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The Impact of Humanitarian Photography on the Generation of
Sympathy and on Donation Behavior

by

Marta Barberini

A thesis submitted in partial fulfillment of the
requirements for the degree of

Master of Arts
in
Communication Studies

Thesis Committee:
Cynthia-Lou Coleman, Chair
Priya Kapoor
Paul Slovic

Portland State University
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ABSTRACT

This paper presents findings of an exploratory study to evaluate the impact of humanitarian photography on the generation of sympathy and donation behavior. Considering the large amount of money spent each year by charity organizations on marketing strategies, it seems crucial to shed light on the persuasive impact of images in this context.

The overarching purpose of this study was to discern what impact, if any, a number of features in a photograph have on sympathetic reactions. Specifically the author examined facial expressions (sad vs. happy), eye contact vs. no eye contact and total number of subjects portrayed. Findings supported the hypothesis that sad expressions in photos would have greater sympathetic responses than happy expressions. The author hypothesized that direct eye contact would be more persuasive than indirect eye contact, but the data supported the inverse result: indirect eye contact elicited more sympathy than direct gaze. The third hypothesis, that single subject images would be more persuasive than multiple subjects, was not supported. The author concluded that results draw attention to sympathy-generating attributes of charity appeals that have been overlooked.

ACKNOWLEDGMENTS

This thesis has been a long, long journey. So many individuals have guided me throughout this “*iter*” that, if I had to be completely truthful, this section should take about 20 pages. However, kind reader, I will try to not take advantage of your patience and briefly highlight my fellow travelers.

Dr. Cynthia Coleman has been the model of an academic, compassionate and understanding advisor. She has walked at my side for the entire trip, giving me hope when I needed to be reassured and diligence when I needed guidance. I am aware that my “Itanglish” gave her a hard time here and there, that is why I would like to thank her again for her patience in editing this paper without ever mentioning it!

Dr. Paul Slovic also accompanied me throughout the whole travel. The way he jumped into this project with extreme humility and complete willingness to help, not only provided me a unique medium to accomplish this mission, but also gave me hope. Indeed, in times when selfishness and individualism threaten our very sense of community, his altruism reminded me what people are truly capable of doing for each other.

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DEDICATIONS

I would like to dedicate this work to my beautiful sister, Lavinia, her amazing boyfriend, Giorgio (also known as “Vucinic”), and their already much-loved upcoming baby boy.

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Chapter 1

INTRODUCTION

Figure 1. Nigerian Woman Portrait. Photograph by Thatcher Cook, Mercy Corps' documentary photographer.

As American photographer Paul Strand once said, “It is one thing to photograph people. It is another to make others care about them by revealing the core of their humanness.” Humanitarian photography tells through images complex stories of suffering and oppression, as well as progress and hope, making the

photograph a powerful means to inspire, educate and raise awareness of global issues.

In 2009 the number of charitable organizations in the United States alone was more than 800,000. As this number increases competition among charities for limited donation dollars also increases. Indeed, research based on Internal Revenue Service exemption data estimates that American non-profit organizations spend at least \$7.6 billion per year on marketing (Watson, 2006). Considering that a large portion of these marketing strategies rely on humanitarian photographs, it is valuable to understand the persuasive impact of images in this context.

As a student intern at a non-governmental organization, Mercy Corps, I learned first hand the importance of imagery, which is recognized in the literature as a crucial fundraising issue for charities (Bendapudi, Singh & Bendapudi, 1996).

This research proposes that some photographs have a greater impact than others on emotions, moving people to take action and donate money to charities. The ambition of the current study is to try to shed light on how and why this happens, and on what attributes of a photograph should be taken into consideration to ensure its evidentiary power and ultimately lead people to donate money.

Support for the specific role of sympathy in the decision to donate can be found in a number of different studies (Bagozzi & Moore, 1994; Coke, Batson & McDavis, 1978). Since, this link is already well established and in order to take a look at donation behavior, I will measure sympathy. In other words, I will examine

the degree to which humanitarian photographs generate a sympathetic reaction in the viewer. I will look at the impact on sympathy of facial expressions of emotions, eye contact and number of subjects portrayed in the image.

Chapter 2

LITERATURE REVIEW

PHOTOGRAPHY AND FRAMING

“The photographic image, even to the extent that it is a trace (not a construction made out of disparate photographic traces), cannot be simply a transparency of something that happened. It is always the image that someone else chose: to photograph is to frame, and to frame is to exclude.”

– Susan Sontag, 2003, p. 260

The concept “to photograph is to frame” is at the heart of my work. I will examine how photographs frame the world. In Entman’s words, “to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (1993, p. 52). The same idea can be applied to a photograph. A photo is not a pure and objective representation of the world, but it is rather a map designed by the photographer. Indeed, Lippmann (1922), almost a century ago, argued that the environment is altogether too big and complex for direct knowledge, and we need some maps to help us reconstruct and manage it. Therefore I argue that photographs affect and guide our knowledge of the external world and, depending on how they are framed, photos may intentionally or unintentionally cause several different emotional responses in the viewer.

The relationship between photography and framing is only the starting point of this study that was framed looking at a number of different dimensions: a cognitive dimension was taken into consideration, through the investigation of recent neuroscience findings about mirror neurons, to shed light on how the body perceives and decodes images. Donation behavior was explored to understand what factors are in play during the decision to donate, with a specific focus on the distinction between altruistic and egoistic motivations that move people to donate.

This research focuses on humanitarian photography, which tends to represent subjects in need, thus particular attention was given to photographs representing the pain of other people and to the debate over their evidentiary power. In other words, do photos succeed in telling other peoples' stories?

The current study proposes that some photographs do succeed better than others and the reason behind this might lie in the photograph itself, more precisely behind some of the photograph's attributes. The literature in this study highlights two attributes: facial expressions of emotions (Small & Verrochi, 2008) and the number of subjects in the photographs (Slovic, 2007).

As I stated above, photographs have the power to affect and guide our knowledge of the external world. An example of this argument is represented by *National Geographic* magazine, which in the past century has become the primary source where readers have come to "meet" the world outside their own borders. It is

important to highlight that a good portion of its text and photographs is devoted to images of the people and cultures of the third world.

Lutz and Collins, in their work *Reading National Geographic* (1993), focus on what has been largely ignored over the years by academics and other writers on the subject of photography, mass media, and culture in general. They argue that *National Geographic* has shaped the world around us through its use of imagery.

Lutz and Collins' analysis moves from the Gramscian notion that "hegemony is not so much a structure, but a process," and in order to gain meaningful insights in the images that appeared on the magazine, the authors centered on three different issues (p. 12). They looked at the process of producing images of the non-western world, the structure and content of these images, and their influence on readers. I will concentrate here on the role of the readers. Indeed, there would be no *National Geographic* without its forty million monthly readers.

Through extensive interviews with fifty-five white American adults (chosen as representative of the overall readership of the magazine), the authors assessed how the messages of the magazine were received and interpreted. A set of photographs from the magazine was shown to the participants who were asked to evaluate them. The images were shown without their original captions to concentrate only on how the photographic elements themselves affected the readers.

The first goal was to understand what ideas white Americans held about the third world, and if *National Geographic* played a role in constructing them. Lutz and

Collins' study is grounded in the assumption that we do not look at pictures as blank pages upon which we can write any tale. This assumption is part of a debate over the freedom of audiences to gather their personal meanings from media messages that has not been resolved. Some insist on the power of media to constrain meanings while others have gone so far to say that media products like *National Geographic* photos "have no intrinsic meaning but rather are empty vessel(s) awaiting audiences to pour meaning into them" (Carragee, 1990, p. 56). This claim is true in one sense and false in another. It is true because:

"Meaning implies both meaning makers and social communication, and it implies the possibility for historical and contextual shifts in how a single artifact makes sense to its viewers; it's false, however, because not all of the media artifacts are equally likely to have the same cultural ideas deployed to make sense of them." (Lutz & Collins, 1993, p. 219)

This vision often coexists with what Carragee defined as "semiological guerrilla," a concept borrowed from Umberto Eco (1967), which refers to the act of contrasting the dominant culture on an imaginary level. According to Eco the only form of resistance that seems available is to fight "fire" with "fire:" In Eco's words:

"For the strategic solution it will be necessary, tomorrow, to employ a guerrilla solution. The battle is not to be won where the communication originates, but where it arrives. For the receiver of the message seems to have a residual freedom: the freedom to read it in a different way; I am proposing an action to

urge the audience to control the message and its multiple possibilities of interpretation. The universe of Technological Communication would then be patrolled by groups of communications guerrillas, who would restore a critical dimension to passive reception.” (Eco, 1967, p. 144)

In trying to highlight what the magazine meant to the subjects, two concepts emerged: objectivity and social mobility. In terms of objectivity almost everyone agreed that *National Geographic* is a valuable source of information about the world, neither judgmental nor controversial. In terms of social mobility the responses were fascinating: indeed, the magazine was described as either a way to gather information for a future trip or as an actual tool for imaginary travelling. One of the participants said: “People like me, who don’t have any money to go and travel, can just look at that, and like read the articles and then you really get into it, like you’re really there, you know?” (Lutz & Collins, 1993, p. 240).

In these words we hear Lippmann’s argument, noted earlier, that our knowledge of the world derives often from what we see through the eyes of others.

Some participants said they felt uncomfortable reading the magazine because of its representation of “poor” people. For example, one participant said looking through *National Geographic* magazine is often depressing because of the evidence of third world poverty. Another one believed that the magazine’s main emphasis on poverty diminished its utility for adults. He said the magazine was helpful for children in grade school, who may want to look at its photographs and reports, but

poorly connected to adults because of its focus on the “non-modern world,” alias third world countries.

When subjects were asked to say which photo they liked the most, the majority picked photographs showing people feeling good in some way. Also when asked about the criteria for that specific choice, about half (52%) said that good feelings in or produced by the image were the reason. Other reasons given for liking a certain picture included aesthetics (17%) and the possibility to relate the scene to one’s own life (9%). On the other hand the least popular pictures in the set were the two that showed military scenes, and the reasons given were that these photos were associated with (although neither showed) conflict, destruction, turmoil, or war.

As I mentioned above an important detail is that participants commented on the pictures assuming them to be “objective” documents. Indeed, no one questioned or mentioned issues related to ideology. In fact, photos in a scientific journal are not likely to lead readers to ask about their producers’ intentions or their ideological resonances (Lutz & Collins, 1993). This reminds us the earlier concept of “semiological guerrillas,” and Umberto Eco’s warning that messages in popular culture must be decoded to reveal their latent ideological content in order to prevent mass media from becoming an instrument of passive control.

Overall the responses of the subjects showed a tension between the tendency to identify themselves with the photographs, relating their lives to the lives of people in the third world, and the simultaneous need to differentiate from them. This opens the

door to a series of questions about the western world's perception of people who live in third world countries, often treated as "the other," and often portrayed in needy situations. How deeply and truly can we understand their lives just looking at their photographs? And given that their suffering is often portrayed, what kind of impact do these pictures have on their viewers?

REPRESENTING AND REACTING TO THE PAIN OF OTHERS

It is impossible to glance through any newspaper, no matter what the day, the month or the year, without finding on every line the most frightful traces of human perversity...Every newspaper, from the first line to the last, is nothing but a tissue of horrors. Wars, crimes, thefts, lecheries, tortures, the evil deeds of princes, of nations, of private individuals; an orgy of universal atrocity. And it is with this loathsome appetizer that civilized man daily washes down his morning repast.

– Charles Baudelaire, 1860, p. 266

When Baudelaire wrote these words, newspapers did not carry photographs. However, his critique of the bourgeoisie sitting down with their morning newspapers to breakfast while reading with an apathetic attitude about the horrors of the world is definitely contemporary. Susan Sontag included the quote in her work, *Regarding the Pain of Others* (2003), in which she reflects about the imagery of warfare. In this book she provided a challenge to some of her earlier opinions expressed in her previous essay *On Photography* (1977). Although the book concentrates on reaction to photography, it is also, like *On Photography*, a deeply questioning meditation on modern life.

Sontag begins her study of wartime photographs with a discussion of Virginia Woolf's *Three Guineas* (1938), a book that explores the origins of war by looking at a set of photographs depicting the Spanish Civil War (1936-1939). In the book, Woolf examines the different ways women and men react to war, especially as war has been a male activity. Would a man revolted by war have the same feelings as a woman like Woolf, who had neither the power nor the desire to make war? The man who writes to her about his antiwar feelings assumes that his reactions are the same as those of Woolf's, but she does not believe that he can take his "we" (himself and Woolf) for granted.

Sontag does not so much contest Woolf's feminist position as suggest it is not comprehensive enough, for she notes that Woolf herself later lapses into the same use of "we." "No 'we' should be taken for granted when the subject is looking at other people's pain," Sontag concluded (2003, p. 7). The distinction to be made, in other words, is not just between men's and women's responses to the portrayal of war but also between the reality of war as others experience it and the perception of everyone else who only observes and responds to the images of war.

Even though Sontag seems to reduce heavily the efficacy of photographs and their ultimate power to persuade and move people to antiwar actions, she nevertheless takes issue with her earlier book's pessimism that photographs have actually dominated the public's sense of reality and that war is only what we see in photographs, television or movies. She reexamined her earlier concern about the way

photography and the mass media infiltrate human consciousness and sensationalize events in terms of images.

