27(2.27)	4.77(1.70)	5.77(1.37)
Elder woman	4.96(1.32)	6.20(.92)	3.96(2.32)	4.86(1.53)	5.28(1.93)

Table 2.2  
General descriptions of participants' objective perceptions toward victims in experiment 2

Conditions	Compassion	Perceived proximity	Perceived seriousness	Perceived attractiveness	Perceived sadness	Perceived likability
Dead Asian	5.44(.86)	2.94(1.32)	6.33(.91)	4.17(1.90)	5.35(1.46)	6.52(1.08)
Injured Asian	5.04(1.21)	2.00(.87)	5.35(1.44)	4.79(1.50)	5.50(1.45)	6.25(1.19)
Rescued Asian	5.06(1.23)	2.49(1.27)	5.53(1.50)	3.80(1.89)	4.84(1.89)	6.04(1.79)
Dead American	5.87(1.52)	3.61(1.82)	6.28(1.03)	4.74(1.87)	5.96(1.19)	5.83(1.64)
Injured American	5.32(1.09)	3.43(1.76)	6.03(.93)	4.58(1.61)	5.42(1.56)	5.38(1.35)
Rescued American	5.39(.92)	3.23(1.76)	5.80(1.00)	4.68(1.84)	5.36(1.93)	6.04(1.59)

Note. Means and SDs were shown in Table 2.1 and Table 2.2.; all variables were measured in seven-point scale, with 1 represented the least/lowest and 7 represented the most/highest level of response of the measured variable.

Disaster-related news consumption was also overwhelmingly high ( $M = 5.53$ ,  $SD = 1.17$ ), with 83.3% participants reporting disaster news consumption as more than 4 (mid-point of the seven-point scale) and 27.1% rated themselves as extremely caring about disaster related news (7 out of seven-point scale). Participants' personal compassionate traits were a little higher ( $M = 3.51$ ,  $SD = .52$ ) than 2.5 (mid-point out of the five-point scale). No gender differences in terms of personal compassionate traits. General descriptions of all other variables were showed in Table 2.

### **Manipulation check**

To be sure that participants perceived the stimuli in the way the investigator intended, a manipulation check was performed by analyzing the participants' responses on questions concerning the content of the stories they read. The findings were as follows:

*Age and gender.* Four participants failed to correctly identify the age and gender of the victim portrayed in experiment 1. This indicated that the respondents might not have paid close attention to the stimuli, or the answers he/she made were not mainly a result of the perceptions of the age/gender manipulations. The data provided by these four participants was thus excluded from the final analysis.

*Physical severity.* ANOVA results indicated that the manipulation of physical severity performed well. Participants perceived the dead victim ( $M = 6.25$ ,  $SD = .98$ ) was more serious than the injured ( $M = 5.57$ ,  $SD = 1.23$ ) and rescued victims ( $M = 5.38$ ,  $SD = 1.38$ ),  $F(2,171) = 8.12$ ,  $p < .01$ . But perceived seriousness was not significantly differentiated between the injured and the rescued victims. This showed that participants' paid attention of the manipulation of victims' degree of physical severity (dead, injured, survival) at the body text and derived their perception of physical severity accordingly.

*Cultural proximity.* An independent-sample T-test demonstrated that the manipulation of cultural proximity performed well. Participants perceived Hurricane Ika as more physically proximate ( $M = 3.86, SD = 1.87$ ) than the Indian Ocean Tsunami ( $M = 2.45, SD = 1.12$ ),  $t(172) = 6.02, p < .001$ , which means participants noticed that one was a domestic disaster and the other was a foreign disaster.

### **Primary analysis**

First, a principal component factor analysis was used to examine the internal statistical structure of scales. As the factor matrix in Table 3 indicated, four clear factors—compassion, perceived innocence, perceived proximity, and perceived seriousness were emerged. Items 1 through 9 described the factor of compassion. The reliability coefficient (Cronbach's alpha) for the nine-item scale was .93 in experiment 1 and .96 in experiment 2. Items 10 to 15 in Table 3 reflected the factor of perceived innocence. The reliability coefficient was  $\alpha = .79$ . The third factor consisted primarily of items 16 through 19, which concerned the participants' perceived proximity. The reliability coefficient for these five items was  $\alpha = .93$ . The last factor, perceived seriousness, tended to be well loaded by items 20 through 23, with a reliability score of  $\alpha = .94$ . As can be seen, the four measurements were independent from one another and item loadings were all moderate to strong on each respective factor. Items referred to each factor were in line with the questions in the questionnaire that proposed to measure the specific variable. Only one question, "I would want to spend time with him so that I can find ways to help", came out as a very low correlation  $r = .547$ , and was excluded from the final analysis. Next, each factor's final score was summed by averaging the scores of all corresponding items (Batson, et. al., 2005). Because individual compassion was measured separately in experiment 1 and experiment 2, it was calculated separately.

Table 3

*Factor analysis results for items related to the proposed model of compassion*

	Varimax Rotated Component Matrix			
	Compassion	Innocence	Proximity	Seriousness
1) Compassionate	.892			
2) Sympathetic	.873			
3) Warm	.833			
4) Touched	.903			
5) Moved	.899			
6) I feel a great deal of compassion for him.	.868			
6) I would rather suffer myself than to see his/her suffer	.909			
7) I would engage in action to help	.886			
9) I would like to be kind and good to him/her	.810			
10) The person is not self-responsible for his own plight		.698		
11) The person is no fault of his/her own for his suffering		.751		
12) The person is incapable of avoiding the misfortune		.710		
13) The situation is not manageable by the person		.767		
14) The situation is beyond the power of the person		.773		
15) The person is not able to change the current situation by his/her own.		.801		
16) I'm similar to the victim			.915	
17) The person and I are part of the same group			.922	
18) I would use the term "we" to describe me and the victim			.939	
19) The victim and I are connected			.877	
20) The situation is serious.				.943
21) The person is suffering				.915
22) It is necessary to help				.886
23) It urgent to do something for him/her portrayed in the picture in				.941

Two Pearson-correlation analyses were conducted to examine the bivariate relationships between the variables of interest in the two experiments respectively. The purpose of the Pearson Correlation test was to draw a primary picture about the relationships between independent and dependent variables. Results of the correlation tests were expected to provide a general direction for hypotheses and research questions test. It also helped to indicate whether and how alternative factors were evident out of the proposed model.

Individual compassion, antecedents of compassion, other cognitive assessments (e.g. perceived attractiveness, perceived likability, and perceived sadness of the victims), and the covariates (e.g. personal disaster experiences, disaster news consumption, and individual compassionate traits) were all included in the Pearson-correlation matrix.

Table 4.1  
Pearson correlation of the Variables related to compassion in experiment 1

	1	2	3	4	5	6	7	8
1. Compassion	-							
2. Perceived Innocence	.45**	-						
3. Perceived Attractiveness	.13	-.02	-					
4. Perceived Likability	.13	-.05	.50**	-				
5. Perceived Sadness	.21**	.18*	-.30**	.07	-			
6. Personal Experiences	.10	.03	.01	.04	-.04	-		
7. Disaster news consumption	.14	.06	-.06	-.01	.04	.38**	-	
8. Personal Compassionate Trait	.07	-.10	-.10	-.12	-.05	.18*	.39**	-

\*p<.05, \*\*p<.01, \*\*\*p<.001.

Table 4.2  
Pearson correlation of the variables related to compassion in experiment 2

	1	2	3	4	5	6	7	8	9
1. Compassion	-								
2. Perceived Seriousness	.75**	-							
3. Perceived Proximity	.28**	.14	-						
4. Perceived Attractiveness	.010	.24**	-	-					
5. Perceived Likability	.01	-.01	-.09	.36**	-				
6. Perceived Sadness	.17*	.18*	.16*	.09	.37**	-			
7. Disaster experiences	.03	.04	-.01	-.03	.01	-.01	-		
8. Disaster news Consumption	.23**	.22**	.15*	-.08	-.01	-.05	.34**	-	
9. Personal Compassionate Trait	.20**	.14	.03	-.14	-.02	-.11	.18*	.39**	-

\*p<.05, \*\*p<.01, \*\*\*p<.001.

As Table 4.1 and 4.2 showed, compassion was positively related to perceived innocence, perceived seriousness, and perceived proximity. This suggested that the three hypothesized factors were significantly related to compassion. Further, the perceptions of the victims' sadness emerged as a consistent correlator to compassion, perceived innocence, perceived seriousness, and perceived proximity. The perception of attractiveness and likability was only mutually related to each other. This group of correlations suggested that perceived sadness might play a role in the model of compassion as it was related with both compassion and its main antecedents. Past disaster experience was only related to peoples' disaster news consumption and personal compassionate traits. Personal compassionate traits were not related to peoples' compassionate response in experiment 1, but was evident as a close correlator under the context of experiment 2. This result suggested an inconsistent role of the personal compassionate traits in the model of compassion.

In summary, the correlation matrix suggested a probable association between compassion, compassion antecedents, and a few covariates. Thus, the following analysis started with the hypotheses and research questions test and evolved to explore the influences of alternative factors on compassion and its antecedent factors.

