2008

Framing environmental messages: Examining audience response to humor, shock, and emotional treatments

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Framing Environmental Messages: Examining Audience Response to Humor, Shock, and Emotional Treatments

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
College of Arts and Sciences
School of Mass Communications
University of South Florida

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Date of Approval:
April 3, 2008

Keywords: environmental communication, emotional appeal, fear appeal, humor appeal, behavior change, attitude change, source credibility

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ABSTRACT

The purpose of this study was to examine individual reactions to environmental messages based on three message frames. The frames include shock or fear, humor, and emotional frames. The intent of the study was to document, through the use of pre- and post-questionnaires, individuals' reactions to the three types of messages by measuring attitude or perception change, credibility of the message, and importance of the issue.

In this study, baseline knowledge levels and beliefs about environmental issues were examined using a pre-questionnaire. How variable treatments affect attitudes or create perception change with regard to the environmental messages were explored. This study was questionnaire based, with results based on one time pre- and post questionnaires of mass communications undergraduate students at the University of South Florida.

Along with message framing, McGuire's Information Processing Theory is useful in determining an individual's psychological context, and the steps an individual will take after a message is presented. This theory gives a "good overview of the attitude change process, reminding us that it involves a number of components" (Severin & Tankard, 2001, p. 175). Using these two theories as underpinning, exploration of the effects of different types of Greenpeace messages is possible.

Determining which types of frames promote a behavior change in individuals adds to environmental persuasion research, and ultimately assists the designers of environmental messages and the deliverers of environmental communication.

Keywords: environmental communication, emotional appeal, fear appeal, humor appeal, behavior change, attitude change, source credibility

Chapter One

Introduction

Environmental messaging, environmental communication, and environmental persuasion have come again to the forefront over the last several years. "Going green" has suddenly become very trendy. Mainstream documentaries and science programs have gripped America's attention demanding debate on both sides of the issue. Being "eco-friendly" has become an important part of our political and moral discussions, and companies all over the nation now use their "green products" or "green choices" as selling points in advertising. Celebrities broadcast their earth friendly lifestyles and messages in an effort to appeal to the masses. Public service announcements and commercials from environmental groups are on television, radio, and the Internet. With the influx of information, people may be left with a number of questions. What environmental issues are important? What environmental issues can I have an affect on? Which messages are credible, and which are not? Who should I listen to? It is important to gather information in an attempt to answer some of these questions.

Environmentalism in the United States and the mass media came together around 1969. This is the year in which images of planet Earth were broadcast to the public (Allan, Adam, & Carter, 2000). It was at this time that Americans began displaying an interest in creating harmony "between humankind and the only Earth we have; and reporters and editors watched – and responded" (Schoenfeld, Meier, &

Griffin, 1979, 43). Around this same time, many environmental disasters were occurring. These include the break-up of a super-tanker (Allan et al., 2000), underground tests for nuclear weapons off the coast of Alaska (van Ginneken, 2003), and the Santa Barbara Channel Union Oil leak (Allan et al., 2000).

At this same time, the grassroots organization Greenpeace began using the media in ways that no other organization had done until this point. Greenpeace, using the practice of "bearing witness," went one step further "by making the [ir] actions highly symbolic, visual, spectacular, and perfectly attuned to the pictorial news age" (van Ginneken, 2003, p.127). As time went on, Greenpeace focused its opposition on and around objects with high publicity value, including the Statue of Liberty, the Eiffel Tower, and the Sydney Opera House, so as to identify with the minds of the public (van Ginneken, 2003).

Due largely to the amount of publicity it was able to generate in a short amount of time, Greenpeace eventually developed into an international organization and effective environmental activist group. Their purposes were two-fold. They wanted to stop the degradation of the environment by various organizations, but they also wanted to draw the public into their cause in order to create empathy and support for the environmental movement. According to van Ginneken (2003), "their actions would usually provoke a scuffle, provide drama, and attract media coverage. Photo and film crews would relay their message. They kept it simple: well-chosen places and times; feasible demands and clear issues. Spokes(wo)men were carefully trained in photo ops and sound bites. Journalists were carefully selected and invited along"

(p.128). Greenpeace focused their efforts on the mass media and directing attention to their cause.

Since the initial movement toward communicating environmental messages to the masses, the media in general have struggled with an appropriate form of communication that works on a broad level. Allen et al. (2000) states "it quickly became apparent to many reporters seeking to translate the complex language routinely employed by these claims-makers that it would be necessary, in turn, to develop a distinct vocabulary to interpret the environment as 'news' for the benefit of audiences anxious to understand the long-term implications of these events for their own lives" (p. 3).

Throughout the 1970's and into the 1980's, environmental issue salience in the mass media fluctuated depending on what other human-interest stories were going on around that time period. Guber (2003) claims that while interest in the environment has remained relatively constant over the last thirty years, it has shifted around "definitive peaks and troughs" (p. 57). These peaks and troughs generally have to do with how the economy is doing at any particular time. In an interview with an environmental reporter, Schoenfeld (1980) cites the following words of an environmental beat writer:

> Do you give readers what they should know or something they will read? The challenge of the environmental beat is to convey a sense of immediacy and pertinence, usually by telling the story in human terms…I try to find the human element while writing about an increasingly complex world of

bewildering facts and figures. Every beat needs that, but this beat demands it (p. 462).