In this essay Sontag is affirming a sense of reality that exists apart from portrayals of it; according to her, there is a reality that exists independent of the attempts to lessen its authority. *On Photography* never denied this reality, but it did seem to suggest reality could be overwhelmed by the plethora of photographic images. In this context she seemed to validate Lippmann's argument that reality could be actually replaced by pictures of it. However she later changed her opinion stating that no quantity of images can ever actually supplant the reality.

What, then, should be the appropriate attitude toward photography? Sontag is aware that some viewers simply refuse to look, to avoid being inundated by images of wartime atrocities. And even when viewers do look, their very sympathy for suffering may only express their sense of distance from the pain they see. The photographs simply make for more spectators. What else can most people do, though, but watch? Sontag asked. Photographs have not invented the way people regard the pain of others. Ultimately, it is not possible to experience fully another's pain, Sontag concluded. One asks too much of photographs in this regard. They provide only an approach to the pain of others; an approach that can be explored or evaded.

At the end of her book, Sontag returned to her insistence that "we," in regard to the experience of war, the reality of war, can only be used by those who have been

there. When a journalist, a soldier, an aid worker—anyone who has been under fire during war—claims that “we” (everyone who has not experienced war) cannot imagine how horrible it is, Sontag replied, in the last sentence of her book, “they are right” (2003, p. 126).

Sontag’s *Regarding the Pain of Others* (2003) represents her diversion from Lippmann, who argued that photographs have the power to replace reality. Here she stepped back and admitted that there will always be a reality aside from photographs, and that is why a picture’s power is not as strong as people think. Indeed photographs can be simply ignored for the most part, and even when actually seen they just make the viewer a spectator, with no real power to do anything about the image. This raises concerns in terms of photographs’ evidentiary power; in other words, can a photograph lead to a positive change? Can photographs representing the pain of others move people to take action and bring the suffering to an end?

REFLECTIONS ON PHOTOGRAPHY EVIDENTIARY POWER

Medical anthropologist and physician Paul Farmer, in his essay *Never Again? Reflections on Human Values and Human Rights* (2005), draws on Sontag’s work to consider how photographs and stories may be employed to generate reflection on human values. To put it in his words: “Can photographs and personal narratives play a role, even as rhetorical tools, in promoting those human values that might lessen the magnitude of these disasters” (2005, p. 145)?

Sontag warned that vivid photographs used to represent the pain of others may “carry a double message. They show a suffering that is outrageous, unjust, and should be repaired. They confirm that this is the sort of thing that happens in that place. The ubiquity of those photographs, and those horrors, cannot help but nourish belief in the inevitability of tragedy in the benighted or backward, that is poor parts of the world” (2003, p. 71).

However, Farmer reported the experience of a young Haitian man whose story offers a chance for reflection. Joseph was carried to the public clinic in Lascahobas, a town in central Haiti, on the afternoon of March 17, 2003. At the time he was 26 and had been sick for months. His family did everything possible to take care of him. However, since his conditions kept getting worse, they asked for the help of a community health worker, who immediately recognized in Joseph symptoms of tuberculosis and HIV. Therefore his parents, with the help of the neighbors, literally carried him to the closest clinic, since he was too weak to travel on a donkey. At the clinic he was diagnosed with advanced AIDS and tuberculosis. Despite his doubts, he took the medications every day and slowly got better, gaining more than thirty pounds. His story demonstrates that even in areas as poor as rural Haiti it is possible to deliver complex medical services. Joseph’s photograph was taken right after his hospitalization and looked very different from the one taken after several months of therapy.

Almost one year later, while travelling in Kenya, Farmer ran again into Joseph's photos in an unexpected circumstance. His before-and-after treatment images appeared on a local newspaper that believed Joseph to be Kenyan, with the purpose to emphasize the importance and benefits of treatment. Joseph's pictures somehow "had made it across the world from Haiti to Kenya" (Farmer, 2005, p. 151).

This is an example of how photos can offer an insight and prompt the need to take action in front of a problem such as AIDS in Africa; stories such as Joseph's can give a face to massive and impersonal tragedy. However, questions about when, where, and how these strategies are effective still remain unsolved.

While Sontag argued that photographs' evidentiary power is overrated, Nicholas Kristof, journalist, author and *New York Times* columnist, took a very different stand.

He published an article about *The Secret Genocide Archive* in *The New York Times*, observing that: "photos don't normally appear with columns in this newspaper." Kristof argued:

But it's time for all of us to look squarely at the victims of our indifference.

These are just four photos in a secret archive of thousands of photos and reports that document the genocide underway in Darfur. The materials were gathered by African Union monitors who are just about the only people able to travel widely in that part of Sudan...I'm sorry for inflicting these horrific photos on

you. But the real obscenity isn't in printing pictures of dead babies—it's in our passivity, which allows these people to be slaughtered...during past genocides against Armenians, Jews and Cambodians, it was possible to claim that we didn't fully know what was going on. This time, President Bush, Congress and the European Parliament have already declared genocide to be underway. And we have the photos. This time we have no excuse. (2005, February 23, p.12)

In his column, as in Joseph's story and its resonance in Kenya, Kristof believes photographs have an evidentiary power that, according to him, brings something new, and inarguable to the equation. And yet, as Sontag has noted, photographs have long been used in this manner: "For a long time some people believed that if the horror could be made vivid enough, most people would finally take in the outrageousness, the insanity of war" (2003, p. 14).

Considering this endless debate over the evidentiary power of photographs, it becomes natural to wonder: what is really the photograph's evidentiary power? Is there an absolute truth or does it depend on situations, cultures, or people? Do some photographs succeed better than others in pursuing the goal of change? Do some photographs have a better evidentiary power than others?

It is grounded in theory that some photographs do succeed more than others in portraying other people's stories, and also have a greater impact on emotions, moving people to take action and try to have a positive impact on those stories. The ambition of this study is to try to shed light on how and why this happens, and what

factors of a photograph should be taken into consideration to ensure a photograph is powerful.

Before taking the next step and examining these factors, it is crucial to take a look at this inquiry from a scientific standpoint. In other words, how does our body decode photographs in the first place? Indeed, to understand which variables may have the greater impact on viewers' emotions, it is necessary to observe how the brain perceives photographs in the first place. Therefore, in the next section, I will approach the cognitive perspective through the investigation of recent neuroscience findings about mirror neurons that have changed our understanding of the neural basis of social cognition.

MIRROR NEURONS AND AESTHETICS

As stated above, in studying the connection between photography and emotions it is fundamental first to understand how the human body decodes images. Indeed in considering the power of images, an important aspect is grounded in the cognitive level, which is to say how the brain perceives images, why they matter for us and how our body physically reacts to them. Thus I would like to provide a cognitive insight into the way we process photographs, and I will start by exploring the recent findings in neuroscience about mirror neurons.

Mirror neurons are specific types of neurons that are activated both during the execution of purposeful, goal related, actions like holding or grabbing, and during the observation of analogous actions performed by another individual.

The discovery of mirror neurons in the premotor and posterior parietal cortices of primates, and of similar mirroring mechanisms in the human brain, in conjunction with the new interest on the significance of emotional processes for social perception, have revolutionized our knowledge of the neural foundations of social cognition.

The mirror neuron system (MNS) of a monkey is shown to be activated during the observation of an action, in particular a goal-oriented one, in the same way it would be if the monkey would actually perform that action. The same neurons that would be firing while performing a certain task are firing if looking at the action performed by someone else. Gallese and Lakoff claimed that: “brain-imaging experiments on humans have shown the activation of premotor and parietal areas which are very likely to be the human homologue of the monkey areas in which mirror neurons were found” (2005, p. 9).

Neuroscientific research has shed a light on the ways in which we empathize with others by understanding the role of implicit models of others’ behaviors and experiences that is embodied simulation. Our capacity to pre-rationally make sense of the actions, emotions and sensations of others depends on embodied simulation. This functional mechanism, through which the actions,

emotions or sensations we see activate our own internal representation of the body states that they are associated with these social stimuli, as if we were engaged in a similar action or experiencing a similar emotion or sensation. Activation of the same brain region during first and third person experience of actions, emotions and sensations suggest that, as well as explicit cognitive evaluation of social stimuli, there is probably a phylogenetically older mechanism that enables direct experiential understanding of objects and the inner world of others. (Freedberg & Gallese, 2007, p.198)

In other words, in humans, as in monkeys, the same neurons that would be firing while performing a certain task are firing if looking at the action performed by somebody else, and this is suggested to be one of the first ways in which humans empathize with each other. It also implies that our understanding of others' action is activated by a genetic mechanism that leads our body to internally replicate what the other person is doing. Does this process happen only while watching people performing actions or could it also happen when looking at a photograph?

Freedberg and Gallese focus on this particular matter and tried to assess the implications of embodied simulation for empathetic reactions to visual artworks, highlighting the lack of scientific information both in this field and on images in general. Traditional art history and art criticism have maintained a cognitive and disembodied approach to aesthetics, meaning that the way viewers react while looking at a photograph has always been approached as abstract and metaphysical.

Freedberg and Gallese instead believed that the empathetic reaction that takes place while looking at visual art is neither abstract nor metaphysical, but actually measurable and grounded in the brain. They proposed that:

A crucial element of aesthetic response consists of the activation of embodied mechanism encompassing the simulation of actions, emotions and corporeal sensation, and that these mechanisms were universal. This basic level of reaction to images was essential to understanding the effectiveness both of everyday images and of works of art. Historical, cultural and other contextual factors do not preclude the importance of considering the neural processes that arise in the empathetic understanding of visual artworks. (2007, p.197)

Put simply, no matter the historical or cultural context, there is a universal simulation mechanism that takes place while looking at a visual item, whether it is an art piece or a photograph. The viewer's body gets in motion through an embodied simulation that tends to reproduce what the viewer is viewing. For example, the authors cite Michelangelo's famous work "The Dying Prison" (1513-1514), whose vision appears to provoke an individual response in the same muscles that seem to be stimulated in the sculpture itself (see Figure 2).

Figure 2. “The Dying Prisoner.” Michelangelo’s work “The Dying Prisoner” (1513-1514), currently located in the Louvre Museum in Paris, France.

Although the focus of the particular study by Freedberg and Gallese was on visual art, my interest is slightly different because I am concentrating on photographs. The same ideas may apply to humanitarian photographs, advertising, marketing, etc.

If studies about mirror neurons are relatively new and still controversial, knowledge about the human face and its powerful communication skills are already well established. The face indeed is considered to be the primary nonverbal channel for the communication of emotion (Ekman, Friesen & Ellsworth, 1972). Facial expression of emotions not only conveys information, but also may generate a

number of different emotions in observers, a phenomenon called emotional contagion. Emotional contagion is a primitive, automatic form of empathy, which differs from more deliberative empathy that involves taking another person's perspective (Hatfield, Cacioppo & Rapson, 1993).

Mirror neurons seem to be particularly relevant even in this context, as emotional contagion can be defined as “the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally” (Hatfield et al., 1992, p. 153–154). Considering the automatic nature of this phenomenon and the recent findings about the presence and roles of mirror neurons, it is reasonable to connect the origin of emotional contagion with mirror neurons. Indeed, the research on mirror neurons shows that the body automatically tends to replicate what it is observing, whether it is another person or visual art. The involuntary nature of this process could be related to the automatic tendency to align our feelings with the ones of someone else after seeing their expressions. In others words, in seeing someone else's face, we gather information about their feelings, and subsequently our own body tends to replicate the same feelings.

In the next section I will explore how research on emotional contagion can enrich the current study.

EMOTIONAL CONTAGION AND FACIAL EMOTION EXPRESSIONS

Previous research has shown that emotional contagion, defined above as “the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally” (Hatfield et al., 1992, p. 153–154), happens automatically and outside of awareness (Dimberg, Thumberg & Elmehed 2000; Neumann & Strack 2000). This means that, in looking at a photograph of a sad or happy subject, the viewer’s emotional state converges with the subject’s negative or positive emotional state. What are the consequences of such convergence of emotions?

Small and Verrochi (2008) tried to shed a light on this inquiry by focusing on the relation between facial expressions of emotions in charity advertisements and donation behavior. In order to measure people’s intent to donate money, Small and Verocchi relied on the well-established link between sympathy and donation behavior. In fact previous research has shown that promoting sympathy increases the tendency to give to charity. (Bagozzi & Moore 1994; Coke, Batson, & McDavis, 1978).

Small and Verrochi predicted that because of emotional contagion, people feel sadder when exposed to a sad-faced image. They proposed that this automatic induction of emotion influences sympathy because the observers empathize with suffering through the shared experience of sadness. The researchers proposed that when people are exposed to more information about the photograph, it engages the

deliberative system, which lessens the impact of facial emotion expression. In other words, if detailed information accompanies the photograph, then emotional contagion will be reduced by rational thinking. This last point draws on the evidence, based on previous studies, that emotional contagion happens automatically and that cognitive deliberation can interrupt these emotional processes.

Small and Verrochi demonstrated that it is the emotional convergence specific to contagion that drives the effect of emotion expression on sympathy, rather than a generic feeling of sadness. Contagion effects, as stated above, are automatic and diminished by deliberative thought. Indeed, when viewers were provided with detailed information about the subjects in the photograph and could process it at a deep level, emotion expression became a less important determinant of sympathy.