### **Hypothesis and research question tests**

#### *Compassion as related to perceived innocence and victims' age and gender*

The first set of hypotheses and research questions examined the relationships between compassion, perceived innocence, and victims' age and gender. As indicated previously, the whole sample of 174 participants was randomly assigned to one of the six test conditions in experiment 1, with 26 in the condition of a boy victim, 29 of a girl victim, 30 of a man victim, 28 of a woman victim, 21 of an elderly man victim and 30 of an elderly woman victim. The data was further categorized according to age and gender. In the age group, the conditions of the boy and girl victims were recoded as young victims ( $N = 55$ ), the conditions of the man and woman victims were recoded as adult victims ( $N = 58$ ), whereas the conditions of the elderly man and woman victims were recoded as senior victims ( $N = 61$ ). In the gender group, the conditions of the boy, man, and elderly man victims were recoded as male victims ( $N = 87$ ), and the other conditions of the girl, woman, and elderly woman victims were recoded as female victims ( $N = 87$ ).

H1 proposed that individual compassion would be positively related to perceived innocence toward the victims. A linear regression analysis was performed, and the result indicated a significant association between perceived innocence and compassion ( $F(1, 172) = 24.72, \beta = .54, R^2 = .15^1, p < .001$ ). Thus, H1 was supported.

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<sup>1</sup> All  $R^2$  reported in the present research were adjusted  $R^2$ .

H1a and H1b predicted that perceived innocence would be varied by the age and gender of the victims. In particular, H1a predicted that the young and the senior victims would be perceived as more innocent than the adult victims and H1b hypothesized that female victims would be regarded as more innocent than male victims. A Univariate analysis was performed which supported a main effect of age on perceived innocence ( $F(2,171) = 6.98, p < .001$ ), but no effect of gender on people's perception of innocence ( $t(172) = 1.74, p = .053$ ). Therefore, H1a was supported and H1b was rejected. As H1 predicted, age was a main factor that influenced the perceived innocence. A Post Hoc analysis further indicated that perceived innocence toward adult victims ( $M = 5.28, SD = 1.02$ ) was significantly lower than that toward children ( $M = 6.49, SD = .86$ ) and senior victims ( $M = 5.75, SD = 1.10$ ), but no significant differences were found between the children and the senior victims group. It is important to note that even as adult victims were rated as the least innocent, the average innocent score was more than 5, which was highly above the mid-point ( $M = 4$ ) of the seven-point scale<sup>2</sup>. In other words, participants inevitably regarded disaster victims as innocent, but also clearly distinguished between the most and the least innocent victims according to their age.

The result, however, indicated a significant interactive effect between victims' age and gender on peoples' perceived innocence ( $F(2, 171) = 3.46, p < .05$ ). As figure 2 showed, the influences of victims' gender on perceived innocence depended on victims' age. In particular, for the young and the adult victims, female victims were not perceived as more innocent than male victims. However, elderly women ( $M = 6.20, SD = .92$ ) were perceived as much more innocent than elderly men ( $M = 5.32, SD = 1.09$ )

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<sup>2</sup> A one-sample T-test indicated that the perceived innocence of adult victims was significantly higher than the midpoint of the 7-point scale,  $t(47) = 8.72, p < .001$ .

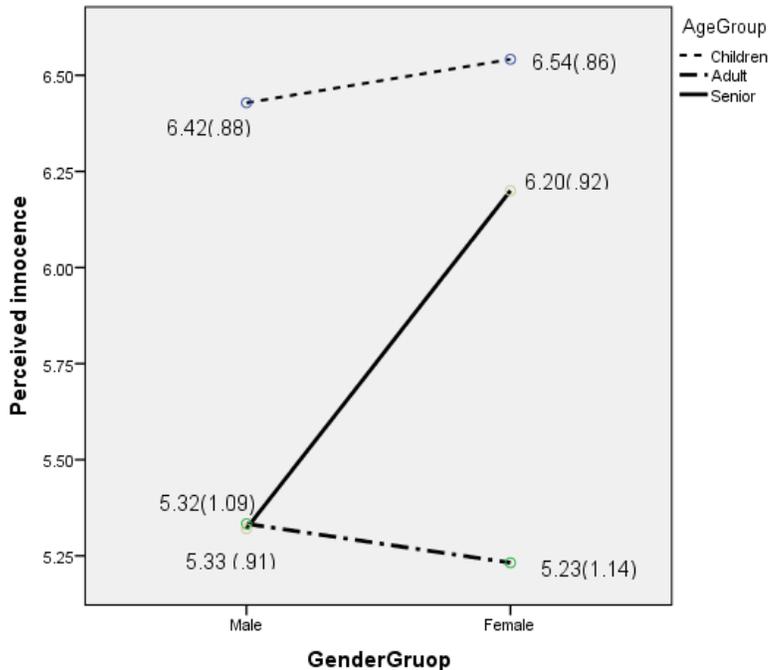


Figure 2 The interactive effects between age and gender on perceived innocence  
 † Means and SDs as shown in the figure.

RQ1 asked how the victims’ age and gender related to compassion. A Univariate analysis was performed using compassion as the dependent variable and the age and gender of victims as independent variables. The age group emerged as the only main factor of peoples’ compassion ( $F(5, 168) = 13.39, p < .001$ ). Specifically, adult victims received the least amount of compassion ( $M = 3.76, SD = 1.59$ ), which was significantly lower than compassion associated with the senior victims ( $M = 4.58, SD = 1.56$ ) and children victims ( $M = 5.30, SD = 1.36$ ). Individual compassion toward the senior and children victims were not significantly differentiated from one another. No interaction effects were found regarding the age and gender groups on compassion.

The above analysis indicated that different types of news coverage about disaster victims, such as the manipulations of victims’ age and gender had a direct impact on people’s perceived innocence, which in turn, influenced the variances of compassion. The following questions are, are there any alternative factors, such as individual differences, news consumption habits, and/or

subjective perceptions other than perceived innocence that would emerge as predictors? To answer this question, a hierarchical linear regression was performed, using mediated victims' characteristics (age<sup>3</sup> and gender), participants' characteristics (participants' gender, personal disaster experiences, personal compassionate traits), subjective perceptions (perceived innocence, attractiveness, sadness and likeliness), and news consumption habits (disaster news consumptions) as independent variables.

Table 5  
*Summary for hierarchical linear regression analysis for variables predicting compassion (experiment 1)*

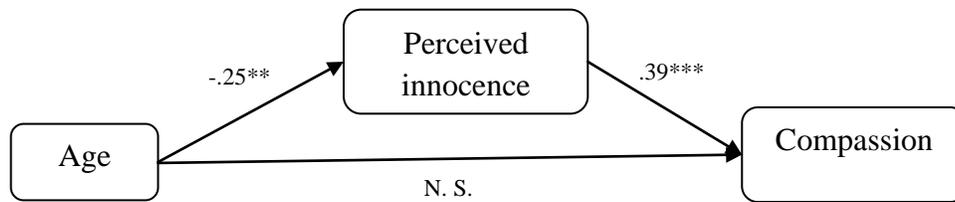
Variables	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Victims' Age	1.23	.26	.37***	1.29	.25	.39***	.91	.26	.27**	.96	.27	.29***
Victims' gender	.42	.24	.13	.35	.24	.11	.21	.23	.07	.17	.23	.05
Participants' gender				-.47	.26	-.21**	-.69	.25	-.17	-.65	.25	-.17
Personal disaster experiences				.28	.12	.18*	.22	.12	.13	.15	.13	.09
Personal compassionate traits				.23	.24	.08	.24	.23	.08	.11	.25	.04
Perceived innocence							.43	.12	.31***	.42	.12	.30***
Perceived attractiveness							-.05	.07	-.07	-.05	.07	-.07
Perceived sadness							-.02	.08	-.02	-.01	.08	-.01
Perceived likeliness							.01	.09	.01	.02	.09	.01
Disaster news consumptions										.17	.12	.13
Adjusted R <sup>2</sup>		.15			.19			.25			.25	
F for change in R <sup>2</sup>		13.30***			3.51*			3.60**			.01	

\*p<.05, \*\*p<.01, \*\*\*p<.001.

As Table 5 showed, for all variables measured in experiment 1, compassion was only predicted by the portrayal of victims' age and participants' perceive innocence. Since the two

<sup>3</sup> Victims' age group was dummy coded, with adult = 0, children and senior victims =1.

variables were associated with each other (see results of H1a), it is necessary to further test the relationships among the three variables. A general linear model command (GLM) was performed, with compassion as the dependent variable, victim's age as the independent variable, and perceived innocence as the covariate. When all factors came together, the associations between the age group and compassion disappeared, which means victims' ages were related to individual compassion only through the mediation of perceived innocence. The exact relationships between the three variables were shown in figure 3.



*Figure 3* Perceived innocence as mediator between victims' age and participants' compassion. <sup>†</sup>  $\beta$  and p value as shown in the figure; victims' age group was dummy coded, with adult = 0, children and senior victims = 1; unadjusted means of the age groups were: M adult = 3.76; M children/senior = 5.00; adjusted means M adult = 4.09, M children/senior = 4.52; \*  $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

In summary, experiment 1 found that 1) photographic portrayal of victim's age and gender had a direct impact on participants' perceived innocence, which in turn, was 2) the only direct predictor (out of all measured variables) of compassion; 3) victim's age influenced compassion but only through the mediation of perceived innocence, 4) victim's gender influenced perceived innocence through its interaction with victims' age, but had no direct influence on compassion.

*Compassion as related to perceived proximity and cultural similarity*

Experiment 2 examined the two sets of relationships. One was the relationships between compassion, perceived proximity, and the degree of cultural similarity between disaster victims and viewers; the other was the relationship between compassion, perceived seriousness, and the

victims' degree of physical severity. This was a 2 (cultural similarity: high vs. low) X 3 (physical severity: dead, injured, rescued) factorial design. The 174 participants were randomly assigned to one of the six test conditions, with 28 in the condition of a dead U.S. victim, 29 of an injured U.S. victim, 30 of a rescued U. S. victim; 28 of a dead Asian victim, 29 of an injured Asian victim, and 30 of a rescued Asian victim.