The results of their studies showed that sadness contagion facilitates sympathy, most likely because the observer shares the victim's pain, but happiness contagion fails to connect the observer to the victim's positive state. Subjects exposed to sad photographs presented higher levels of contagion than subjects exposed to happy ones. Further, sad photographs generated higher sympathetic reactions than happy ones, and emotional contagion was shown to be the mediator in this relationship. Put simply, when viewers were presented with the photograph itself, sad photos generated higher sympathetic reactions than happy ones. However when participants read detailed information about the subject's plight and could process it at a deep level, diminishing then the effect of emotional contagion because of rational

thinking, sympathetic reactions between viewers exposed to sad and happy photographs weren't significantly different. This means that facial emotion expression in this situation became a less important determinant of sympathy. Therefore Small and Verrochi's study demonstrated that "emotion expression matters most when people are thinking with their hearts and not scrutinizing information" (Small & Verrochi, 2008, p. 31).

ATTENTIONAL MECHANISM IN THE GENERATION OF SYMPATHY

Two important variables to consider when looking at donation behavior are mental images and attention (Slovic, 2007).

Regarding mental images, people seem to be more willing to help the individual most similar to themselves since they are able to imagine him or her (Loewenstein & Small, 2007). Moreover, viewers seem more inclined to help single individuals rather than groups, because mental images of single victims are more resonant (Jenni & Loewenstein, 1997; Kogut & Ritov, 2005a; Slovic, 2007; Vastfjall, Peters, & Slovic, 2006).

Dickert and Slovic (2009) provided insight into attention and the generation of sympathy. They tested two hypotheses: first, that visual distractors in the form of other victims negatively influence the attention needed to generate sympathy toward the target victim (the target subject was identified by a spatial cue appearing on the computer screen either before or after the photograph). They hypothesized that

sympathy will increase when the target victim is alone rather than with distractors. Second, they hypothesized that subjects evaluated online (focusing on the picture of the subject displayed on the screen) will generate more sympathy than the ones evaluated through memory retrieval. Dickert and Slovic tested the previous hypothesis through the development of two experiments. In the online judgment condition, participants were able to concentrate on the specific location where the target picture would appear and make an online sympathy judgment while looking carefully at the picture. In the memory condition, the spatial cue appeared after the presentation of the target picture, and sympathy judgments were based on a memory representation. Target pictures were either accompanied by seven distractors (other victims) or presented alone. Sympathy rating was the primary dependent variable for the target picture.

The results supported the hypothesis that a single target generates a higher level of sympathy, which is in line with the findings that emotional response decreases as the number of victims increases (Slovic, 2007). This was true when judgments were made online (realized by a spatial cue presented before the target picture) than when based on memory. However the sympathy score difference between viewers exposed to photos with no distractors and photos with distractors was especially pronounced when judgments were based on memory (the spatial cue appeared after the presentation of the target picture). The reason behind this finding raised some doubts; indeed, a possible explanation could be that online judgment

provided more vivid images and consequently generated more empathy, however an alternative explanation could be simply related to the fact that subjects were not able to clearly identify the target.

Through the development of a second experiment, Dickert and Slovic (2009) clarified the previous doubt. The design and materials were similar to the first experiment, however few changes were made: distractors were reduced to three, the time to look at the pictures was extended and a manipulation was added to make sure that subjects could identify the target properly.

Here again the level of sympathy decreased as the number of distractors increased, and also sympathy from memory was lower than sympathy from online judgments.

The results of both experiments point to the fact that “presenting a group of people in need of help can increase the difficulty of attending to any single individual, leading to lower sympathy” (Dickert & Slovic, 2009, p. 304). The findings validated the idea proposed by Slovic (2007) that the viewer’s attention is a key variable in the generation of empathetic feelings.

In the next section I will focus on the delicate relationship between attention and empathy that, according to Slovic (2007), could play a key role in understanding our inability to react to genocide. Genocide is defined as the deliberate and systematic extermination of an ethnic or national group. Slovic argued that the cause of people’s indifference to mass murders in the past century is not insensitivity, nor

the fact that we only care about identifiable victims, and not simply a consequence of our politicians, but is actually tied to the concept of attention.

PSYCHIC NUMBING AND GENOCIDE

According to Slovic (2007) our incapacity to react to genocide resides in a mechanism that plays a role in many episodes of mass murder neglect. The mechanism involves our ability to experience affect, defined as “the positive and negative feelings that combine with reasoned analysis to guide our judgments, decisions, and actions” (Slovic, 2007, p. 80). Affect plays a central role in what has come to be known as “dual-process theories” of thinking. Seymour Epstein (1994) wrote: “There is no dearth of evidence in every day life that people apprehend reality in two fundamentally different ways, one variously labeled intuitive, automatic, natural, non verbal, narrative, and experiential, and the other analytical, deliberative, verbal and rational” (Epstein, 1994, p. 710).

Drawing on this concept, Stanovich and West (2000) labeled these two ways System 1 and System 2 as shown in Table 1.

Table 1.
Dual Model of Thinking.

System 1: Experiential System	System 2: Analytic System
Affective: pleasure-pain oriented	Logical: reason oriented (what is sensible)
Connections by association	Connections by logical assessment
Behavior mediated by feelings from past experiences	Behavior mediated by conscious appraisal of events
Encodes reality in images, metaphors, and narratives	Encodes reality in abstract symbols, words, and numbers
More rapid processing: oriented toward immediate action	Slower processing: oriented toward delayed action
Self-evidently valid: “experiencing is believing”	Requires justification via logic and evidence

Dual model of thinking: Comparison of experiential and analytic systems (adapted from Epstein, 1994, Copyright 1991, with permission from Guilford).

The dual model of thinking comprehends the experiential system and the analytic one. In the experiential system, thinking happens naturally, irrationally, and it is driven by beliefs. In the analytic system instead, thinking is the results of an analytic and rational process grounded in evidence. For example, in the experiential system actions are fast and justified by personal beliefs, while in the analytic one actions move from logical reasoning and evidence. Moreover, in the experiential system mental processes are faster and actions are immediate, while in the analytic one, mental processes are slower and actions require justification. While the first system is grounded in affect, the second one is grounded in reason.

Stanovich and West (2000) argued that it is through the experiential system that we make most of our decisions. Given this, recent history has proved that this system responds to large-scale atrocities in ways that are less than desirable, and a possible explanation could be tied with the concept of human evolution. Individuals are believed to have evolved to protect their families and communities from visible and immediate dangers. Their affective system did not evolve to respond to distant mass murder.

A recent study designed by Vastfjall, Peters, and Slovic (2008) tested people's willingness to donate money towards one vs. two children. They gave one group of Swedish students the opportunity to contribute their earnings from another experiment to Save the Children to aid Rokia, a seven-year-old girl from Mali. A second group was offered the opportunity to contribute their earnings to Save the Children to aid Moussa, a seven-year-old boy from Mali who was similarly described as in need of food aid. A third group was shown the story and photos of Rokia and Moussa, and was told that any donation would go to both of them. According to this study, our level of compassion seems to start fading as soon as there is more than one person involved. As an explanation for this fading, Slovic (2007) refers to the "psychic numbing," or the act of voluntarily turning off feeling.

A similar process is called moral disengagement, a phenomenon activated by disabling the mechanism of self-condemnation that can assume various forms such as displacement of responsibilities, dehumanization, reconstruction of conduct, and

misrepresentation of the consequences of action. Individuals supposedly devote their sense of self-worth so strongly in humane beliefs and social obligations that they behave against what they consider unjust or immoral even though their actions may incur heavy personal costs. Moral disengagement occurs with the reframing of the behavior so the individual does not view it as immoral. According to Bandura (1999), moral disengagement is activated by the turning off feelings combined with the attempt to find an actual rational explanation for this conduct. For example, by minimizing the personal role in harming others, or by devaluing them or even by blaming them for what is done to them. In summary, affect is a key element in the generation of sympathy, and imagery and attention can influence its engagement. Affect and therefore compassion seem to start fading when attention has to deal with more than one life. Psychic numbing and moral disengagement also facilitate the apathy and inaction seen repeatedly over the last century in response to genocide.

DONATION BEHAVIOR

One goal of the study is to consider what type of humanitarian photographs generates the best outcome in terms of charitable donations.

There are multiple factors to consider when talking about donation behavior. Social pressure, sympathy, guilt, desire to earn prestige, friendship and respect are some influences on charitable giving. Previous research has provided evidence that

both egoistic and altruistic motivations are expected to increase helping behavior (N. Bendapudi, 1996; Singh, 1996; V. Bendapudi, 1996).

In the past researchers have tried to draw a precise line between altruistic and egoistic motivations that lead to donations. One way to analyze this matter is through the cognitive appraisal approach of emotions (Smith & Ellsworth, 1985). This approach conceptualizes emotions by studying a variety of cognitive dimensions. One of the dimensions considered in this approach is the so called ego-focused vs. other-focused dimension, introduced by Markus and Kitayama (1991). Markus and Kitayama stated that the emotions humans experience differ depending on whether they experience themselves as being independent from (ego-focused), or interdependent with (other-focused) people. Ego-focused emotions can be defined as emotions directed toward oneself, and those who put oneself as the central person, independent from others. When experiencing an ego-focused emotion, the attention is on one's own desires, needs, achievements, and failures. Examples of ego-focused emotions are pride, happiness, and frustration. Other-focused emotions are directed towards others, and put a person in relation with others. These are emotions that are experienced in a social context. When experiencing the other-focused emotion, one does not focus on oneself, but on the desires, needs, achievements, and failures of others. Examples of these kinds of feelings are empathy, peacefulness, gratitude, and shame (Aaker & Williams, 1998; Markus & Kitayama, 1991).

Considering the possible impact of this dimension on the efficacy of emotional appeals on donation behavior, Faseur and Geuens (2008) drew on the empathy–altruism hypothesis developed by Batson, O’Quin, Fultz, Vanderplas, and Isen (1983). According to this hypothesis, the confrontation of an individual with another person in need can generate two different types of emotional reactions in people. More specifically, the individual will experience higher levels of personal distress and/or of empathetic concern. Additionally, the empathy-altruism hypothesis states that in case of an empathetic response, people focus attention on the person in need, and this leads to a selfless and purely altruistic motivation to decrease the distress of this other person. On the other hand feelings of personal distress are more likely to result in egoistic motivations to help. In this case attention is focused on oneself, and helping the others might help to relieve him or her of his or her own negative feeling. So, even if for different reasons, both egoistic and altruistic motivations are expected to increase helping behavior (N. Bendapudi, 1996; Singh, 1996; V. Bendapudi, 1996).

Drawing on the definitions of ego and other-focused feelings, it is clear that personal distress can be considered as an ego-focused feeling and empathic concern as an other-focused feeling. More specifically, it can be anticipated that any other-focused emotion (positive or negative) will engage altruistic motivations to help than ego-focused emotion.

Andreoni (1989) however, offers a different approach when talking about donation behavior. He argued against drawing a line between altruistic and egoistic motivations, claiming that giving is motivated by both. Andreoni introduced the “impure altruism” model, a mix between altruism and warm glow. Warm glow in this context refers to the feeling experienced by contributors of having done something good. His analysis of the motivations behind donations concluded that: “When people make donations to privately provided public goods, they may not only gain utility from increasing its total supply, but they may also gain utility from the act of giving” (Andreoni, 1989, p. 472)

In summary, there are different factors to take into consideration when talking about donation behavior, such as social pressure, sympathy, guilt, desire to earn prestige, friendship and respect. In the past researchers have tried to distinguish between the altruistic and egoistic nature of emotions that lead to donation (Markus & Kitayama, 1991; N. Bendapudi, 1996; Singh, 1996; V. Bendapudi, 1996; Faseur & Geuens, 2008), in other words do people donate to feel better about themselves or because they want to help someone else? Andreoni however, introducing the “impure altruism” model (1989), argued against this distinction claiming that behind the act of giving there is always a mix of altruism and warm glow.

HUMANITARIAN PHOTOGRAPHY, SYMPATHY AND DONATION BEHAVIOR

My interest lies in measuring the effects of humanitarian photography on emotions and donation behavior. Since the link between sympathy and willingness to donate is already well established, in order to take a look at donation behavior I will specifically look at sympathy. In other words, I will examine to what extent humanitarian photographs generate a sympathetic reaction in the viewer.

To accomplish this goal, the current study was grounded into a number of different theories and focused on several dimensions. First, I examined how the relationship between framing and photography is crucial in understanding the effects of photographs on the viewers, in particular on the viewers' knowledge of the outside world.

Since humanitarian photography often portrays subjects in need, particular attention was given to photographs representing the pain of others and to how we react to them. Sontag (2003) argued that photographs can be simply ignored for the most part, and even when actually seen they just make the viewer a spectator, with no real power to do anything about the image. On the other hand, Farmer (2005) and Kristoff (2005) made a case that photographs have an evidentiary power that brings something new and inarguable to the equation. This endless debate over photographs' evidentiary power raises questions like: can a photograph lead to a positive change? Can photographs representing the pain of others move people to

take action and bring the suffering to an end?

Before answering these questions however, this research had to confront the way the body processes images. Indeed, before being able to understand what kind of effects photographs have on the viewer, it is crucial to take a look at how the brain decodes images. The literature told us that no matter the circumstances, cultures and contexts, our body decodes visual items in a universal way. Recent neuroscience findings (Gallese & Lakoff, 2005; Freedberg & Gallese, 2007) about mirror neurons showed that there is a universal simulation mechanism that takes place while looking at a visual item, whether it is an art piece or an everyday photograph. The viewer's body gets in motion through an embodied simulation that tends to reproduce what the viewer is seeing.

Mirror neurons could also be a key point in understanding emotional contagion. Emotional contagion is defined as “the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally” (Hatfield et al., 1992, pp. 153-154). The research on mirror neurons showed that the body automatically tends to replicate what it is observing, whether it is another person or visual art. Therefore, the automatic nature of this process could be related to the automatic tendency to align our feelings with the ones of someone else after seeing his or her expression.

Emotional contagion might be another crucial variable that determines the efficacy of a photograph. The literature provided evidence of this through Small and Verrochi's study (2008), which focused on the role of emotional contagion in the relation between facial expressions of emotions and donation behavior. They found that subjects exposed to sad photographs presented higher level of emotional contagion than subjects exposed to happy photographs. Further they found that emotional contagion was the mediator in the relationship between facial expression of emotions and sympathy.

However the literature also highlighted other possible issues to take into consideration, such as affect, imagery and attention. Slovic (2007) provided evidence that affect is a key element in the generation of sympathy, and also that imagery and attention can influence its increase or decrease. Affect seems lacking when talking about large numbers, possibly because of the way humans evolved. A possible explanation for the fading of human compassion could be found in the phenomenon of moral disengagement, activated by disabling the mechanism of self-condemnation that can assume various forms such as displacement of responsibilities, dehumanization, reconstruction of conduct, and misrepresentation of the consequences of action. Research on attention highlighted that the numbers of subjects portrayed in a photograph might be another variable that has an impact on the sympathetic reaction of the viewer.

Lastly, attention was drawn to donation behavior. The literature suggested that there are different factors to take into consideration when talking about donation behavior, such as social pressure, sympathy, guilt, desire to earn prestige, friendship and respect. In the past researchers have tried to distinguish between the altruistic and egoistic nature of emotions that lead to donation (Markus & Kitayama, 1991; N. Bendapudi, 1996; Singh, 1996; V. Bendapudi, 1996; Faseur & Geuens, 2008), in other words do people donate to feel better about themselves or because they want to help someone else? Andreoni however, introducing the “impure altruism” model (1989), argued against this distinction claiming that behind the act of giving there is always a mix of altruism and warm glow.

HYPOTHESES AND RESEARCH QUESTIONS

Following directly from the studies emerged in this literature on photography, sympathy and donation behavior, three hypotheses are presented.

Recall that Small and Verrochi (2008) found that when viewers were presented with a photograph, sad photos generated higher sympathetic reactions than happy ones. With this in mind, I propose the following hypothesis:

Hypothesis #1: Subjects exposed to sad face photographs will have significantly stronger sympathetic reactions than subjects exposed to smiling photographs.

Acknowledging the gap in the literature but being aware of the power of the human gaze, I propose the next hypothesis:

Hypothesis #2: Subjects exposed to direct eye contact photographs will have significantly stronger sympathetic reactions than subjects exposed to indirect eye contact photographs.

Lastly, recall that Slovic (2007) provided evidence that when attention decreases sympathy will decrease. In other words, if donors are presented with the choice to help one subject in need and two subjects in need, they will most likely tend to help the single subject. With this in mind, I propose the following hypothesis:

Hypothesis #3: Subjects exposed to individual photographs will have significantly stronger sympathetic reactions than subjects exposed to group photographs.

In addition to the three hypotheses, I raise several research questions. While not appropriate for explicit hypotheses, the following research questions strongly inform this inquiry.

Drawing on the literature that suggests a link between sympathy and donation behavior (Bagozzi & Moore, 1994; Coke, Batson & McDavis, 1978), I propose the following research question:

Research Question #1: Do sympathetic reactions correlate to subjects' willingness to donate money towards the organization that is helping the subjects in the photographs?

A more direct way to measure the relationship between sympathy and donation behavior is to ask participants for real donations. I will investigate this relationship asking participants about their willingness to receive information about the non-profit groups that assist the subjects in the photographs. Thus, I propose the following research question:

Research Question #2: Are sympathetic reactions greater for subjects who are willing to receive information about non-profit groups that assist the subjects in the photographs than subjects who were not willing to receive information?

Drawing on the “impure altruism” model introduced by Andreoni (1989), in which warm glow is defined as the rewarding feeling experienced by contributors of having helped someone else, I propose the following research question:

Research Question #3: Do sympathetic reactions correlate to the rewarding feelings derived from the act of donating?

Recall the phenomenon of moral disengagement, activated by disabling the mechanism of self-condemnation that can assume various forms such as displacement of responsibilities, dehumanization, reconstruction of conduct, and misrepresentation of the consequences of action. With this in mind I propose the following:

Research Question #4: Do sympathetic reactions correlate to moral disengagement?

Recall the phenomenon of emotional contagion, defined as “the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally” (Hatfield, Cacioppo, & Rapson, 1992, p. 153–154). With this in mind, I propose the final research question:

Research Question #5: Will participants’ own feelings converge with the photographs they will be exposed to? In other words, will participants exposed to sad photographs feel significantly more negative feelings than participants exposed to smiling ones? Will participants exposed to smiling photographs feel significantly more positive feelings than participants exposed to sad ones?

Chapter 3

METHODOLOGY

RESEARCH DESIGN OVERVIEW

This pilot study is designed to test, using a quasi-experimental design, the degree to which facial expressions, number of subjects and eye contact captured in photographs, impact the sympathetic reaction of the viewer. The hypotheses explore whether photographs that depict happy subjects generate a stronger sympathetic reaction in the viewer than unhappy ones, whether a single subject photograph generates a stronger sympathetic reaction in the viewer than a group photograph and whether looking directly at the camera provoke a stronger sympathetic reaction in the viewer than one who is not. I have also asked four research questions to examine the correlation between sympathy and respectively willingness to donate; willingness to receive more information about the non-profit groups that assist the subjects in the photograph; and warm glow; and moral disengagement. I finally asked a fifth research question about the phenomenon of emotional contagion.

I will create a quasi-experimental study to measure the effects of humanitarian photography on viewers' sympathetic reactions. The study will have three main conditions. Participants will view photos from each condition:

Condition #1: Smiling vs. Sad

Condition #2: Eye Contact vs. No Eye Contact

Condition #3: Individual vs. Group

For this project I collaborated with Paul Slovic, founder and president of Decision Research at the University of Oregon. The current panel of participants used by Decision Research included 900 participants. To obtain a sample size with a 95% confidence level and 5% confidence interval, I needed to draw a sample size of at least 269 participants. However in order to have at least 15 participants in each condition, I calculated that at least 360 participants were needed to be included (15 participants x 24 conditions = 360). Recall that each of the three conditions above includes two photographic manipulations. In order to measure each variant, I needed eight groups:

Group #1: Smiling/group photo/eye contact

Group #2: Smiling/group photo/ no eye contact

Group #3: Smiling/single portrait/ eye contact

Group #4: Smiling/single portrait/ no eye contact

Group #5: Sad/group photo/eye contact

Group #6: Sad/group photo/ no eye contact

Group #7: Sad/single portrait/ eye contact

Group #8: Sad/single portrait/ no eye contact

What follows is the ideal design for the study. That is, I planned the following scenario: I would need to have a group condition of 45 subjects who would see the same group portraying A, B and C together, while in the individual condition subjects would ideally be divided into three sub-groups of 15 subjects exposed to either subject A, B, or C, ($45 = 15+15+15$). Indeed the group photograph would be singularly cropped into individual A, B and C, so that, in the individual condition, 15 subjects would be exposed to individual A, 15 subjects would be exposed to individual B, and 15 subjects would be exposed to individual C. To summarize this would be a $2 \times 2 \times 2$ factorial design (for a visual representation see Table 2).

Table 2

Visual Representation of the Research Design

Smiling			Sad		
Individual		Group	Individual		Group
E	A: 15 S	ABC: 45 S	E	A: 15 S	ABC: 45 S
	B: 15 S			B: 15 S	
	C: 15 S			C: 15 S	
<u>E</u>	A: 15 S	ABC: 45 S	<u>E</u>	A: 15 S	ABC: 45 S
	B: 15 S			B: 15 S	
	C: 15 S			C: 15 S	

Visual representation of the research design: A, B, and C represent the different individuals in the photographs, E stands for eye contact, E over-score for no eye contact, and S stands for subjects of the study.

THE SELECTION OF THE PHOTOGRAPHS

Because the study focuses on photography, a crucial step was the selection of the appropriate images.

I was able to obtain photos from the global aid agency Mercy Corps, with access to its photo library, composed of all of the photographs taken by its staff in various parts of the world. All of the photographs are taken with the approval of the

subjects portrayed and are employed for marketing purposes. Phil Ottum, specialist of the photo library at Mercy Corps, provided me a username and a password to access the library.

The photo library is organized by region, country, year and photographer. All of the photos are tagged for horizontal/vertical, country and region. Pictures are also tagged following other criteria. For example specific names of foods (tomato, apple, etc) are tagged when recognizable, as are names of animals. If a color is significant or dominant in an image, that color is tagged (red, blue, etc). If the subject's name is known, the tag "name" is used. When a quote is included in the caption, the tag "quote" is used. If three or more people are in the photograph the tag "group" is applied. If the subject's face and expression are predominant the tag "portrait" is used. If a young male appears in the photograph he will be tagged as "boy," if there is a young female she will be tagged as "girl."

Once I obtained access to the photo library I created a "photography committee" composed by my thesis committee members (Cynthia-Lou Coleman, Priya Kapoor, and Paul Slovic). Also included were Martin Tusler, senior research assistant at Decision Research; Phil Ottum, specialist of the photo library at Mercy Corps; and Devan Wardell, marketing officer at Mercy Corps. The purpose of this committee was to serve as advisors when selecting photographs.

In order to maximize control and decrease the variables that could influence the viewers' opinions, the committee and I decided that the subjects represented in

the final photographs had to share the same gender, race and age. Talking about age, with the committee approval, I decided to look for children, between about 4 and 8 years old. This choice is due to the fact that the literature (Small & Verrocchi, 2008; Slovic, 2007; Kogut & Ritov, 2005; Vastfjall, Peters, & Slovic, 2008) has focused on children.

To begin, I initially did a simple search in the photo library. I typed the word “girl” in the research box, and I found 8855. Then I typed the word “boy” and I found 8461 photographs. Since I was planning to find group pictures at first, and then crop the subjects for the individual condition, I went back and typed in the search box the words “girl group” and “boy group.” In the first case I obtained 4997 results, and in the second 4610. I further filtered my results typing “girl group portrait” and “boy group portrait,” obtaining 1851 photographs in the first case and 2108 in the second one. Because the difference between the two groups did not look significant, with the committee approval, I decided to start examining both of them.

I went back to the results and typed “girl group portrait” and started to look through 1851 photographs, searching for subjects who had been photographed multiple times. At this point, I was hoping to find the same group of children in the four conditions I needed: smiling/looking at the camera, smiling/not looking at the camera, sad/looking at the camera/sad/not looking at the camera. This would have helped me to maximize control by reducing the number of variables that could influence the viewer and consequently increase the validity of the study.

However as I began to look through the images, I immediately understood that finding the same group of children in the four different conditions would have been no easy task. With the committee help, I realized that having a group of four or even five children would have made it difficult, if not impossible, to try to find the same group in all of the conditions (that is smiling, sad, eye contact and no eye contact). The higher the number of children in the photograph, the less likely they would be all doing the same thing, like smiling and looking at the camera.

It was clear that if I decided to choose group photographs first, I would need four different groups to satisfy the four conditions, and have a total of 12 different children in the study. Therefore, in light of the events, I met with my committee and proposed to look for single subjects portraits. In other words, I wanted to try to reverse my strategy. Instead of finding the group images first, and then crop them singularly, I had to find the single portraits first and then paste them together to create the group condition. The committee understood my concerns and agreed to the strategy change. Hence, I went back to the photo library and typed in the search box the words “girl portrait” and “boy portrait,” obtaining 4044 and 4296 results respectively. With the same criteria of the previous search (looking for subjects who had been photographed multiple times), I went through all of the photographs. I decided to look at images of girls and boys, precisely scrutinizing 100 pictures of girls and then switching to the boys.

When I was about half way in the process my attention was captured by the

images of two young African girls. They looked similar and were wearing similar clothes so I guessed they were sisters. I found about 40 photographs of them, which meant plenty of possibilities to find both of them in the four conditions.

The photographs were taken in November, 2009, by Cassandra Nelson, communication officer at Mercy Corps, in Nyanzale, North Kivu, Democratic Republic of Congo. Looking at the description I found out that the girls were actually sisters: Patience, 5 years old, and Promise, 4 years old (see Figure 2).

Showing the sequence of photographs to the committee, I had the final approval to proceed and select the ones I wanted to include in the study. At this point I had two out of the three subjects I was looking for, and decided the study will focus on girls.

Figure 3. Promise and Patience. Promise, 4, and her sister Patience, 5. Photograph by Cassandra Nelson.

After several meetings with the committee I selected the first photographs, and then proceeded to crop them. As shown in the photograph (see Figure 3), the images showed the girls' faces and upper torsos. However, their colorful dresses could have been another variable influencing the subjects' sympathetic reactions. Therefore, I decided to crop them with Photoshop, using a fixed cropping ratio: 1500 pixels x 1500 pixels. The final results showed mainly the girls' faces, and I retained a small portion of their dresses to make sure people perceived them as girls. After meeting with the committee we realized that their short hair and expressions created a bit of confusion in terms of their gender in some photographs, and keeping their dresses slightly visible could help the subjects' perception.

At this point I had eight photographs portraying Patience and Promise in each one of the four conditions I was looking for (see Figure 4 and Figure 5).