The data was further categorized into two ways: the physical severity group and the cultural similarity group. In the physical severity group, the dead U.S. and dead Asian victims were recoded as the dead victims ( $N = 56$ ), the injured U.S. and injured Asian victims were recoded as the injured victims ( $N = 58$ ), and the rescued U.S. and Asian victims were recoded as the rescued victims ( $N = 60$ ). Because injured and rescued victims were very close in almost all measured variables (see Table 2.1), the two categorizations were further collapsed into the group of survived victims ( $N = 118$ ). In the cultural similarity group, the dead, injured, and rescued U.S. victims were recoded as the U.S. victims ( $N = 87$ ), and the reminder of dead, injured, and rescued Asian victims were recoded as the Asian victims ( $N = 87$ ).

The second set of hypotheses and research questions examined the relationships between peoples' compassion, perceived proximity, and victims' cultural similarity. H2 predicted that compassion would be positively related to perceived proximity toward the victims. A single linear regression analysis was performed, and the result indicated a significant but weak association between perceived proximity and compassionate response ( $F(1, 172) = 5.27, \beta = .14, R^2 = .04, p < .05$ ). Therefore, H2 was supported.

H2a predicted that participants' perceived proximity would be associated with the degree of cultural similarity between the victims and the viewers. The result of an independent sample T-test confirmed that peoples' perceived proximity significantly varied by the cultural similarity

of victims ( $t(142) = 3.74, p < .001$ ). As H2a predicted, the U.S. victims were perceived as more proximate ( $M = 3.42, SD = 1.76$ ) than the Asian victims ( $M = 2.47, SD = 1.21$ ). However, even for the U.S. victims, the average proximity score was below the mid-point ( $M = 4$ ) out of the seven-point scale. This might be partially due to the reason that the victim was described as a 12-year-old boy whereas the majority (64.4%) participants were 17-24 year old females. The result of a t-test confirmed that female participants ( $M = 2.65, SD = 1.44$ ) rated the victims as less proximate than male participants ( $M = 3.41, SD = 1.68$ ) did ( $t(172) = 2.86, p < .01$ ). When only data from male participants were analyzed, perceived proximity for U.S. victims increased to  $M = 4.05 (SD = 3.46)$  and for Asian victims also increased to  $M = 2.84 (SD = 1.49)$ . The results indicated that congruent gender between the participants and the victims increased the perceived proximity, although not significantly. A Univariate analysis was performed, with cultural similarity and participant's gender as independent variables and perceived proximity as dependent variables. The result, however, found no interaction. Thus, cultural similarity was the only factor, out of all variables measured in the present research, influenced participants' perception of proximity. H2a was supported.

RQ2 asked how the victims' cultural similarity related to compassion. An independent sample T-test was performed but no significant effect was found. Thus, the degree of cultural similarity between the victims and the participants did not significantly influence individual compassion toward the victims. In other words, it is perceived proximity rather than the actual cultural similarity that affected peoples' compassionate response.

#### *Compassion as related to perceived seriousness and physical severity*

The third set of hypotheses and research questions examined the relationships between peoples' compassion, perceived seriousness, and victims' physical severity. As mentioned above,

the six test conditions were recategorized into two groups according to the extent of physical seriousness: The dead victims group ( $N = 56$ ), and the surviving victims group ( $N = 118$ ).

H3 proposed that perceived seriousness would be varied by the extent of physical severity. The results of a t-test indicated significant differences of perceived seriousness by victims' degree of physical severities ( $t(142) = -.30, p < .001$ ). In particular, dead victims ( $M = 6.31, SD = .96$ ) were perceived more seriously than surviving victims ( $M = 5.68, SD = 1.25$ ). Therefore, H3 was partially supported.

H3a predicted that individual compassion would be positively related to perceived seriousness of suffering. The result of a linear regression analysis indicated a strong association ( $F(1,172) = 57.57, \beta = .62, R^2 = .34, p < .001$ ). Therefore, H3a was supported.

H3b assumed that individual compassion would be varied by the physical severity of the sufferers. The results of a t-test indicated that compassion was slightly but significantly varied by the portrayal of victim's physical severity ( $t(142) = -.22, p < .05$ ). Dead victims ( $M = 5.66, SD = 1.25$ ) elicited more compassion than survived victims ( $M = 5.21, SD = 1.13$ ) did. However, what is not clear is, did victims' physical severity influence compassion directly, or functioned only through the mediation of perceived seriousness? To explore the relations among these variables, a GLM test was performed, with compassion as the dependent variable, victims' physical severity as the fixed factor, and perceived seriousness as the covariate. After perceived seriousness entered the model, the associations between victims' physical severity and participants' compassion disappeared, which means victims' physical severity influenced compassion only through the mediation of perceived seriousness. The exact relationships between the three variables were showed in figure 4.

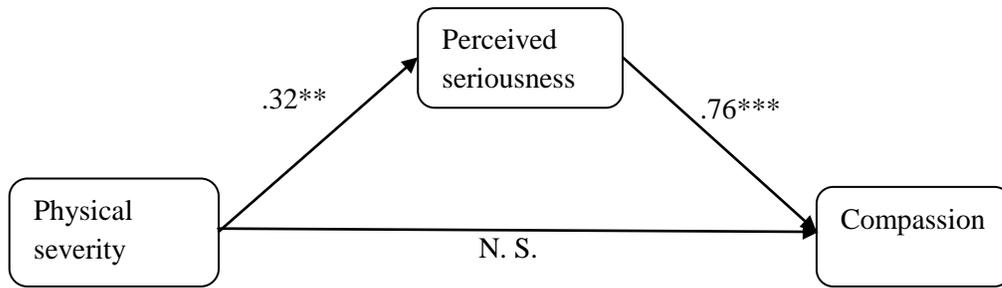


Figure 4 Perceived seriousness as mediator between victims' physical severity and participants' compassion.

<sup>†</sup>  $\beta$  and p value as shown in the figure; unadjusted means of the physical severity were: M dead = 5.66; M survived = 5.21; adjusted means M dead = 5.37, M survived = 5.34; \*  $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

The examination of hypotheses and research question in experiment 2 found that different portrayal of disaster victims influenced people's perceptions, which further predicted the variances of compassion. The left questions are, could the portrayal of victims' cultural similarity and physical severity influence compassion directly? Are there any alternative factors that would emerge as new predictors? To answer these questions, a hierarchical linear regression was performed, using mediated victims' characteristics (cultural affiliation and physical severity), participants' characteristics (participants' gender, personal disaster experiences, personal compassionate traits), subjective perceptions (perceived proximity, seriousness, attractiveness, sadness and likeliness), and news consumption habits (disaster news consumptions) as independent variables.

As table 6 shows, besides perceived proximity and perceived seriousness, personal compassionate traits emerged as an alternative predictor of compassion beyond the variables proposed in the theoretical model.

Table 6

Summary for hierarchical linear regression analysis for variables predicting compassion (experiment 2)

Variables	Model 1			Model 2			Model 3			Model 4		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$
Victims' cultural affiliation	.07	.20	.03	.07	.19	.03	-.21	.15	-.09	-.21	.15	-.09
Victims' physical severity	.23	.11	.18*	.17	.10	.14	-.04	.08	-.03	-.04	.08	-.03
Participants' gender				.10	.20	.04	.06	.16	.03	.06	.16	.03
Personal disaster experiences				.01	.10	.01	-.01	.07	-.01	-.01	.08	-.01
Personal compassionate traits				.66	.02	.28**	.37	.15	.16*	.37	.16	.16*
Perceived proximity							.14	.06	.18**	.14	.05	.18**
Perceived seriousness							.65	.06	.66***	.65	.07	.67***
Perceived attractiveness							.03	.04	.04	.03	.04	.05
Perceived sadness							.08	.06	.10	.08	.06	.10
Perceived likeliness							-.05	.05	-.07	-.05	.05	.10
Disaster news consumptions										-.01	.07	-.01
Adjusted R <sup>2</sup>		.02			.09			.52			.52	
F for change in R <sup>2</sup>		2.43			4.46**			25.70***			.03	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

To find the exact role of personal compassionate traits in the model, a GLM test was performed, with compassion as the dependent variable, perceived proximity and perceived seriousness as independent variables, and personal compassionate traits as the covariate. The result indicated that personal compassionate traits ( $\beta = .11, p < .05$ ), together with perceived proximity ( $\beta = .08, p < .05$ ) and perceived seriousness ( $\beta = .52, p < .001$ ), explained 37.4% of the variance in individual compassion toward the victims ( $F(3, 170) = 21.95, R^2 = .37, p < .001$ ). The interactive effect between personal compassionate traits and perceived seriousness significantly

influenced compassion ( $t = 2.37, \beta = .04, p < .05$ ), which means personal compassionate traits positively moderated the relationship between perceived seriousness and compassion (see figure 5).

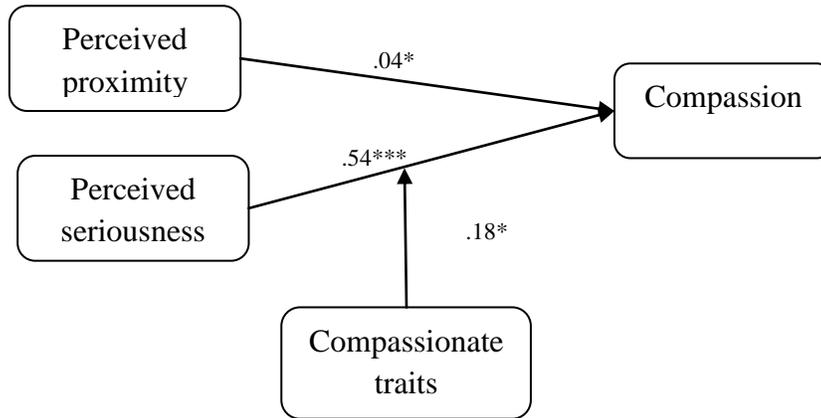


Figure 5 Relationships between perceived proximity, perceived seriousness, personal compassionate traits and compassion.

<sup>†</sup>  $\beta$  and p value as shown in the figure; \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

The results of the GLM test showed that among all three factors, perceived seriousness was the strongest predictor, which explained 33.9% of the variances in compassion, the other two factors were equally important, each increased 1.6% of the explanatory power of the whole model. It is important to point out that the percentage of compassion variances explained by the model in experiment 2 was relatively high especially the contribution of perceived seriousness on compassion. Because the role of perceived seriousness was consistently strong in explaining variances of compassion with and without covariates, it was less likely to be a statistical error. It might be due to the selection of stories that described a boy as either dead, injured or rescued from a major disaster. The manipulated variable was physical severity but the elements contained in the story were actually a mix of both the “boy” as the ideal innocent and the “victim” with different degrees of physical severity. Thus, the perceived seriousness measured in the research was in fact a mixed perception of perceived seriousness and perceived innocence. This might

help to explain the large portions of variances of compassion as explained by the model. It might also be a result of the uniqueness of the participants who had an equivalently high level of disaster experiences. Their personal experiences of lost friends, schoolmates or community members might leave them a distinct compassion differential between the dead victims and the survived sufferers. There might also be other underlying reasons, which need further examination and exploration.

In sum, experiment 2 found that 1) news portrayal of victims' cultural affiliation and physical severity age and gender had a directly impact on perceived proximity and perceived seriousness respectively, which in turn, 2) predicted the variances of individual compassion; 3) victim's physical severity influenced compassion but only through the mediation of perceived seriousness, 4) degree of cultural similarities between victims and viewers influenced perceived seriousness, but did not have direct influence on compassion; 5) personal compassionate traits emerge as an important moderator of the relationships between perceived seriousness and compassion.

The results of all hypotheses, research questions and the examination of factors were listed in table 7.

Table 7  
Summary results of hypotheses and research questions

Hypotheses		Relationships of Variables		
<i>Main factors and compassion</i>		F	$\beta$	R <sup>2</sup>
H1	Perceived innocence positively influenced individual compassion	24.72***	.54***	.15
H2	Perceived proximity positively influenced individual compassion	5.27*	.14*	.04
H3a	Perceived seriousness positively influenced individual compassion	57.57***	.62***	.34
<i>Manipulations and main factors</i>		F		
H1a	Relationship between age and perceived innocence	16.98***		
H1b	Relationship between gender and perceived innocence	3.15*		
RQ1	Relationship between age and compassion	13.39***		
	Relationship between gender and compassion	1.96		
H2a	Positive relationships between cultural similarity and perceived proximity	3.74***		
RQ2	Relationships between cultural similarity and compassion	.352		
H3	Positive relationships between physical severity and perceived seriousness	4.55*		
H3b	Positive relationships between physical severity and compassion	2.38		
<i>Mediators/Moderators</i>				
Innocence	Mediator between age and compassion			
	<i>Age and Innocence</i>	3.15*		
	<i>Innocence and compassion</i>	24.72***	.54***	.15
Personal compassionate trait	Moderator between perceived proximity, seriousness and compassion			
	<i>Personal compassionate trait</i>	12.21**	.87**	.010

\*p<.05, \*\*p<.01, \*\*\*p<.001.

## CHAPTER 5

### DISCUSSION

This dissertation examined compassion and its antecedents under the context of disaster communication, and it had several purposes. First, it sought to identify the construct of compassion as a psychological construct—its nature, cognitive antecedents, and relations with other factors of news portrayal of disaster victims. Previous social-psychological research has explored such topics but has not examined these correlated factors systematically. The current research tried to propose an overall model (as indicated by figure 1) by examining the above factors together. Second, previous findings and models about compassion and its antecedents were mostly social-psychological experiments under laboratory environments. The current research extended compassion-related research into the field of disaster communication so as to investigate the applicability of established models as embedded in media practice and under the public context. Finally, the current study tried to explore the operationalized predictors of compassion, particularly factors commonly used in communication research, such as age, gender, cultural similarity, etc. It also used typical materials and method of communication research by asking participants to read stories, view pictures, and report their perceptions toward the stimuli. All of such efforts aimed to increase the comparability of compassion, a construct long been dominated by sociological and psychological methods, with the established paradigms of communication research.

This dissertation started by conceptually defining natures, concepts, and antecedents of compassion. Based on a previous review, a basic model was proposed. That is, compassion was theoretically related to three main antecedences: Perceived innocence, perceived proximity, and perceived seriousness. Then, studies in the areas of social psychology, sociology, and mass communication were reviewed, thereby identified the specific predictors of each antecedent of compassion. A series of hypotheses and research questions were then proposed and examined through two experiments. The results supported the basic model: Individual compassion was positively associated with peoples' perceived innocence, perceived proximity, and perceived seriousness. Predictors of these three antecedents of compassion were also fully or conditionally supported. Alternative factors, such as personal compassionate traits emerged as a moderator of the relationship between perceived seriousness and compassion, which added new element to the proposed model. Each of these findings is discussed below.

### **Compassion, antecedents, and manipulations**

The main finding of the current research was the confirmation of the proposed model of compassion, that is, peoples' perceived innocence, perceived proximity, and perceived seriousness were three main factors that influence compassion. In particular, perceived seriousness was the strongest predictor, followed by perceived innocence, and perceived proximity was only weakly associated with compassion.

#### *Compassion as related to perceived innocence and victim's age and gender*

As predicted, perceived innocence was strongly associated with the extent of compassion that people felt toward the victims. The perceived innocence consisted of perceived inculpability and perceived uncontrollability. The former dealt with a sense of not being responsible for one's own misfortune, and the latter was associated with a perception of being

unable to avoid the suffering or to change the plight singlehandedly. After viewing the pictures of victims, participants developed their own judgment about the victims' extent of innocence, which further influenced the degree of individual compassion. This result had two implications. First, it distinguished compassion from basic emotions, such as anger, fear, excitement, etc. This is because individual has some innate physical responses toward external stimuli—particularly threats and dangers— such as the increased blood pressure, muscle tension, adrenal hormone, etc., which do not necessarily require cognitions. These kind of physical responses usually, although inevitably accompanied with some basic emotions, or “gene-oriented” emotion, such as anger and fear, which are primarily physical brain states that arise from the recognition of certain environmental stimuli, and which aimed to facilitate species survival perpetuation of genes (Sheenhan, 2003). In contrast, as the results of this study showed, compassion was not directly influence by external stimuli— the portrayal of disaster victims, but rather a complex emotional experience based on primarily cognitive judgments about the victims' extent of innocence, proximity, and seriousness. Thus, it could reasonably state that compassion was a kind of social reaction that was above a basic emotional response.

Second, the judgment of innocence suggested that compassion contained a dimension of moral judgment, which was different with other similar constructs such as empathy and pity. For example, people might feel pity for the death of a criminal or the bankruptcy of a speculator, but they would barely feel sorry for them or feel an obligation to aid them. Compassion, on the other hand, contained a willingness to help because the victims were regarded as innocent from their own misfortunes. This echoed Weber's (2004) statement that compassion was a noble emotion that contained a moral evaluation of the victims as “free from fault or innocent of guilt” (p.493).

As for the factors influencing perceived innocence, the portrayal of victims' age emerged as a strong predictor, while victims' gender functioned only through its interaction with age. In particular, children and senior victims were regarded as more innocent than the adults. As the participants comments showed, children and seniors were usually regarded as "too young/too old to change their misfortunes", as "no fault of their own for the sufferings" and "have no power to change the current situation at all". In contrast, adults, particularly adult men, although regarded as "sad" and "tired," were mostly rated as more capable to manage the unfortunate conditions, or as somewhat self-responsible for their own suffering, and thus, less innocent.

Victims' gender conditionally affected the perceived innocence via its interaction with the victim's age. Specifically, gender did not make a difference on perceived innocence of the young and the adult victims, but elderly women were rated as much more innocent than elderly men. Among the comments at the end of experiment 1, elderly men victims were mostly described as "He looks tired", "sad" or "helpless", whereas elderly women were usually associated with expressions of sorrow ( e.g. "I feel extremely sorry for her"), pity ( "her situation is terrible") or willingness to help ("Her face reminds me of my grandma. I would like to help her if I can"). This might be due to established stereotypes of age and gender as social constructs (Deming, 1992; Eisend, 2010; Herndon, 2001, Knobloch-Westerwick & Hoplamazian, 2012; Murdock & Kinsky,1982). For the young victims who were regarded as asexual, whether the victim was a boy or a girl did not change the high level of perceived innocence. For adult victims who were supposed to be primarily self-responsible, women were not perceived as much more innocent than men. Compassion toward seniors indicated a mixed influence of both age and gender. On one hand, seniors are viewed as vulnerable and societal care; on the other hand,

sexual role was one of the many factors that helped to distinguish the weaker female seniors from the male seniors.