Figure 4. Patience. Patience, 5, smiling and looking at the camera (top left), smiling and looking away (top right), sad and looking at the camera (bottom left), and sad and looking away (bottom right). Photographs by Cassandra Nelson.

Figure 5. Promise. Promise, 4, smiling and looking at the camera (top left), smiling and looking away (top right), sad and looking at the camera (bottom left), and sad and looking away (bottom right). Photographs by Cassandra Nelson

At this point I had to look for the last subject of the study. I was looking for a young black girl photographed multiple times and somehow similar to Promise and Patience. I wanted the three girls to look similar for validity reasons and to ensure that subjects in both the group and individual conditions would have seen similar children.

I found two distinct girls, both fitting the research criteria, whose images appeared in all of the four conditions.

The description of the first girl did not provide a name, so in line with Promise and Patience I decided to refer to her as “Hope.” Her photographs were taken by Cassandra Nelson in September, 2009, in Bouar, Central African Republic. The description did not provide information about her age, and she seemed to be five or six years old. A sequence of eight photographs portrayed Hope in different situations. In this sequence I was able to find the smiling/looking at the camera and sad/ looking at the camera conditions. However I was still missing the smiling/looking away and sad/looking away conditions.

The second girl, who looked similar to Hope, happened to perfectly fill this gap. The photographs were taken in September, 2007, by Miguel Samper, documentary photographer for Mercy Corps, in the port city of Barranquilla, Colombia. Again there was no information about the girl’s name or age, however she seemed to be six or seven years old. I refer to her as “Grace.”

Grace was photographed seven times, and I was able to find her portrayed in the two missing conditions: smiling/looking away and sad/looking away.

The committee reviewed Hope and Grace’s photographs and approved the choice to combine them together in order to have the third and fourth subject. The two girls indeed looked so alike that it didn’t seem unreasonable to consider them as

one single subject. At this point I proceeded with the cropping, following the same criteria used earlier for Promise and Patience (see Figure 6).

Figure 6. Hope and Grace. Hope, smiling and looking at the camera (top left), sad and looking at the camera (bottom left). Grace, smiling and looking away (top right), sad and looking away (bottom right). Photographs by Cassandra Nelson and Miguel Samper.

The committee agreed with me that the strategy to combine single portraits together was a powerful way to recreate the group condition. The group images are shown in figures 7 through 10.

Figure 7. Group/Smiling/Eye Contact Condition. From the left: Hope, Patience and Promise in the group/smiling/eye contact condition. Photographs by Cassandra Nelson

Figure 8. Group/Smiling/No Eye Contact Condition. From the left: Grace, Patience and Promise in the group/smiling/no eye contact condition. Photographs by Cassandra Nelson and Miguel Samper

Figure 9. Group/Sad/Eye Contact Condition. From the left: Hope, Patience and Promise in the group/sad/eye contact condition. Photographs by Cassandra Nelson

Figure 10. Group/Sad/No Eye Contact Condition. From the left: Grace, Patience and Promise in the group/sad/no eye contact condition. Photographs by Cassandra Nelson and Miguel Samper

Once I collected all of the photos, I had to consequently modify the research design. Originally I thought to find single images of three different subjects in all of the four conditions. Instead I selected four subjects, but the results were close enough to let me proceed with the next step of the study. Graphically, this is how the new research design looked:

Table 3
Visual Representation of the Research Design

Smiling			Sad		
Individual		Group	Individual		Group
E	A: 15 S	ABC: 45 S	E	A: 15 S	ABC: 45 S
	B: 15 S			B: 15 S	
	C: 15 S			C: 15 S	
<u>E</u>	D: 15 S	DBC: 45 S	<u>E</u>	D: 15 S	DBC: 45 S
	B: 15 S			B: 15 S	
	C: 15 S			C: 15 S	

Visual representation of the research design; A refers to Hope, B to Patience, C to Promise and D to Grace. E stands for eye contact, E over-score for no eye contact, and S stands for subjects of the study.

QUESTIONNAIRE

Recall that the overarching purpose of this study was to discern what impact, if any, a number of features in a photograph have on sympathetic reactions.

Specifically these features were facial expressions (sad vs. happy), eye contact vs. no eye contact and total number of subjects portrayed.

SYMPATHY

In order to measure sympathy I used the design by Batson, Coke and McDavis, 1978. Batson and colleagues developed a scale that measures sympathy by asking participants to rate on a 7-part Likert scale the following ten feelings: upset, distressed, sympathetic, alarmed, grieved, troubled, compassionate, perturbed, worried and disturbed. I replicated the same scale for a variable called sympathy.

EMOTIONAL CONTAGION

Turning to emotional contagion, I drew on Small and Verrochi's work. They asked participants, after seeing a photograph, to rate their own emotions. In particular participants were asked to indicate to what extent any of the following described "how you feel right now" on a 5-part Likert scale, ranging from "very slightly or not at all" to "extremely." All of the items included were taken from the Positive and Negative Affect Schedule (Watson, Clark & Tellegen, 1988). Measures included 20 items: interested, alert, attentive, excited, enthusiastic, inspired, proud, determined, strong, active, distressed, upset, guilty, ashamed, hostile, irritable, nervous, jittery, scared and afraid. Then, as a manipulation check after participants reported their own feelings, the authors repeated the Positive and Negative Affect Schedule list of emotion characteristics with different instructions. This time, participants indicated the extent that the characteristics described "the expression on

the child/children's face in the picture" using the same 20 items. I replicated their design in my study and asked the same questions for both scales.

AWARENESS MEASURES

Drawing again on Small and Verrochi's study, I investigated subjects' own perception of what may have caused their sympathetic reaction. I asked subjects to rate on a 5-part Likert scale from "not at all a cause of my feelings" to "the most important cause of my feelings" the following causes: "I was affected by the expression the girl's face," "I am a sympathetic person," "I was affected by the girl's cuteness," "I was affected by her age," "I was affected by her race" and lastly "I was affected by her eyes."

DONATION BEHAVIOR

Recall that I am also interested in the association of sympathy with willingness to donate. To measure willingness to donate I asked the following questions: "How likely is it that you would donate money to an organization to help the girl in the photograph?" on a 7-part Likert scale, from "not at all" to "extremely."

I also asked participants if they would like to receive more information about the non-profit groups that assist the children in the images. This way I could have a better idea of how and if an emotion, sympathy in this case, drove an actual behavior. Following is the question wording: "Would you be interested in getting more

information about the non profit groups who help the children in the photographs?”

Responses were recorded with a yes or no response.

WARM GLOW

As a measure of warm glow, I also examined the relationship between sympathy and good feelings derived from the donation itself. In order to investigate this matter I asked participants: “How much do you think the possibility of donating to this organization would make you feel better?” on a 7-part Likert scale, ranging from “not at all” to “extremely.”

MORAL DISENGAGEMENT

To address moral disengagement, drawing on Slovic’s suggestion, I asked participants the degree to which they agreed with the following statement on a 7-part Likert scale, ranging from “not at all” to “extremely”: “In general, I believe that people should take care of themselves and not depend on others to help them.”

Below is the complete questionnaire.

The first section measures sympathy drawing from Batson, Coke and McDavis’ scale (1978).

1) Please tell us how much you feel the following emotions towards the girl in the picture.

Upset: Not at all 1 2 3 4 5 6 7 Extremely

Distressed: Not at all 1 2 3 4 5 6 7 Extremely

Sympathetic:	Not at all	1	2	3	4	5	6	7	Extremely
Alarmed:	Not at all	1	2	3	4	5	6	7	Extremely
Grieved:	Not at all	1	2	3	4	5	6	7	Extremely
Troubled:	Not at all	1	2	3	4	5	6	7	Extremely
Compassionate:	Not at all	1	2	3	4	5	6	7	Extremely
Perturbed:	Not at all	1	2	3	4	5	6	7	Extremely
Worried:	Not at all	1	2	3	4	5	6	7	Extremely
Disturbed:	Not at all	1	2	3	4	5	6	7	Extremely

The second section, drawing from Small and Verrochi's study (2008), measures subjects' own awareness of what may have caused their sympathetic reaction.

2) Which one of these causes may have affected your emotions?

I was affected by the expression on the girl's face:

Not at all a cause of my feelings 1 2 3 4 5 The most important cause

I am a sympathetic person:

Not at all a cause of my feelings 1 2 3 4 5 The most important cause

I was affected by the girl's cuteness:

Not at all a cause of my feelings 1 2 3 4 5 The most important cause

I was affected by her age:

Not at all a cause of my feelings 1 2 3 4 5 The most important cause

I was affected by her race:

Not at all a cause of my feelings 1 2 3 4 5 The most important cause

I was affected by her eyes:

Not at all a cause of my feelings 1 2 3 4 5 The most important cause

The third section, drawing from Small and Verrochi's study (2008), measures subjects' own feelings. In this section emotional contagion is investigated borrowing all of the items included in the Positive and Negative Affect Schedule (Watson, Clark & Tellegen, 1988).

3) Next we would like to know how you are feeling at the moment. How much do any of the following describe how you feel right now?

Interested:	Very slightly or not at all 1 2 3 4 5 Extremely
Alert:	Very slightly or not at all 1 2 3 4 5 Extremely
Attentive:	Very slightly or not at all 1 2 3 4 5 Extremely
Excited:	Very slightly or not at all 1 2 3 4 5 Extremely
Enthusiastic:	Very slightly or not at all 1 2 3 4 5 Extremely
Inspired:	Very slightly or not at all 1 2 3 4 5 Extremely
Proud:	Very slightly or not at all 1 2 3 4 5 Extremely
Determined:	Very slightly or not at all 1 2 3 4 5 Extremely
Strong:	Very slightly or not at all 1 2 3 4 5 Extremely
Active:	Very slightly or not at all 1 2 3 4 5 Extremely
Distressed:	Very slightly or not at all 1 2 3 4 5 Extremely
Upset:	Very slightly or not at all 1 2 3 4 5 Extremely
Guilty:	Very slightly or not at all 1 2 3 4 5 Extremely
Ashamed:	Very slightly or not at all 1 2 3 4 5 Extremely
Hostile:	Very slightly or not at all 1 2 3 4 5 Extremely
Irritable:	Very slightly or not at all 1 2 3 4 5 Extremely
Nervous:	Very slightly or not at all 1 2 3 4 5 Extremely

Jittery:	Very slightly or not at all 1 2 3 4 5 Extremely
Scared:	Very slightly or not at all 1 2 3 4 5 Extremely
Afraid:	Very slightly or not at all 1 2 3 4 5 Extremely

The fourth section, drawing from Small and Verrochi's study (2008), serves as a manipulation check in the investigation of emotional contagion.

4) Please tell us how much these characteristics describe the expression on the girl's face in the photograph.

Interest:	Very slightly or not at all 1 2 3 4 5 Extremely
Alert:	Very slightly or not at all 1 2 3 4 5 Extremely
Attention:	Very slightly or not at all 1 2 3 4 5 Extremely
Excitement:	Very slightly or not at all 1 2 3 4 5 Extremely
Enthusiasm:	Very slightly or not at all 1 2 3 4 5 Extremely
Inspiration:	Very slightly or not at all 1 2 3 4 5 Extremely
Pride:	Very slightly or not at all 1 2 3 4 5 Extremely
Determination:	Very slightly or not at all 1 2 3 4 5 Extremely
Strength:	Very slightly or not at all 1 2 3 4 5 Extremely
Energy:	Very slightly or not at all 1 2 3 4 5 Extremely
Distress:	Very slightly or not at all 1 2 3 4 5 Extremely
Trouble:	Very slightly or not at all 1 2 3 4 5 Extremely
Shame:	Very slightly or not at all 1 2 3 4 5 Extremely
Hostility:	Very slightly or not at all 1 2 3 4 5 Extremely
Irritation:	Very slightly or not at all 1 2 3 4 5 Extremely
Anxiety:	Very slightly or not at all 1 2 3 4 5 Extremely
Intimidation:	Very slightly or not at all 1 2 3 4 5 Extremely
Fear:	Very slightly or not at all 1 2 3 4 5 Extremely
Terror:	Very slightly or not at all 1 2 3 4 5 Extremely

The fifth section contains questions introduced to measure donation behavior (number 5, and 7); warm glow (number 6); and moral disengagement (number 8).

- 5) How likely is it that you would donate money to an organization to help the girl in the photograph?

Not at all 1 2 3 4 5 6 7 Extremely

- 6) How much do you think the possibility of donating to this organization would make you feel better?

Not at all 1 2 3 4 5 6 7 Extremely

- 7) If you would like information about non-profit groups that assist children living in poverty like the one in the survey, we can send information directly to your email address. We wouldn't reveal your email address to anyone else. Would you like Decision Research to send you this information?

Yes, send me more information about helping children in poverty/No, thank you

- 8) How much do you agree with the following statement?

"In general, I believe that people should take care of themselves and not depend on others to help them."

Not at all 1 2 3 4 5 6 7 Extremely

The final question is employed regularly at the end of Decision Research surveys, however it will be irrelevant for the analysis.

- 9) Finally, how interesting was the survey overall?

Not at all interesting, Slightly interesting, Moderately interesting, Very interesting.

SUBJECT RECRUITMENT

Participants are part of the Decision Research online database. The database was created beginning February 2008 by recruiting subjects on the Internet.

Subjects had to be at least 18 years of age and fluent English speakers. There were no other limitations to their participation. They were asked to complete questions about their demographics (gender, age, name and address) and fluency in English. Those under 18 or not fluent in English were excluded. Current members of the panel have been invited to participate under a protocol approved by the Decision Research Human Subjects Coordinator. Many subjects found the site from advertising done with Google Ad-Words. Also, a panel member posted the link to the web page on Slickdeals.net. Subjects were only allowed to register for the panel after agreeing to the privacy and confidentiality statements. Because the surveys are conducted online, full written consent is not possible. Subjects did not have access to the recruitment document unless they have checked “I agree” on the privacy form. This ensured that subjects understood all aspects of their involvement in the research project.

Following are the details and protocol with subject recruitment:

1. Subjects’ email addresses stored online at Decision Research.
2. When a new survey instrument is developed, subjects are emailed to invite them to take the survey. Although they are emailed as a group, subjects cannot see the email addresses of any of the other subjects. For this particular

study, under request of the Portland State University Human Subjects, the email with the link to the study also included a paragraph about the author. It states: "Marta Barberini, a graduate student from Portland State University, is conducting the study as part of her graduate program. The purpose of this study is to increase the knowledge of the effects of humanitarian photography on individuals' emotions. There are no foreseeable risks to the study. If you have any further questions or need clarifications, you can contact Marta Barberini anytime at martabarberini@hotmail.com."

3. Typically, subjects have 48 hours to complete the survey. For the current study subjects had one week. The survey was made available on Thursday March 29, 2010, and closed on Thursday April 8, 2010.
4. Survey responses are transferred securely to a computer at Decision Research.
5. Surveys were timed and subjects are paid for their participation via PayPal, based on an estimate of \$15 per hour. Running some pre-tests, an average of 15 minutes was estimated as the time needed by participants to take the entire survey, therefore each participant was promised to receive \$5.

RECORDS AND DISTRIBUTION

The identifying data collected about the subjects are: name, address, email, income, race/ethnicity, age and gender. Currently, data are collected under the

protocol approved by Decision Research and subjects use their email address as a unique identifier. The link between their email address and other personal identifiers (i.e., name and address) is stored on a password protected portable hard drive that is stored in a locked drawer when not in use. Because Decision Research may need to be able to link subjects with previously completed surveys, some type of identification is required. Further, their email addresses are used to pay them through PayPal. Hence, when the data are given to the data analyst, the email addresses are maintained to allow her to match the data with the earlier studies. However, for the studies conducted under the Human Subjects Compliance Office for the University of Oregon, an additional step was added, substituting a unique identifier for the email address. The file, linking this unique identifier to the person's email address was stored in the password protected thumb drive described earlier.

For the current study a unique identifier was created for each subject when he or she registers. When new data were collected, the subjects' email addresses were replaced with the identifier. When subjects ask to be dropped from the panel, the link between their unique identifier and personal identifying data will be destroyed.

In terms of how and where data were stored, initially, they were stored on a secure server maintained by Madhu Lundquist for Decision Research. During periods of data collection, data were downloaded to a computer used by Martin Tusler, senior research assistant, using encrypted SSH software. The only identifier on the data at this point was the subject's email address. Mr. Tusler did the data

cleaning and replaced the email address with the unique identifier and then burned the data onto a password protected CD that he delivered to the data analyst. The data analyst stored the data on her password protected computer. The people who had access to the data are Mr. Tusler, the data analyst, the members of my committee, and me. The data will be retained and they may be used in future studies if the subject has completed any standardized tests.

Chapter 4

RESULTS

DEMOGRAPHICS

Recall that the current panel of participants used by Decision Research included 900 subjects. For the pilot study, 450 panelists were randomly contacted. The total number of subjects' responses was 394, for a response rate of 88%.

Also, recall that the study had three main conditions. Participants saw photos from each condition:

Condition #1: Smiling vs. Sad

Condition #2: Eye Contact vs. No Eye Contact

Condition #3: Individual vs. Group

In order to measure each variant, I needed eight groups of 45 participants. However, the actual numbers of participants per group varied from 33 to 63, but was still considered acceptable by the committee (see Table 4 for the breakdown of conditions by group).

Table 4
Number of subjects per group

Group	Condition	Subjects
1	Smiling/group photo/eye contact	63
2	Smiling/group photo/ no eye contact	49
3	Smiling/single portrait/ eye contact	54
4	Smiling/single portrait/ no eye contact	33
5	Sad/group photo/eye contact	48
6	Sad/group photo/ no eye contact	50
7	Sad/single portrait/ eye contact	44
8	Sad/single portrait/ no eye contact	53
		N = 394

In light of the variations in the number of participants per group, the final research design is reported in Table 5.

Table 5
Visual Representation of the Final Research Design

Smiling			Sad		
Individual		Group	Individual		Group
E	A: 18 S	ABC: 22 S	E	A: 18 S	ABC: 17 S
	B: 14 S	ABC: 22 S		B: 13 S	ABC: 16 S
	C: 22 S	ABC: 19 S		C: 13 S	ABC: 15 S
<u>E</u>	D: 10 S	DBC: 13 S	<u>E</u>	D: 13 S	DBC: 21 S
	B: 13 S	DBC: 13 S		B: 19 S	DBC: 16 S
	C: 10 S	DBC: 23 S		C: 21 S	DBC: 13 S

Visual representation of the final research design: A refers to Hope, B to Patience, C to Promise and D to Grace. E stands for eye contact, E over-score for no eye contact, and S stands for subjects of the study.

TIME

Decision Research times all of its online surveys. Running some pre-tests, an average of 15 minutes was estimated as the time needed by participants to take the entire survey. The mean time for the total subject pool ($n = 394$) was 8.29 minutes, with a standard deviation of 29.89 minutes. The explanation for the high standard deviation can be found when looking at the time used by each subject to complete the survey: five of them indeed took more than a 140 minutes to complete the survey. A possible reason behind could be that they completed the survey but did not

turn it in right the way, so that the clock kept running.

By filtering the results, and excluding those five subjects, time values changed significantly. The mean time for the subject pool ($n = 389$) was now 5.22 minutes, with a standard deviation of 5.80 minutes.

Table 6
Time

Subjects	Mean	Standard Deviation
394	8.29	29.89

Table 7
Time with filter (<140 min.)

Subjects	Mean	Standard Deviation
389	5.22	5.80

AGE

In the total subject pool ($n = 394$), age breakdown showed that 55 (14%) subjects were between the ages of 18 and 25, while 53 (14%) were between the ages of 26 and 30. One hundred and eleven subjects (29%) were between the ages of 31-40, while 135 (36%) were between the ages of 41-60. A total of 30 (8%) were between the ages of 61-80. The mean age for the entire subject pool was 40.54 with a standard deviation of 12.83. The median age was 40.

GENDER

In the total subject pool, 204 (52%) were female and 190 (48%) were male.

RACE

Among the participants, 295 (75%) subjects were White, 52 (13%) were Asian or Pacific Islander, 21 (5%) were Black or African American, 12 (3%) were Hispanic, 1 (0.3%) was Native American and 2 (1%) were Other. Eleven (3%) subjects did not provide information about their ethnicity.

Table 8
Race

Race	Frequency	%
White	295	75
Asian or Pacific Islander	52	13
Black (African American)	21	5
Hispanic	12	3
Native American	1	0.3
Other	2	1
Missing	11	3
Total	394	100

EDUCATION

In the overall subject pool, 103 (26%) subjects reported an education level of

High School Graduate or Associate Degree. A total of 106 (27%) reported an education level of Bachelor's Degree in progress and 120 (31%) reported completion of a Bachelor's Degree. Sixty-five (17%) subjects reported completion of either a Master's or Ph.D. program.

Table 9
Education

Education	Frequency	%
H.S. Grad or A.A.	103	26.1
B.A./B.S. in progress	106	26.9
B.A./B.S. completed	120	30.5
M.A, M.S. or Ph.D	65	16.5
Total	394	100

INCOME

In the overall subject pool, 23 (6%) subjects reported income below \$15,000. Thirty-five (9%) subjects reported income between \$15,000 - \$24,999, while 38 (10%) reported income between \$25,000 - \$34,999 and 66 (17%) reported income between \$35,000 - \$49,999. Eight-nine (23%) subjects reported income between \$50,000 - \$74,999, a total of 114 (29%) reported income of \$75,000 or more, and 19 (5%) subjects declined to respond, while 10 (3%) did not provide any information.

Table 10
Income

Income	Frequency	%
Under \$15,000	23	26
\$15,000 - \$24,999	35	27
\$25,000 - \$34,999	38	31
\$35,000 - \$49,999	66	17
\$50,000 - \$74,999	89	23
\$75,000 or more	114	29
Declined to respond	19	5
Missing	10	3
Total	394	100

SYMPATHY

The main dependent variable of this pilot study is sympathy. Drawing on Small and Verrocchi (2008), I generated the variable sympathy computing all ten items into an additive scale labeled “Sympathy”. Recall that items were: upset, distressed, sympathetic, alarmed, grieved, troubled, compassionate, perturbed, worried and disturbed. I combined all of the items together in an additive scale and then ran a reliability analysis and found the scale was highly correlated with a Cronbach’s alpha of .96.

In addition, I ran t-tests on time, age, gender, education, income and race, and saw no significant difference in sympathy level by demographic variables.

AWARENESS MEASURES

The causes that subjects endorsed as the most important determinants of sympathy were their own personality (*I am a sympathetic person*, $M = 3.72$, $SD = 1.09$), the expressions on the girls' faces (*I was affected by the expression on the girl's face*, $M = 3.43$, $SD = 1.26$), and the girls' age (*I was affected by her age*, $M = 3.20$, $SD = 1.18$). Other causes were the girls' eyes (*I was affected by her eyes*, $M = 2.99$, $SD = 1.28$) and the girls' cuteness (*I was affected by the girl's cuteness*, $M = 2.82$, $SD = 1.29$). The cause believed least important was the girls' race (*I was affected by her race*, $M = 2.02$, $SD = 1.12$).

SMILING VS. SAD CONDITION

Recall the three main conditions of the current study are:

Condition #1: Smiling vs. Sad

Condition #2: Eye Contact vs. No Eye Contact

Condition #3: Individual vs. Group

Now, recall Hypothesis 1: Subjects exposed to sad face photographs will have significantly stronger sympathetic reactions than subjects exposed to smiling photographs.

An independent-samples t-test was conducted to compare the sympathy scores for subjects who saw sad photographs and subjects who saw smiling ones. There was a significant difference in scores for the smiling group ($M = 27.99$, $SD = 14.71$) and

the sad group [(M = 40.00, SD = 14.32); $t(373) = 7.41, p < .000$].

Given the t-test results, and the fact that the mean sympathy score is higher in the sad group as compared to the smiling one, it appears that sad photographs induced significantly more sympathy than smiling ones, thus supporting Hypothesis 1.

EYE-CONTACT VS. NO EYE-CONTACT CONDITION

Recall Hypothesis 2: Subjects exposed to direct eye contact photographs will have significantly stronger sympathetic reactions than subjects exposed to no eye contact photographs.

An independent-samples t-test was conducted to compare the sympathy scores for subjects who saw direct eye contact photographs and subjects who saw no eye contact photographs. There was a significant difference in scores for the eye contact group (M = 31.45, SD = 15.93) and the no eye contact group [(M = 35.82, SD = 14.76); $t(373) = 2.75, p < .006$].

Given the t-test results, and the fact that the mean sympathy score is higher in the no eye contact group than in the eye contact one, it appears that no eye contact photographs induced significantly more sympathy than eye contact ones. Thus, Hypothesis 2 was not supported.

INDIVIDUAL VS. GROUP CONDITION

Recall Hypothesis 3: Subjects exposed to individual photographs will have significantly stronger sympathetic reactions than subjects exposed to group photographs.

An independent-samples t-test was conducted to compare the sympathy scores for subjects who saw individual photographs and subjects who saw group photographs. There was no statistically significant difference in scores for the individual photo ($M = 32.38$, $SD = 15.29$) and the group photo [$(M = 34.50$, $SD = 15.71)$; $t(373) = -1.32$, $p < .530$].

The mean sympathy score is slightly higher in the group condition than in the individual one, but this difference is not statistically significant. Therefore Hypothesis 3 was not supported. Please see Table 11.

Table 11
Sympathy score in the three main conditions

	Smiling vs. Sad		Eye Contact vs. No Eye Contact		Individual vs. Group	
	(Smiling)	(Sad)	(Eye)	(No Eye)	(Indiv.)	(Group)
M	27.99	40.00	31.45	35.82	32.38	34.50
SD	14.71	14.32	15.93	14.76	15.29	15.71
<i>t</i>	7.41		2.75		-1.32	
<i>p</i>	.000		.006		.530	

WILLINGNESS TO DONATE

Recall Research Question 1: Do sympathetic reactions correlate to subjects' willingness to donate money towards the organization that is helping the subjects in the photographs?

Recall that sympathy is an additive scale while willingness to donate was a single variable (measured on a 7-part Likert scale). The two variables were positively correlated at $r = .55$ ($p = .000$). That is, as sympathy increases so does willingness to donate.

WILLINGNESS TO RECEIVE INFORMATION

Recall Research Question 2: Are sympathetic reactions greater for subjects who are willing to receive information about non-profit groups that assist the subjects in the photographs than subjects who were not willing to receive information?

Recall that willingness to receive information was measured as a dichotomous variable. An independent-samples t-test was conducted to compare the sympathy scores for subjects who agreed to receive more information and subjects who did not. There was a significant difference in sympathy scores for the subjects who agreed to receive further information ($M = 39.67$, $SD = 15.89$) compared with the subjects who did not [$(M = 31.15$, $SD = 14.87)$; $t(367) = 4.71$, $p < .000$]. That is, sympathetic reactions were greater in subjects who agreed to receive more information than

subjects who did not.