This finding suggested the role of news portrayal of victims' characteristics on peoples' judgment of innocence. The fact that adult males were perceived as the least innocent is congruent with views on modern masculine culture, which sees the role of men as guardians of the young, the old and females (Eagly, Beall, & Sternberg, 2004). Such sexually-typed social norms lead to a stereotyped perception that adult men are more capable of controlling their fate or to change their plight, and hence more blameworthy as being a helpless victim. This result also provided empirical evidences for the observational findings of "the hierarchy of innocence" (Moeller, 1999, 2002). While Moeller only observed the phenomenon of hierarchical innocence that started from children, pregnant women, to teenagers, elderly women, and ended with adult men, the present research identified age and gender as two specific variables, as well as their influences on perceived innocence.

*Compassion as related to perceived proximity and victim's cultural similarity*

The weakest predictor ( $r = .281$ ) occurring among the three antecedents of compassion was perceived proximity. To a certain extent, this finding only slightly supported previous literature which suggested a discriminate compassion toward similar versus different others. There might be several underlying reasons.

The first reason might be due to the limited reliability of psychological experiments. As mentioned above, most research concerning the role of perceived proximity on compassion involved social-psychological studies in laboratory environments. Participants usually confronted victims either extremely similar or dissimilar with himself/herself and reported polarized compassion as either very high or very low. The connections found between perceived

proximity and compassion might be reasonable to decrease in effect size in mediated communication when participants' similarities with the victims were less polarized and their compassionate responses were not greatly disparate. As the statistic results showed, the variances of perceived proximity ( $V = 2.49$ ) and compassion ( $V = 1.39$ ) were in a small to medium level, which might limit the effect size between each other. Had both variables exhibited a larger degree of variances, a stronger relationship might have been found.

The second reason might be because of the uniqueness of disaster communication. It was probable that perceived proximity was not a strong predictor of compassion as for mediated communication of natural disasters, because once mass media constructed a narrative context, participants could usually find certain extents of similarities with the victims. Take the current research for example, even though cultural similarity was intentionally controlled, other factors, such as age, gender, disaster experiences, etc., all helped to build a degree of proximity. Thus, perceived proximity was not extremely different between "others" (victims of Indian Ocean Tsunami) and "us" (victims of Hurricane Ika). Moreover, the unique context of disaster communication helped to prevent a huge disparity of compassion. Compared with the physical personal sufferings, such as electronic shock in pervious psychological studies (e.g. Batson, et. al., 1979), the sufferings endured by victims of huge natural were more easily understandable because of the distributions of natural disasters worldwide. Especially since most participants in the current research had personal experiences of huge natural disasters one year before, they tended to easily share the feeling of the victims as well as to generate compassion towards them. The easily established proximities and compassion resulted in small variances of both perceived proximity and compassion, which might lead to a small discrepancy between the two variables. On one hand, further studies using participants with diverse levels of disaster experiences might

find a stronger relationship; on the other hand, it cannot exclude the possibility that the perceived proximity was only a small predictor of individual compassion under the unique context of disaster communication.

Although the variances of perceived proximity were not very big, it was still significantly differentiated by the degree of cultural similarities between victims and viewers. Despite the fact that the victim was described as a 12-year old boy, whereas most participants were 17-24 year-old females who were different from the victims in terms of age, gender, physical locations, etc., cultural similarities still emerged as a significant influential factor of perceived proximity. This result confirmed the role of cultural similarity on perceived proximity. What is more important is the power of cultural similarity not offset by the different demographic features (such as age and gender) between the victims and the participants. This finding suggested the social dimension of perceived proximity, one that was cultivated by cultural principles and social norms. People clearly identified the social markers affiliated with the victims and showed discriminated perception of proximity toward those *inside* versus *outside* the same cultural circle.

Given than the manipulation of cultural similarity did not directly influence compassion, it was not sufficient to claim that compassion was socially shaped or culturally biased. The current research only demonstrated an indirect relationship between victims' cultural affiliation and individual compassion as mediated by perceived proximity. It is, however, reasonable to state that compassion contained a dimension of social judgment that favored the psychologically closer victims as opposed to distant victims. This judgment could result from cultural similarities, as manipulated in the current research, or be caused by other factors, such as age, gender, social background, similar interest, etc. Future research should diverse the manipulations of similarities to better explore the contributions of perceived proximity on individual compassion.

*Compassion as related to perceived seriousness and victim's physical severity*

The relationship between victims' physical severity, participants' perceived seriousness and the corresponding compassionate response was the clearest connection found in the current research. Victims' degree of physical severity directly influenced the viewer's perceived seriousness of their sufferings, which was in turn, positively associated with the feeling of compassion. A surprise finding was that the degree of physical severity failed to influence the extent of individual compassion, which means it was the perceived seriousness, rather than the actual degree of physical severity that determined peoples' compassionate response.

This finding had several implications. First, it indicated that compassion was a result of participants' perceived seriousness rather than the victims' actual degree of severity. This highlighted the complexity of compassion as being consisted of both objective observations and subjective evaluations. Because unlike the other two antecedents—perceived innocence and perceived proximity, which were subjective judgments based on personal experiences and social stereotypes, perceived seriousness was based on the objective fact: The victim was dead, injured or had survived. In such a case, compassion was partially a response to the victim's actual degree of sufferings. On the other hand, however, it directly resulted from ones' perceived seriousness, which, as pointed by Taylor and Loble (1989), were mostly an ego-centric process when one estimated others' situations through one's own point of view (Taylor & Loble, 1989). This finding suggested compassion as consisted of both an objective observation of the victims and a subjective evaluation of the viewer.

Second, compared with perceived innocence and perceived proximity, which were mostly products of social norms, perceived seriousness contained both a natural dimension and a social dimension. As of the natural dimension, the degree of compassion was indirectly but

positively related with the actual degree of the victim's physical severity. In this case, compassion was like a gene-oriented response (Sheenhan, 2003) resulted from the directed external stimuli. Compassionate individuals could be more easily and reliably experience how serious the peers were in suffering and how urgent the vulnerable other were in need, thus, could provide prompt assistance to the vulnerable others. Therefore, compassion would have directly increase the chances of offspring surviving and the prosperity of species reproduction (Goetz, et al., 2010). As of the social dimensions, compassion was directly associated with perceived seriousness, which might be influenced by multiple factors. The current research only manipulated the degree of physical severity, leading to an appearance that perceived seriousness was a simple reflection of objectivity. However, once additional factors were added in, the perceived seriousness might rely more on subjective judgment. For example, in pairs of sufferers such as a deceased adult man and an amputee baby, a traitor to be hanged and an injured soldier, a close friend who lost all his property and a Rwandan refugee who lost his family, ones' perceptions of seriousness might involve more complicated factors that relate to social norms, moral principles, personal values, etc. The cultural dimensions of perceived seriousness would be illustrated more clearly under those contexts. It is hoped that further research with more controllable variables might better explore the social and subjective dimensions of perceived seriousness and compassion.

#### **Alternative factors as evident in the model of compassion**

Besides the proposed three antecedents and the manipulated variables, personal compassionate traits emerged as a positive mediator of the relationships between perceived seriousness and compassion, which means perceived seriousness increased its impact on

compassion as personal compassion traits increased, as well as decreased its association with compassion for those who had a low level of personal compassion trait.

This finding is interesting because personal compassionate traits were a relatively stable personal trait, but moderated the relations of two immediate psychological constructs—perceived seriousness and compassion. It might demonstrate the construct of compassion as consisting of both cognitive-oriented and trait-oriented dimensions. That is, people’s compassionate responses were based on a series of primary judgment, such as perceived seriousness of the victims’ sufferings, but the real outcome varied from person to person, according to individual compassionate trait.

However, personal compassionate traits only affected the relationship between perceived seriousness and compassion, but did not impact the influences of the other two factors—perceived innocence and perceived proximity on compassion. It is interesting because perception of seriousness had a somewhat objective attribute—physical severity of the victims was evident, whereas perceived innocence and perceived proximity were mostly subjective evaluation based on social norms and personal preferences. Why there was a correlation between compassion and the relatively objective perception that was moderated by personal compassionate traits whereas no such relationships existed between subjective perceptions and compassion? The answer might be beyond the scope of the present research, but the findings suggested that personal compassionate traits were not a consistent influential factor of compassion. It seems that although compassion had a trait-like dimension, its functions still depended on the specific contexts. When the power of other cognitive perceptions, such as the degree of perceived innocence was strong enough, its contributions to compassion were rendered

as less significant; in other cases, it worked together with cognitive reactions, such as perceived seriousness to explain the variances of individual compassion.

### **Conclusions**

The current research empirically examined the theoretical constructs of compassion through experimental design. The results supported direct relationships between individual compassion and its antecedents, such as perceived innocence, perceived seriousness, and perceived proximity, but rejected all hypotheses regarding the relationships between compassion and news portrayal of victims, such as victims' age, gender, cultural similarity, and physical severity. The findings of this research have several implications.

In terms of academic research, it empirically supported the theoretical model of compassion. Variables predicted by theoretical frameworks were systematically examined and new factors were raised, suggesting a direction for scholars to modify and correct the established model. Second, the current research tested the applicability of the model of compassion under the particular context of disaster communication. On one hand, this research proposed an applicable model to this specific context; on the other hand, it set up an example for further research that aimed to test the theoretical model for other topics and under diverse environments.

For journalists, editors, and other media professionals, this research suggested some manipulated constructs as well as their impacts on individual compassion. For example, victims' age was the most effective factor, which influenced peoples' perceived innocence significantly and effectively. Cultural similarity could successfully influence perceived proximity but only a small portion of the effects remained for individual compassion. Thus, if the disaster news aimed to move rather than inform the public, an elaborate selection of the victims' age, gender, and

degree of physical severity might be more effective than working the victims' cultural background, attractiveness, and likability.

### **Limitations and further research**

Although the present study shed light on the way that the model of compassion constructed and functioned under the context of disaster communication, it was subject to several limitations. First, the sample used in the study is unique, which posed limitations of generalizability. For example, participants overwhelmingly identified themselves as 1) Christian, with 2) high level of disaster experiences, and 3) heavy disaster news consumptions. While this homogeneous population allowed for the isolation of variables that is not in the interest of this research, such as religion, disaster experiences, and news using habits, it did pose a risk that the findings of the current research would not be applicable to alternative populations and conditions. Further research using participants with diverse demographic backgrounds might find different results or would help to expand the applicable scope of the current study.

Another limitation of the sample was that the city where the university was located was hit by a huge tornado one year before, so most of the students had a similarly high level of disaster experiences. On the one hand, because personal experience was not the interest of the current research, participants' similar experiences served as a good control of this particularly variable. On the other hand, the high level of disaster experience further limited the generalizability of the findings to alternative samples. For example, past experiences of natural disasters failed to influence any variable as measured in the present research. This finding contradicted with other studies in other fields that proposed significant influences of past experiences on future behaviors (e.g. Ajzen, 1985; Ajzen & Fishbein, 2000). One reason might attribute to participant's similarly high level of disaster experiences, the small variances of which

failed to make differences on compassion. In particular, the homogeneously high level of disaster experiences might lead to ceiling effects that further diminish the explanatory power of personal disaster experiences on compassion. Future research with manipulation of individual experiences might find the exact role of past disaster experiences on individual compassion.

Another reason might be due to the inaccuracy of scales. The current research measured personal disaster experiences by asking participants to report the individual disaster experience of themselves, their close friends and family members. This instrument might be too general to find out the specific aspect of disaster experiences that matter for compassion. Further studies should use more detailed instruments to measure multiple items such as the degree of first-hand experiences, the extent of physical suffering, the amount of property loss, etc., so as to explore the exact relationships between personal experiences and compassionate response.

Also, the high homogeneity of past disaster experiences might impede the explanatory power of other minor factors that should play a role in compassion. For example, participants' gender was reported as a key predictor of compassion (e.g. Cundiff & Komarraju, 2008; Gladstein, 1977; Wang, Davidson, Yakushko, Savoy, Tan, & Bleier, 2003; ), but this effect failed to emerge in this study. It is possible that gender did not influence compassion under the unique context of disaster communication. However, it is also possible that the overwhelmingly high level of disaster experiences increased the compassionate experiences of both men and women, and this increase covered the gap of compassion that existed between genders. Thus, alternative samples with diverse levels of disaster experiences might find different answers.

Second, some manipulations of the current research were not strictly rigorous, which might influence the accuracy of the final results. For example, only elderly women were rated as more innocent than the elderly man. This finding, however, cannot exclude the confounding

caused by other factors in the pictorial portrait. For example, the elderly woman looked older than the elderly man, such that even in the senior group, perceived innocence toward the elderly woman was an effect of both age (older than the elderly man) and gender (female). It might also be due to the class differences deduced from the attire of the victims. The elderly woman wore a formal suit implying an upper-class affiliation, whereas the elderly man was in casual T-shirt, a symbol of the working, middle class. Although covariates, such as perceived attractiveness, sadness, and likeliness, did not differentiate between the elderly woman and elderly man (see Table 2.1), it still cannot exclude the potential confounding that derived from such factors or alternative elements.

Another variable that was not strictly controlled was the manipulation of cultural similarity. Because of the complex of social variables, it is hard to isolate one cultural dimension without the influences of others. For example, perceived proximity in the current research mainly resulted from the differences of victim's cultural affiliations (U.S. vs. Indonesia), however, it cannot exclude the influence of factors such as physical distances (disasters near vs. far from the participants), personal relevance (high vs. low related to the participants), degree of familiarity (that hurricane Ika was a fictitious never heard before, but the Indian Ocean Tsunami was a real events fully coverage by U.S media), etc. This is a limitation of using quantitative methods to operationalize social and cultural constructs, but a more rigorous control of variables might find more precise relations between variables.

Third, due to the small participant pool available in the summer, the experiment was carried in a loose condition. The investigator went to classrooms to conduct the research, thus, the external validity might be influenced due to different classroom settings, course atmospheres, and instructor policies. In particularly, because of the different class policies, 12.22% completed

the questionnaire at home and brought back to school the next class day. Although further analysis of these 22 samples did not indicate any significant differences with the left samples ( $\alpha=.87$ ), this was an unevadable limitation regarding the procedure of experiment. Further studies should have a more strict control of the external validity.

Lastly, because the same compassion measurement was used in both experiments, participants were thus repetitively exposed to the same scale regarding similar stories in a short time period, which might result in response fatigue that influenced the internal validity. To diminish this impact, the author randomized the order of stories, so that half of the participants started from experiment 1 and then experiment 2, and another half of the participants engaged in reverse order. Thus, although the same measurement of compassion was used in two experiments, influences caused by the repetitive measure were equal for both. Even though, the author admitted that a historical influence was impossible to avoid because of the design. Further research should choose a time-interval design or employ between-subject design to diminish the probable influences of repetitive measure on participants' response.

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# APPENDICES

## Appendix A IRB approval document

Office for Research  
Institutional Review Board for the  
Protection of Human Subjects

May 22, 2012



Yan Yan  
Department of Journalism  
College of Communication & Information Sciences  
The University of Alabama

Re: IRB # 11-OR-300 (Revision) "Hierarchy of the Innocent: The Hierarchical Perception of War Victims"

Dear Ms. Yan:

The University of Alabama Institutional Review Board has reviewed the revision to your previously approved expedited protocol. The board has approved the change in your protocol.

Please remember that your approval period expires one year from the date of your original approval, October 3, 2011 not the date of this revision approval.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,



Cassandra L. Myers, MSM, CIM  
Director of & Research Compliance Officer  
Office of Research Compliance  
The University of Alabama



316 Ross Administration Building  
Box 870-127  
Tuscaloosa, Alabama 35687-0127  
(205) 348-8881  
fax (205) 348-7180  
toll free (877) 826-1866

11-OR-300

UNIVERSITY OF ALABAMA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS  
REQUEST FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

HRP 04 2012 0410:46

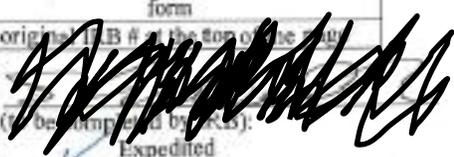
I. Identifying information

Principal Investigator      Second Investigator      Third Investigator  
Name: Yan Yan  
Department: Journalism  
College: Communication and Information science  
University: University of Alabama  
Address: P.O. Box 870172, 478 Phifer Hall, Tuscaloosa, AL., 35487  
Telephone: 205-861-7334  
FAX:  
E-mail: [yyan8@crimson.ua.edu](mailto:yyan8@crimson.ua.edu)

Title of Research Project: Compassionate responses toward victims: Do innocence, seriousness and closeness matter?  
Date Printed: 05/03/2012      Funding Source: N/A

Type of Proposal:  New       Revision       Renewal       Completed       Exempt

Attach a renewal application  
Attach a continuing review of studies form  
Please enter the original IRB # at the top of the form

UA faculty or staff member signature: 

II. NOTIFICATION OF IRB ACTION (to be completed by IRB)

Type of Review:  Full board       Expedited

IRB Action:  
 Rejected      Date: \_\_\_\_\_  
 Tabled Pending Revisions      Date: \_\_\_\_\_  
 Approved Pending Revisions      Date: \_\_\_\_\_

Approved—this proposal complies with University and federal regulations for the protection of human subjects.

Approval is effective until the following date: 10-2-12

Items approved:  Research protocol: dated  
 Informed consent: dated  
 Recruitment materials: dated  
 Other: dated

Approval signature:  Date: 5/22/2012

## **Appendix B Recruitment statement**

### **Recruitment Statement**

Hello! You are invited to participate in a study about your perception of disaster photographs. You will be asked to read two short news stories, view two pictures and answer questions about the stories and pictures. The study will take about 20 minutes.

You will receive extra credit from your professor for your participants. All information you provide will be kept confidential. Your name will be removed from all of your responses; you will click into a separate site at the end of the survey to enter your name for your professor.

Thank you.

Yan Yan, Ph.D. student

College of Communication and Information Sciences

## **Appendix C Consent form**

### **Informed Consent for a Non-Medical Study**

#### **Dear Participants:**

You are being asked to take part in a research study. This study is called Peoples' *perceptions of natural disasters*. The study is being done by Yan Yan, who is a Ph.D candidate at the University of Alabama. Ms. Yan is being supervised by Dr. Shuhua Zhou, who is a professor of College of Communication and Information Sciences at the University of Alabama.

This study is being done to find out peoples' perceptions of pictorial depictions of victims of natural disasters. This knowledge is important because it would help us to understand how people feel when viewing conflict news and disaster victims. The results of this study will help both industrial and academic persons to understand better the roles of pictorial materials in disaster communication.

You have been asked to be in this study because you are an undergraduate student that represents the overall news consumption preference of the young in U.S. Your responds to the recruitment instruction expressed interest in this study. About 180 other people will be in this study. If you meet the criteria and agree to be in this study, you will be asked to do these things:

You will read two news stories, view two pictures and answer a few questions about them. This will take about 20 minutes to complete the study. This is a pen-and-paper survey, and the whole process would be conducted in the classroom via an eight-page questionnaire.