WARM GLOW

Recall Research Question 3: Do sympathetic reactions correlate to the rewarding feelings derived from the act of donating?

Recall also that warm glow was a single variable (measured on a 7-part Likert scale). The relationship between sympathy and warm glow was positively correlated ($r = .48, p = .000$), which means that the higher the sympathy the higher the warm glow.

MORAL DISENGAGEMENT

Recall Research Question 4: Do sympathetic reactions correlate to moral disengagement?

Recall also that moral disengagement was measured in a 7-part Likert scale.

The relationship between sympathy and moral disengagement was moderate and negatively correlated ($r = -.16, p = .002$), which indicates that higher sympathy is statistically associated with lower moral disengagement. Please see Table 12.

Table 12
Correlations

		Sympathy	Willing. To Donate	Warm Glow	Moral Disengag.
Sympathy	Pearson Correlation				
	Sig. (2- tailed)				
	N				
Willingness To Donate	Pearson Correlation	.551**			
	Sig. (2- tailed)	.000			
	N	374	393		
Warm Glow	Pearson Correlation	.457**	.772**		
	Sig. (2- tailed)	.000	.000		
	N	373	391	392	
Moral Disengagement	Pearson Correlation	-.157**	-.086	-.116*	
	Sig. (2- tailed)	.002	.089	.022	
	N	374	392	391	393

EMOTIONAL CONTAGION

Recall Research Question 5: Will participants' own feelings converge with the photographs they will be exposed to? In other words, will participants exposed to sad photographs feel significantly more negative feelings than participants exposed to

smiling ones? Will participants exposed to smiling photographs feel significantly more positive feelings than participants exposed to sad ones?

In order to examine emotional contagion, the 20 items of the Positive and Negative Affect Scale were subjected to factor analysis. Factor analysis revealed that all items loaded onto two main factors, explaining 31.4% and 28.4% of the variance respectively. The two factors were labeled “Positive Feelings” and “Negative Feelings” (see Table 13).

Table 13
Factor analysis

	Component	
	Positive Feelings	Negative Feelings
Interested	.764	.046
Alert	.698	-.066
Attentive	.745	-.049
Excited	.728	.164
Enthusiastic	.844	.057
Inspired	.849	.133
Proud	.772	.052
Determined	.816	.107
Strong	.841	.006
Active	.798	-.007
Distressed	-.121	.809
Upset	-.106	.812
Guilty	.001	.709
Ashamed	-.018	.756
Hostile	-.023	.664
Irritable	-.230	.672
Nervous	.006	.740
Jittery	.014	.672
Scared	-.016	.820
Afraid	.006	.804

An independent-samples t-test was then conducted to compare the Negative Feelings scores for subjects who saw smiling photographs and subjects who saw sad ones. There was a statistically significant difference in Negative Feelings scores for subjects exposed to smiling photographs ($M = -.12$, $SD = .84$) and subjects exposed to sad ones [$M = .13$, $SD = 1.13$]; $t(392) = 2.48$, $p < .014$].

A second independent-samples t-test was conducted this time to compare the Positive Feelings scores for subjects exposed to smiling photographs and subjects exposed to sad ones. There was no statistically significant difference in Positive Feelings scores for subjects exposed to smiling photographs ($M = .24$, $SD = 1$) and subjects exposed to sad ones [$M = -.25$, $SD = 1$]; $t(392) = -.49$, $p < .626$].

Given the two t-test results, subjects exposed to sad photographs reported significantly more negative feelings than subjects exposed to happy ones. On the other hand however, subjects exposed to happy photograph did not report significant more positive feelings than subjects exposed to sad ones. Thus, the phenomenon of emotional contagion, defined as the tendency to converge our own feelings with the ones of the subject in the photograph, was more likely to occur when subjects were exposed to sad photographs rather than happy ones.

Chapter 5

DISCUSSION

Advertisements for charities present photographs of the people they help to evoke the kind of sympathy that stimulates giving. As a result of the increasing number of charity organizations and the limited amount of donation dollars, the competition enhances the role of marketing strategies. Indeed, research based on Internal Revenue Service exemption data estimates that large American nonprofits spend at least \$7.6 billion per year on marketing (Watson, 2006).

The overarching purpose of this study was to discern what impact, if any, a number of variables in a photograph have on sympathetic reactions. Specifically I examined facial expressions (sad vs. happy), eye contact and number of subjects portrayed. It was hypothesized that there would be an impact and that, specifically, sad expressions, eye contact and individual photographs would induce significantly stronger sympathetic reactions in the viewer. To this end, the resulting data are both encouraging and disappointing.

Turning to the results, sad expressions evoked greater sympathy than smiling ones. Moreover, counter to the predictions, looking away from the camera, rather than direct eye contact, generated significantly stronger sympathy. And while I assumed a single child, rather than a group, would evoke stronger sympathetic reactions, resulting data did not support the assumption.

The results draw attention to sympathy-generating attributes of charity appeals that have not been yet explored in depth. The current study adds to the previous evidence that sad expressions may represent a more powerful marketing strategy than smiling ones.

An interesting finding concerns the relationship between human gaze and sympathy. Although counter to my expectations that the human gaze is known to be particularly powerful in transmitting emotions, results indicate that no eye contact evoked greater sympathy.

Turning to the number of subjects, my findings did not support the literature that predicts single subject photographs will generate stronger sympathetic reactions than group ones. A group photograph induced slightly more sympathy than an individual one, however the difference was not found statistically significant.

The study was grounded in the link between sympathy and donation behavior. Previous research has shown that promoting sympathy increases the tendency to give to charity. The correlation between sympathy and willingness to donate was confirmed. To further investigate this relationship, I examined subjects' willingness to receive further information about the non-profit groups helping the subjects in the photographs. Subjects who agreed were significantly more sympathetic than subjects who did not, which again reinforce the link between sympathy and prosocial behavior.

The results of the study also showed a relationship between sympathy, willingness to donate and warm glow, which strengthens the “impure altruism” model introduced by Andreoni (1989). Andreoni argued against drawing a line between altruistic and egoistic motivations behind the donation, claiming that donation behavior is motivated by both. The current study shows that as the sympathy increases so do the rewarding feelings derived from having helped somebody else. Also, as willingness to donate increases, so do the rewarding feelings derived from having helped somebody else ($r = .78, p = .000$). Thus, we can argue that when people donate money to charities they feel better about themselves.

The study also examined moral disengagement, which is activated by the turning off feelings and finding a rational explanation for this conduct. I found that when viewers were more sympathetic, they tended to agree less with the following statement: “In general, I believe that people should take care of themselves and not depend on others to help them.” Thus sympathy is correlated with a lack of moral disengagement.

In terms of emotional contagion, the study revealed interesting results, especially in light of the previous findings by Small and Verrochi (2008). The results indeed confirmed what the researchers previously found; participants exposed to sad photographs reported significantly more negative feelings than participants exposed to smiling ones. On the other hand participants exposed to smiling photographs did not report significantly more positive feelings than participants exposed to sad ones.

Thus, the phenomenon of emotional contagion, defined as the tendency to converge our own feelings with the ones of the subject in the photograph, was more likely to occur when subjects were exposed to sad photographs rather than happy ones. In light of these results, does emotional contagion affect sympathy? Small and Verrochi argued so, saying that sadness contagion facilitates sympathy, most likely because the observer shares the victim's pain, but happiness contagion fails to connect the observer to the victim's negative state.

However, a curious detail arose from the analysis of subjects' own perception of what may have caused their sympathetic reaction. The current study in fact shows that the causes that subjects endorsed as the most important determinants of sympathy (recall awareness measures, p.67) were their own personality, the expressions on the girls' faces, and the girls' age, while the cause believed the least important was the girls' race. Small and Verrochi's (2008) results were really similar, reporting subjects' own personality, the child's age and the child's health as the most important determinants of sympathy. They also reported the child's race to be the least important cause in the generation of sympathy. The difference between the two studies lies in participants' judgments of facial expressions. Indeed while in the current study it was indicated as the second most important cause ($M = 3.43$, $SD = 1.26$), in their study it was judged to be only somewhat important ($M = 3.15$, $SD = 1.24$). The importance of the data lies in the fact that Small and Verrochi used this result to add evidence to the fact that emotional contagion happens automatically,

and that individuals are not aware about the impact of facial expressions. This does not appear to be supported by the current study, because participants indicated expressions as the second most important cause of their feelings. It is tempting to argue that in this case subjects showed awareness about emotional contagion, however this argument would be highly speculative at this time, especially considering the reliability of subjects' own perception of emotional causes.

Moreover, I do not have information about the order in which the several causes were asked in Small and Verrochi's questionnaire, however in the current study the order of the causes was: I was affected by the expression on the girl's face, I am a sympathetic person, I was affected by the girl's cuteness, I was affected by her age, I was affected by her race, I was affected by her eyes. Considering that option 1 and 2 were judged as the most important causes for sympathy and option 5 was judged as the least important, it is valuable to reflect on the possible influence of priming effects. A way to overcome any doubt about priming in the future would be to ask participants the same question, but this time reversing the order of the possible answers.

Results reinforce the link between sympathy and pro-social behavior, and the link between giving and warm glow. This last connection is interesting because it raises the question: do people primarily donate to charities to feel better about themselves?

Moral disengagement was negatively associated with sympathy, but because the correlation was moderate ($r = -.157$), the issue might need further investigation. In this study disengagement was measured by asking participants to rate the degree to which they agreed with the following statement: “In general, I believe that people should take care of themselves and not depend on others to help them.” Because of the moderate size of the correlation, future studies may look into frame the question differently.

This research also reports the presence of emotional contagion only when looking at sad photographs, adding evidence to Small and Verrochi’s previous results. The fact that sympathy scores were higher in the sad condition, and that the presence of emotional contagion was also found the same condition, prompts the need to answer the following question: is it because of emotional contagion that sad expressions had an impact of sympathy?

All of this said, charitable organizations should draw from these data and test the results on the market, especially taking into account the increasing role of the Internet. Indeed, charities should prioritize research on how to successfully reach old donors and potential new ones through emails and the web. Photographs in this sense have a crucial strategic role because of their power to quickly capture the attention of the viewer. The current survey, conducted through email, demonstrates that images on the computer screen can evoke viewers’ sympathetic reactions. While it is unclear

if the research would have generated the same outcome if conducted, for example, by printed mail, marketing strategies are shifting towards the virtual world of the web.

This research was conducted with the intent to be beneficial for NGOs and other charity organizations, however some comments should be made in this context about the possible ethical repercussions. Indeed, even if the findings are meant to be beneficial for the particular purpose of fundraising to alleviate suffering around the world, I cannot control who will have access to the results. This is to say that someone with a completely different goal may take advantage of the findings to persuade people to perform certain actions such as buying a particular product, signing up for a program, etc. Moreover, even if the photos were taken by Mercy Corps' photographers, and I was allowed to employ them in the study, a particular thought goes to the subjects represented in the pictures. Indeed, even if they were a crucial component of this research, they will not directly benefit from the findings.

In terms of the selection of the photographs, it must be mentioned that, besides the literature and the photograph's availability, some assumptions may have determined the final choice. Indeed, even if humanitarian photographs do not only portray children of color in need, the majority does and this may reinforce the image of the "other" depicted by Lutz and Collins in their work *Reading National Geographic* (1993). Indeed, in arguing that *National Geographic* has shaped the world around us through its use of imagery, Lutz and Collins highlighted that participants of their study showed a tension between the tendency to identify

themselves with the photographs, and the simultaneous need to differentiate from them.

In *Orientalism* (1979), Said presented a similar argument. Indeed the book focuses on the timeless duality between the Western and Eastern world, on the Western superiority vs. the Eastern inferiority. The duality arises from the European way of approaching the study of the Orient, making judgments about the concepts they came across instead of viewing them in the context of the society in which they occurred and were experienced.

To put it in Said words:

A line is drawn between two continents. Europe is powerful and articulate; Asia is defeated and distant. Aeschylus represents Asia, makes her speak in the person of the aged Persian queen, Xerxes' mother. It is Europe that articulates the Orient; this genuine creator, whose life-giving power represents, animates, and constitutes the otherwise silent and dangerous space beyond familiar boundaries. (Said, 1979, p.57)

These words open the door to a series of questions about the western world's perception of people who live in third world countries, often treated as "the other," and often portrayed in needy situations. Sontag (2003) reinforces this argument claiming that photographs portraying the pain of others can be simply ignored for the most part, and even when actually seen they just make the viewer a spectator, with no real power to do anything about the image. On the other hand, Farmer (2005) and

Kristoff (2005) made a case that photographs have an evidentiary power that brings something new and inarguable to the equation. This endless debate over photographs' evidentiary power brings up questions like: can a photograph lead to a positive change? Can photographs representing the pain of others move people to take action and bring the suffering to an end?

The current study moved from the assumption that both these questions have a positive answer. However, concerns in terms of how humanitarian photography, no matter its good intention, may reinforce the stereotypical image of third world people and depict them as "the others," should not be forgotten.