The only cost to you from this study is your time. You will receive two extra credits for your participation. If you start the study but do not finish, you will receive half of the credits.

Because the current research measures your perceptions of image of victims of natural disasters, your immediate response might interact with your past experiences or memories of natural disasters. The investigator would be there to provide immediate consult. Dr. Shuhua Zhou will provide backup consultation for any of your further needs. If you feel upset, anxious, sad or any other negative emotions during the survey, you could stop at anytime and ask the investigator for help.

All stories and pictures are openly published and openly accessible. All the measurements are commonly used and the questionnaire is non-controversial. You can skip one question or serious of questions during the survey. You would still get half of the extra credits if you have not

completed the survey.

Although you will not benefit personally from being in the study, the study will help both journalist and journalism scholars probing the problems of peoples' reaction of disaster victims.

We would not ask for any identifying information other than age, gender, and ethnicity. You do not have to answer any questions you do not want to if you thought they were privacy offended.

Your information will be kept confidential. You would be asked to provide your name and CWID so as to get the extra credits, but the information would be collected through the debriefing/credits form that are separate with the questionnaire so that your answers cannot be matched to your name in any form. Once the data is collected, it will be stored in two places: The questionnaire would be saved on a file in the College of Communication and Information Sciences and is only accessible by the investigator; the raw data of the experiment results would be saved on the hard drives of the researcher in CIS. Both will be disposed of one year after the survey is conducted.

The alternative to being in this study is not to participate. Students in the University subject pools may choose the designated alternative assignment for course credit.

Taking part in this study is voluntary. It is your free choice. You can refuse to be in it at all. If you start the study, you can stop at any time. There will be no effect on your relations with the University of Alabama.

The University of Alabama Institutional Review Board ("the IRB") is the committee that protects the rights of people in research studies. The IRB may review study records from time to time to be sure that people in research studies are being treated fairly and that the study is being carried out as planned.

If you have questions about the study right now, please ask them. If you have questions, concerns, or complaints about the study later on, please call Yan Yan at 205-861-7334.

If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at [http://osp.ua.edu/site/PRCO\\_Welcome.html](http://osp.ua.edu/site/PRCO_Welcome.html) or email us at [participantoutreach@bama.ua.edu](mailto:participantoutreach@bama.ua.edu).

After you participate, you are encouraged to complete the survey for research participants that is online at the outreach website or you may ask the investigator for a copy of it and mail it to the University Office for Research Compliance, Box 870104, 152 Rose Administration Building, Tuscaloosa, AL 35487-0104.

I have read this consent form. I have had a chance to ask questions. I agree to take part in it.  
I will receive a copy of this consent form to keep.

---

Signature of Research Participant Date

---

Signature of Investigator Date

## **Appendix D Stimuli**

### **Experiment 1:**

#### **Story: Texas tornadoes leave swath of destruction through Dallas suburbs.**

More than a dozen tornados touched down in a wrecking-ball swath of violent weather that stretched across Dallas and Fort Worth Tuesday afternoon, April, 4th, 2012. Following the massive storms, the hardest-hit area was the Dallas metroplex, where hundreds of homes and businesses sustained significant damage in the outbreak that brought hail, high winds, and rain as it skipped through the area, tossing tractor-trailer trucks into the air and injuring at least 17 people.

Many of the 6.3 million area residents were forced to scramble for safety as the storm bore down during the early afternoon. About 22,000 homes and businesses remained without power on Wednesday morning from Texas to Louisiana, Mississippi and Oklahoma.

April is typically the worst month in a tornado season that stretches from March to June, but Tuesday's outburst suggests that "we're on pace to be above normal," said National Weather Service meteorologist Matt Bishop. As he suggested, the U.S. tornado season started early this year. Tornadoes have been blamed for 57 deaths so far in 2012 in the Midwest and South, raising concerns this year could be a repeat of 2011, the deadliest year in nearly a century for the unpredictable storms.

**Experiment 1 Pictures:**

**Gender**

	<b>Male</b>	<b>Female</b>
<b>Children</b>		
<b>Adult</b>		
<b>Senior</b>		

## **Experiment 2:**

### **Story 1: Hurricane Ika**

#### **A story about Hurricane Ika\_Dead victim**

(September 10, 2002| Palm Beach county) John Stevenson, 12 years old, was fatally injured by a falling tree when he tried to climb to the attic of his one-story house. He was the first child died at the local medical center after Hurricane Ika.

Hurricane Ika is the deadliest natural disaster ever to strike the United States to date. On September 8, 2002, Hurricane Ika made landfall on the Florida Keys, with an estimated winds speed of 145 miles per hour at landfall. Eventually 80% of the city and large tracts of neighboring parishes flooded. The floodwaters lingered for weeks.

About 55,000 people left the Florida Keys before the landfall. Evacuations were ordered for 517,000 people in Dade County, 300,000 in Broward County, 315,000 in Palm Beach County and 15,000 in St. Lucie County. Nonetheless, the hurricane still claimed more than 8000 lives and left more than 2 million temporarily homeless.

#### **A story about Hurricane Ika\_ Injured victim**

(September 10, 2002| Palm Beach county) John Stevenson, 12 years old, was seriously injured by a falling tree when he tried to climb to the attic of his one-story house. He was the first child recovered at the local medical center after Hurricane Ika.

Hurricane Ika is the deadliest natural disaster ever to strike the United States to date. On September 8, 2002, Hurricane Ika made landfall on the Florida Keys, with an estimated winds speed of 145 miles per hour at landfall. Eventually 80% of the city and large tracts of neighboring parishes flooded. The floodwaters lingered for weeks.

About 55,000 people left the Florida Keys before the landfall. Evacuations were ordered for 517,000 people in Dade County, 300,000 in Broward County, 315,000 in Palm Beach County and 15,000 in St. Lucie County. Nonetheless, the hurricane still claimed more than 8000 lives and left more than 2 million temporarily homeless.

### **A story about Hurricane Ika\_ Rescued victim**

(September 10, 2002| Palm Beach county) John Stevenson, 12 years old, was rescued from the attic of his house, the first floor of which was submerged by the floodwaters. He was the first child rescued by the Federal Emergency Management Agency in Hurricane Ika.

Hurricane Ika is the deadliest natural disaster ever to strike the United States to date. On September 8, 2002, Hurricane Ika made landfall on the Florida Keys, with an estimated winds speed of 145 miles per hour at landfall. Eventually 80% of the city and large tracts of neighboring parishes flooded. The floodwaters lingered for weeks.

About 55,000 people left the Florida Keys before the landfall. Evacuations were ordered for 517,000 people in Dade County, 300,000 in Broward County, 315,000 in Palm Beach County and 15,000 in St. Lucie County. Nonetheless, the hurricane still claimed more than 8000 lives and left more than 2 million temporarily homeless.

**Picture 1**



## **Story 2: The Indian Ocean Tsunami**

### **A story about the Indian Ocean Tsunami\_ Dead victim**

(December, 29, 2004| Paupa, Indonesia) Grasion Rodrigo, 12 years old, was fatally injured by a falling tree when he tried to climb to the attic of his one-story house. He was the first child died at the local medical center after the Indian Ocean Tsunami.

The 2004 Indian Ocean Tsunami was the single worst tsunami in history. It was caused by a huge undersea earthquake which lasted around 10 minutes and caused the entire planet to vibrate. The earthquake triggered a series of devastating tsunamis along the coasts of Indian Ocean, killing more than 230,000 people in 14 countries and inundating coastal communities with waves up to 98 ft high.

Indonesia was the worst affected area, with an estimated death toll around 170,000 and tens of millions missing, injured and displaced.

### **A story about the Indian Ocean Tsunami\_ Injured victim**

(December, 29, 2004| Paupa, Indonesia) Grasion Rodrigo, 12 years old, was seriously injured by a falling tree when he tried to climb to the attic of his one-story house. He was the first child recovered at the local medical center after the Indian Ocean Tsunami.

The 2004 Indian Ocean Tsunami was the single worst tsunami in history. It was caused by a huge undersea earthquake which lasted around 10 minutes and caused the entire planet to vibrate. The earthquake triggered a series of devastating tsunamis along the coasts of Indian Ocean, killing more than 230,000 people in 14 countries and inundating coastal communities with waves up to 98 ft high.

Indonesia was the worst affected area, with an estimated death toll around 170,000 and tens of millions missing, injured and displaced.

### **A story about the Indian Ocean Tsunami\_ Rescued victim**

(December, 29, 2004| Paupa, Indonesia) Grasion Rodrigo, 12 years old, was rescued from the attic of his house, the first floor of which was submerged by the floodwaters. He was the first child rescued by the local citizen in the Indian Ocean Tsunami.

The 2004 Indian Ocean Tsunami was the single worst tsunami in history. It was caused by a huge undersea earthquake which lasted around 10 minutes and caused the entire planet to vibrate. The earthquake triggered a series of devastating tsunamis along the coasts of Indian Ocean, killing more than 230,000 people in 14 countries and inundating coastal communities with waves up to 98 ft high.

Indonesia was the worst affected area, with an estimated death toll around 170,000 and tens of millions missing, injured and displaced.

Picture 2:



## Appendix E Questionnaire

### Questionnaire

#### E.1 Demographics

*Before beginning the survey, please tell us something about yourself:*

#### Demographics

1. Your age\_\_\_\_\_
  
2. Gender:
  - A. Male
  - B. female
  
3. Ethnicity (Please check all that are applicable):
  - A. White/Caucasian
  - B. African American
  - C. Asian American
  - D. Hispanic /Latino
  - E. Other\_\_\_\_\_(Please specify)
  
4. What is your religious affiliation?
  - A. Christianity
  - B. Islam
  - C. Hinduism
  - D. Buddhism
  - E. Sikhism
  - F. Judaism
  - G. Agnostic
  - H. Atheist
  - I. Other

## E.2 Compassionate response index

Please tell us how much do you experience each of the following feeling while viewing the image the person in the pictures?

	Not at all						Extremely
Compassionate	1	2	3	4	5	6	7
Sympathetic	1	2	3	4	5	6	7
Warm	1	2	3	4	5	6	7
Touched	1	2	3	4	5	6	7
Moved	1	2	3	4	5	6	7

	Not at all						Extremely
I feel a great deal of compassion for him.	1	2	3	4	5	6	7
I would rather suffer myself than see him suffer.	1	2	3	4	5	6	7
I would rather engage in actions that help him than engage in actions that would help myself.	1	2	3	4	5	6	7
I want to spend time with him so that I can find ways to help.	1	2	3	4	5	6	7
I very much wish to be kind and good to him.	1	2	3	4	5	6	7

### E.3 Perceived innocence

Please answer the following questions about the person depicted in the picture.

	Not at all						Extremely
I think the girl portrayed in the photo is partly self-responsible for her own plight. (PI)	1	2	3	4	5	6	7
I think what happened to her is no fault of her own. (PI)	1	2	3	4	5	6	7
I think the girl is incapable of avoiding her misfortune. (PI)	1	2	3	4	5	6	7
I think the situation is manageable by the girl in the picture. (PC)	1	2	3	4	5	6	7
I think the girl has the power over the situation. (PC)	1	2	3	4	5	6	7
I think the girl is not able to change the current situation on her own. (PC)	1	2	3	4	5	6	7

Perception of inculpability = (PI)

Perception of uncontrollability = (PC)

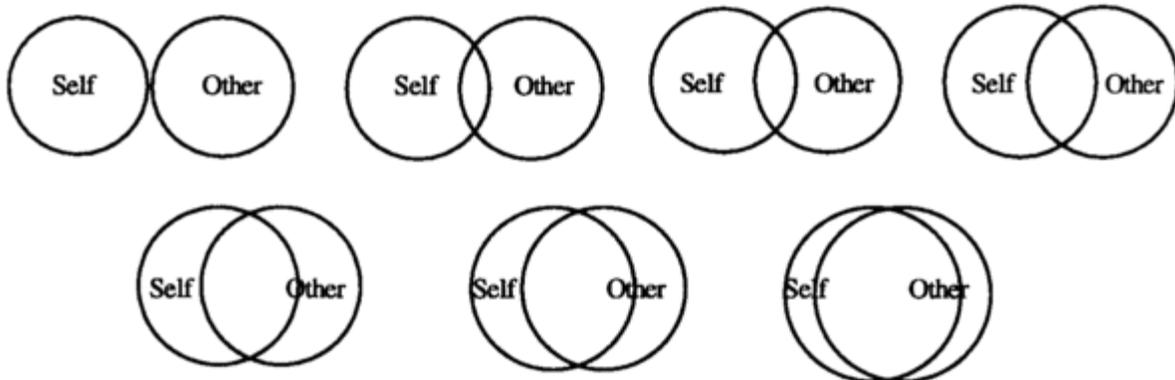
**E.4 Perceived seriousness**

	Not at all						Extremely
	1	2	3	4	5	6	7
1. How do you believe that the situation portrayed in the photo is serious?							
2. How much suffering is the person in the photo experiencing?							
3. To what extent do you think it is necessary to help the person in suffering?							
4. How urgent is the person on portrayed in the picture in need?							

**E.5 Perceived proximity**

	Not at all						Extremely
	1	2	3	4	5	6	7
1. How do you feel that you are similar to the person portrayed in the photo?							
2. To what extent did you perceive yourself and the person in the picture to be part of the same group?							
3. To what extent would you use the term “we” to describe yourself and the person in the picture?							

4. Please circle the picture below that best describes the extent to which you feel that you and the person portrayed in the photo are connected:



**E.6 Manipulation check**

1. Who is the person being portrayed in the picture?

- A. A boy.
- B: A girl.
- C: An adult man.
- D: An adult woman.
- E: An elderly man.
- F: An elderly woman.

2. How physically close to the disaster are you?

Not at all Very much  
1            2            3            4            5            6            7

3. How much do you think the person suffered from the disaster?

Not at all Very much  
1            2            3            4            5            6            7

**E.7 Subjective comments**

How do you think about the stories and picture you just read and viewed in the study?

---

---

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## E.8 Covariates

### 1. Perceive attractiveness, likeness, and sadness.

I think the person portrayed in the picture is

Attractive	1	2	3	4	5	6	7	Unattractive
Likable	1	2	3	4	5	6	7	Unlikable
Sad	1	2	3	4	5	6	7	Happy

### 2. Personal disaster experiences

How do you describe yourself regarding the following items:

	Not at all						Very Much
I could easily understand the feelings of disaster victims.	1	2	3	4	5	6	7
I could easily remember the scene of several recent natural disasters.	1	2	3	4	5	6	7

### 3. Disaster news consumptions

	Not at all						Very Much
I'm highly concerned about disaster-related news.	1	2	3	4	5	6	7

#### 4. Personal Compassion Traits

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number on the five-point scale, in with 1 = “Does not describe me well” and 5 = “Describe me very well”. Please circle your answer on the answer scale next to the item number. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly as you can. Thank you.

	Does not describe me well				Describe me very well
1. I often have tender, concerned feelings for people less fortunate than me.	1	2	3	4	5
2. Sometimes I don't feel very sorry for other people when they are having problems.	1	2	3	4	5
3. I really get involved with the feelings of the characters in a novel.	1	2	3	4	5
4. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.	1	2	3	4	5
5. I try to look at everybody's side of a disagreement before I make a decision.	1	2	3	4	5
6. When I see someone being taken advantage of, I feel kind of protective towards them.	1	2	3	4	5
7. I sometimes feel helpless when I am in the middle of a very emotional situation.	1	2	3	4	5
8. Becoming extremely involved in a good book or movie is somewhat rare for me.	1	2	3	4	5
9. When I see someone get hurt, I tend to remain calm.	1	2	3	4	5
10. Other people's misfortunes do not usually disturb me a great deal.	1	2	3	4	5
11. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	1	2	3	4	5
12. Being in a tense emotional situation scares me.	1	2	3	4	5
13. I am usually pretty effective in dealing with emergencies.	1	2	3	4	5
14. I believe that there are two sides to every question and try to look at them both.	1	2	3	4	5
15. I would describe myself as a pretty soft-hearted person.	1	2	3	4	5
16. When I watch a good movie, I can very easily put myself in the place of a leading character.	1	2	3	4	5
17. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	1	2	3	4	5
18. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.	1	2	3	4	5

19. When I see someone who badly needs help in an emergency, I go to pieces.	1	2	3	4	5
20. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	1	2	3	4	5

Note: (-) denotes item to be scored in reverse fashion

PT = perspective-taking scale

FS = fantasy scale

EC = empathic concern scale

PD = personal distress scale

## Appendix F Debriefing form

### Debriefing/Extra Credit Form

Thank you for completing this survey. The current study investigated peoples' compassionate response toward victims of natural disasters that are different in age, gender, physical severity and cultural backgrounds. We hypothesized that people would feel more compassion toward the female than male, the children and senior than the adult, the dead and injured than the survived, the victims from the proximity culture (Hurricane Ika) than those from the distant culture (the Indian Ocean Tsunami).

You were first asked to view a picture of a victim of the Texas tornado. At the mean time, the other participants viewed pictures of a victim of the Texas tornado who is differentiated in age and gender with the one you viewed. The aim of the design was to see whether perceived innocence and compassion would be varied by the victims' age and gender.

Then, all participants were directed to a story of either Hurricane Ika or Indian Ocean Tsunami, which told a personal story of a boy who were dead, injured or survived from the disasters. You were directed to one of the test conditions and were asked to report your perceived closeness, perceived seriousness and compassion toward the boy. The aim of the design was to see whether your perceptions would be varied by the physical severity and cultural proximity of the victim.

The stories of Texas Tornado and Indian Ocean Tsunami were true stories, but the images of victims were random images selected from a picture pool of disaster victims. The story of Hurricane Ika was a fake story based on the true story of the 1900 Galveston Hurricane, the deadliest hurricane to date in U.S history.

Because we want all students to independently evaluate the information regardless or source and outlet, we ask that you do not discuss this study with your peers before the end of the semester.

If you have further questions at any time about this research project, please contact Yan Yan at 205-861-7334 (yyan8@crimson.ua.edu).

If you have any questions about your rights as a research participant, please contact Ms. Tanta Myles, the University of Alabama Research Compliance Officer, at (205)-348-5152.

**TO RECEIVE YOUR EXTRA CREDIT, YOU MUST COMPLETE THE FOLLOWING FORM. YOUR PERSONAL INFORMATION IS BEING DIVERTED TO ANOTHER DATA COLLECTION SYSTEM AND WILL NOT BE LINKED TO YOUR RESPONSES IN ANY WAY. YOUR INSTRUCTOR WILL RECEIVE A LIST OF ALL WHO HAVE COMPLETED THE SURVEY.**

Please write your

Last name \_\_\_\_\_

First name \_\_\_\_\_

CWID \_\_\_\_\_

Course number \_\_\_\_\_

Thanks again for your participation.