Another aspect to take into consideration about the selected photographs is the gender of the children. This choice has been mainly determined by practical reason during the process of photographs' selection, however it might be grounded in the assumption that girls look more needy than boys, more fragile and thus solicit more sympathy in the viewers. Laura Mulvey in the essay "Visual Pleasure and Narrative Cinema," presented the concept of The Male Gaze as a mark of power asymmetry. Basically, the Male Gaze conveys an asymmetric power relationship between the viewer and the viewed, gazer and gazed. Mulvey argues that: "in a world ordered by sexual imbalance, pleasure in looking has been split between active/male and passive/female. The determining male gaze projects its fantasy onto the female figure, which is styled accordingly" (Mulvey, 1989, p.4). In humanitarian photography, as in cinema, women may be portrayed as passive to achieve a certain

purpose. If in movies the goal is to pleasure the eyes of men, in humanitarian photography the purpose might be to emphasize the need to help the subjects portrayed. Thus, portraying women, generally considered more helpless than men, may work better towards the final aim. It is crucial to acknowledge that the “gaze” of photography, combined with race, influences both the researcher and the subjects.

All of this said, even if additional research is imperative to make more definitive claims about the impacts of facial expressions, eye contact, number of subjects on sympathy, these findings should draw the attention of marketers.

FUTURE DIRECTIONS

Further study will expand the understanding of the role of emotional expressions, eye contact and number of individuals in photographs. The current study only focused on the photograph itself, without any caption or detailed information accompanying it. Therefore, it remains unclear if a photograph accompanied by detailed information about the subjects portrayed would obtain the same results. Moreover, the present study only focused on photographs of young girls of color. Would the same results be obtained with different choices in terms of gender, age and race? Might results be different for images of adult victims? Might findings be different for images of boys? These questions need to be further explored.

In terms of facial expressions of emotion, the study concentrated on two

specific emotion expressions, sadness and happiness. However, might other expressions, such as fear or disgust, also affect sympathy? Further, might expression effects interact with other picture elements, such as visible disease?

At the same time, it is crucial to further investigate the extent to which sad expressions generate sympathetic reactions. Indeed, just because a sad expression helped generate sympathy does not suggest that a sadder advertisement will work even better. For example, sadness may only work as long as people feel that a donation can lessen the sadness. A deeply sad advertisement could instead evoke a feeling of helplessness. Moreover, intense sadness is linked with a cognitive style in which people become self-focused and have trouble relating to others (Lyubormirsky & Nolen-Hoeksema, 1995). If an ad induced such a state, then it might actually be counterproductive and decrease giving. Also, an intense sad expression could be perceived as not genuine and posed to viewers and thus potentially cause reluctance to donate (Brehm, 1966). Therefore, it is important to make a distinction between the slight sadness induced by a facial emotion expression and more intense sadness, which most likely would result from a combination of facial expression and other graphic advertisement attributes.

Even if the results show that a happy expression provides no sympathy advantage, there are exceptions to this general rule. For example, if the charity wants to advertise a positive event (e.g., the opening of a new branch) for which a positive expression is more congruent with the purpose of the advertisement (i.e. creating an

energetic feeling), then the need for congruence might determine the strategy to employ.

Further research is also needed in the eye contact area to fill the current gap in the literature. To my knowledge indeed, this is the first attempt to measure the degree to which the gaze might influence sympathy and giving. The results indicate that the direction of the gaze actually makes a difference in terms of sympathetic reactions in the viewer, therefore its relevance cannot be ignored in future studies.

In terms of the number of subjects portrayed in the photograph, future studies should improve the current analysis. For example, in this case the group condition was generated fusing together three individual portraits, therefore I wonder: might a real group photograph affect sympathy differently? Also, recall that the group for the present study had three children, thus I wonder if a higher number of subjects in the group would have affected sympathy differently.

Previous studies on donation behavior asked participants for real donations. In an effort to avoid intrusion, the current study asked participants about their willingness to receive further information about the non-profit groups helping the children in the photographs. Indeed, while the question about the willingness to donate does not imply any commitment, the question about receiving further information does to some extent. Here, participants are required to step into the matter and receive informational material about the NGO.

The decision to remain vague and not directly mention the name of the

organization, Mercy Corps, was dictated by the necessity to avoid making the survey look like a disguised solicitation. However, considering the increasing amount of charities organizations and the general tendency to distrust the unknown, the vagueness of the question may have turned away some participants. Future research should explore other reliable alternatives to measure participants' willingness to donate without having to directly ask for donations.

Emotional contagion also deserves further attention; the present study confirmed in part Small and Verrochi's results, without however testing contagion as the mediator in the relationship between facial expressions and sympathy. While I can argue that emotional contagion only happened when looking at negative photographs, it would be speculative to infer that it was because of contagion that facial expressions affected sympathy. Future study might try to shed a light on the matter.

This research focused on the role of emotional expressions, eye contact and number of individuals in charities advertisement. However, as I anticipated earlier, there are many other elements worth to analyze. For example, it would be interesting to explore the area of "perspective," meaning does it make a difference in terms of sympathy if a photograph is taken from a higher or lower angle? May the subject look more "needy" if portrayed from a high angle? May he/her look more powerful if portrayed from a lower angle?

Moreover, it would be worth investigating colors; are colors able to impact

sympathy differently? For example a photograph with yellow as the predominant color might have a stronger impact on the viewer than a blue one? These questions, in conjunction with all of the ones raised above provide guidelines for future research.

LIMITATIONS

In light of the fact that this is a pilot study, there are several issues that limit interpretation of the results. For example, the sample of respondents is not truly random, in that the sample was obtained from Internet users responding to a request from the Decision Research group, and is therefore self-selected. Respondents were generally well-educated and engaged, judging from the demographic results. Therefore, generalizing the results to a wider population is unwise at this juncture.

In addition, the way that the photographs appeared on the internet survey might be re-examined in future studies to test the impact of: placement, grouping, gender, race, and photo color. For example, I used girls in the study, and future experiments might use boys and/or a combination of genders. As noted earlier, the group photos were actually pasted together, rather than a true “group” photos. In addition, the girls were quite similar in their appearance, which may have influenced the responses.

Moreover, two of the three children were sisters and were wearing the same dress, which could have somehow reinforced the viewers’ perception of them as a single child, rather than a group. I have explained the reason behind the similarity of

the children earlier in the methodology chapter. Basically, to increase the validity of the study and make sure that participants exposed to the group photos and participants exposed to the individual ones were not affected by too many different variables, I looked for extreme similarity of the children portrayed in the images. However, this may have been a good choice for the individual conditions but a counter productive one in the group condition.

A possible limitation in terms of asking subjects to rate their own feeling might be represented by the Hawthorne effect. The term derives from the earliest of a series of experiments between the years 1924 and 1932 designed to determine the relationship between levels of illumination and industrial production in the Western Electric Company at Hawthorne in Chicago, Illinois. During those experiments it originally seemed that workers were progressively more satisfied and productive as the working conditions were improved. However, it later became evident that workers were responding more to the attention given them by the researchers than to improved working conditions (Babbie, 2007). This raises doubts about the veracity of the strength of subject's reported emotions; might they feel happier or sadder just because they are asked about it? In the current study this question will be left unanswered since the lack of a control group to determine whether or not this was the case.

CONCLUSIONS

Figure 11. Young girl photographed in Eritrea. Photograph by Thatcher Cook

Many charities try, through humanitarian photographs, to give voice to the voiceless and to convey a message of change. However, only some succeed. At the beginning of this work it was proposed that the reason behind this might lie in the photograph itself. Thus, this research tried to shed a light on certain photographs' attributes believed particularly powerful in the generation of sympathy. Results

indicated that facial expressions and eye contact had a significant impact on the sympathetic reactions of the viewers.

Hence, this research brings us one small step closer to the purpose of understanding the unexplored factors in play in the relationship between photography and donation behavior. Consequently, while future research may add evidence to these results and also shed a light on new areas like photography's perspective and colors, charities should take these findings into account and apply them to their outreach campaigns, to keep telling forgotten people's stories in the most powerful way possible.

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APPENDIX A

QUESTIONNAIRE¹

Children in Poverty Study

What is your email address? (Use the address with which you are registered.)

An acknowledgment message will be sent to this address.

As always, please do not copy or forward this web page. We can only pay those people who have been invited by Decision Research to participate.

[Click here to continue.](#)

¹ All questionnaires sent to participants had color photographs.

In the following pages you will be asked to look at a photograph. This picture is of a girl living in poverty in a third-world country. You will be asked a series of questions about the girl in the photograph.

[Click here to go on.](#)

1. Please tell us how much you feel the following emotions towards the girl in the picture.

Upset	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				
Distressed	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				
Sympathetic	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				
Alarmed	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				
Grieved	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				

[Click here to go on.](#)

Here are some more emotions to rate. Please tell us how much you feel these emotions towards the girl in the picture.

Troubled	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				
Compassionate	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				
Perturbed	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				
Worried	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				
Disturbed	Not at all	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Extremely
		☐ 6	☐ 7				

[Click here to go on.](#)

2. Which one of these causes may have affected your emotions?

I was affected by the expression on the girl's face.

Not at all a cause of my feelings ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 The most important cause of my feelings

I am a sympathetic person.

Not at all a cause of my feelings ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 The most important cause of my feelings

I was affected by the girl's cuteness.

Not at all a cause of my feelings ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 The most important cause of my feelings

I was affected by her age.

Not at all a cause of my feelings ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 The most important cause of my feelings

I was affected by her race.

Not at all a cause of my feelings ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 The most important cause of my feelings

I was affected by her eyes.

Not at all a cause of my feelings ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 The most important cause of my feelings

3. Next we would like to know how **you** are feeling at the moment. How much do any of the following describe how you feel right now?

Interested	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Alert	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Attentive	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Excited	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Enthusiastic	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Inspired	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Proud	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Determined	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Strong	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Active	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely

[Click here to go on.](#)

Here are some more feelings for you to rate. How much do any of these describe how you feel right now?

Distressed	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Upset	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Guilty	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Ashamed	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Hostile	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Irritable	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Nervous	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Jittery	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Scared	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Afraid	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely

[Click here to go on.](#)

4. Please tell us how much these characteristics describe the expression on the girl's face in the photograph.

Interest	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Alert	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Attention	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Excitement	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Enthusiasm	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Inspiration	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely

[Click here to go on.](#)

Here are some more words that may describe the expression on the girl's face in the photograph.

Pride	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Determination	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Strength	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Energy	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Distress	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Trouble	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely

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Here are some more words that may describe the expression on the girl's face in the photograph.

Shame	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Hostility	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Irritation	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Anxiety	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Intimidation	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Fear	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely
Terror	Very slightly or not at all	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Extremely

5. How likely is it that you would donate money to an organization to help the girl in the photograph?

Not at all ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Extremely

6. How much do you think the possibility of donating to this organization would make you feel better?

Not at all ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Extremely

7. If you would like information about non-profit groups that assist children living in poverty like the one in the survey, we can send information directly to your email address. We wouldn't reveal your email address to anyone else. Would you like Decision Research to send you this information?

☐ yes, send me more information about helping children in poverty ☐ no, thank you

8. How much do you agree with the following statement?

In general, I believe that people should take care of themselves and not depend on others to help them.

Not at all ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Extremely

9. Finally, how interesting was this survey overall?

Not at all
interesting

Slightly
interesting

Moderately
interesting

Very
interesting

Please enter your email address again. This helps us reduce errors and makes sure you get paid.

[Click here to go on.](#)

APPENDIX B

HUMAN SUBJECTS APPROVAL MEMO

Human Subjects Research Review Committee

Post Office Box 751
Portland, Oregon 97207-0751
503-725-4288 tel
503-725-3416 fax
hsrrc@lists.pdx.edu

March 4, 2010

To: Marta Barberini

From: Nancy Koroloff, HSRRC Chair

Re: Approval of your application titled, "The Impact of Humanitarian Photography on Donation Behavior" (HSRRC Proposal # 101228).

Dear Marta,

In accordance with your request, the Human Subjects Research Review Committee has reviewed your proposal referenced above for compliance with DHHS policies and regulations covering the protection of human subjects. The committee is satisfied that your provisions for protecting the rights and welfare of all subjects participating in the research are adequate, and your project is approved. Please note the following requirements:

Changes to Protocol: Any changes in the proposed study, whether to procedures, survey instruments, consent forms or cover letters, must be outlined and submitted to the Chair of the HSRRC immediately. The proposed changes cannot be implemented before they have been reviewed and approved by the Committee.

Continuing Review: This approval will expire on March 4, 2011. It is the investigator's responsibility to ensure that a Continuing Review Report (available in

ORSP) of the status of the project is submitted to the HSRRC two months before the expiration date, and that approval of the study is kept current.

Adverse Reactions: If any adverse reactions occur as a result of this study, you are required to notify the Chair of the HSRRC immediately. If the problem is serious, approval may be withdrawn pending an investigation by the Committee.

Completion of Study: Please notify the Chair of the Human Subjects Research Review Committee (campus mail code ORSP) as soon as your research has been completed. Study records, including protocols and signed consent forms for each participant, must be kept by the investigator in a secure location for three years following completion of the study.

If you have questions or concerns, please contact the HSRRC in the Office of Research and Sponsored Projects (ORSP), (503) 725-4288, 6th Floor, Unitus Building, 4th & Lincoln.

Cc: Cynthia Coleman

APPENDIX C

AUTHOR BIOGRAPHY

Marta Barberini received the Bachelor of Business, Marketing from Luiss University in Rome, Italy. She graduated from Portland State University in Portland, Oregon, with a Master of Arts in Communication Studies in 2010. Her major interests lie in framing, photography, donation behavior and intercultural communication.

Correspondence concerning this article should be addressed to Marta Barberini via email at, martabarberini@hotmail.com.