Now into the twenty-first century, the running theme challenging news reporters remains. The issue of how to deliver environmental messages to the public effectively is even more pertinent and perhaps more challenging twenty years later. As a news organization begins to package an environmental message, it is faced with many challenges.

One of those challenges involves environmental reporters communicating environmental news accurately and without bias. The environmental beat, which was created in the seventies following the growth of the environmental movement, is one of the most difficult specialties in which to remain neutral (Corbett, 2006). According to Corbett (2006), "most people consider the mass media to be one of the most credible sources of information, a far more trusted source than advertising, salespersons, and even government" (p. 215). While people trust reporters, it may be nearly impossible for an environmental beat reporter to remain a neutral presenter of information for a variety of reasons. Individuals may not realize that all news reports, environmental or otherwise, are "a constructed version of a *social* reality, a report that necessarily includes some facts and ignores others, and presents one version or frame of reality at the expense of another" (Corbett, 2006, p. 215). Corbett (2006) suggests that environmental reporters are subject to the same constraints and biases that all other reporters of social issues are.

Not only do environmental reporters have to sift through scientific data, some of which may contradict itself, they are faced with a beat that "cuts across all news

beats and topics (business, outdoors, legislative, health, science, and so on) and may be in the purview of many different reporters" (Corbett, 2006, p. 217). Environmental issues are complex. According to Corbett (2006), "because of the complex, scientific nature of many stories, reporters often lack expert training and can be easily influenced by special interests, yet remain suspicious of environmental group spokespersons" (p. 217). And due to the "anti-business stance of much of the environmental movement," reporters and editors become skeptical about who is a reliable source (Corbett, 2006, p. 217).

An additional challenge is the way in which an environmental message is framed. This will have a substantial impact on how an audience will respond to or perceive this message. Lakoff (2004) defines frames as "mental structures that shape the way we see the world" (p. xv). Corbett (2006) states "just as a picture frame or house frame organizes the inner contents and provides an outer boundary, a news frame is a central organizing idea for news content that supplies a context and suggests what the issue is through the use of selection, emphasis, exclusion, and elaboration. Simply put, framing is the subjective act of selecting and ordering objective facts" (p. 236). Allan et al. (2000) claims "the news media also trade in cultural views, and through selection and juxtaposition of scenes visualize the environment and environmental risks often in spectacular ways – ways, that is, which help to culturally position us as spectators viewing/sensing both the 'wonders' of nature as well as the awesome nature of environmental threats" (p. 32).

The recognition of a news frame is not a new one. The issue of framing can be traced back to the fifties with Gregory Bateson's paper (1955), 'A theory of play

and phantasy' (Allan et al, 2000). Allan et al. cites a clear example of environmental news framing in a series of press releases that focused on environmental policies regulating wetlands. The conservationists involved in the issue focused on issues such as wildlife habitats, while the property owners involved were interested in property rights and compensation.

As discussed previously, environmental issues are complex issues and are often difficult to relay to the public in a way they will understand. According to Allan et al., "as journalists report on complex issues they depend on available sources. While information in news articles is attributed to their source, it will be just as limited in scope and focus as the selective nature of comments by any particular set of stakeholders or claims-makers on whom journalists depend for information and quotable comments" (p. 47). Interest groups and stakeholder groups are often a journalist's source of information with regard to a particular environmental issue. The more often those stakeholder groups get themselves thrust into the public arena, the more that issue will be framed toward the beliefs of that group. The mass media are faced with the task of choosing which issues to present to the public, based on what they gauge as public sentiment at the time.

As discussed previously, Greenpeace is an organization that is experienced in issues framing for public awareness. As van Ginneken (2003) states, "Greenpeace often proved to have much more media savvy than the much larger powers it confronted" (p. 128). Using the powerful tool of the mass media, Greenpeace began a movement in the seventies that continues to this day. Greenpeace is a common name when one thinks about environmentalism. This organization has continued to

promote their causes using the media, regularly advertising their plight. When one thinks of Greenpeace, images of individuals chaining themselves to trees, the clubbing of baby seals, and forests being cut down come to mind. Some believe that Greenpeace has become a leader in the field of strategic environmental communication (van Ginneken, 2003).

When communicating any message, the sender is expecting some level of understanding, or acceptance of their message. Furthermore, the message sender may anticipate some sort of attitude or behavior change following the message. Corbett (2006) states, "although a message is received by an individual, the 'room' is very crowded. Even if one little message manages to best the competition and reach the ears or eyes of one individual, that person must understand, believe, weigh, and interpret the words and images in the context of her own personal, complex psychology" (p. 57). Understanding what types of messages will affect certain people and which will not is important because, as Corbett states, "although significant social change involves masses of people and institutions, by necessity it must begin with one person and another person and another" (p. 58). The link between framed environmental messages, and how an audience member will interpret a message is in the psychology of that individual. Research shows that we must understand an individual's psychological context if we are to ever understand how that individual receives and interprets the message (Corbett, 2006).

Along with message framing, McGuire's Information-Processing Theory is useful in determining an individual's psychological context, and the steps an individual will take after a message is presented. This theory gives "a good overview

of the attitude-change process, reminding us that it involves a number of components" (Severin & Tankard, 2001, p. 175). Using these two theories as an underpinning, exploration of the effects of different types of Greenpeace messages is possible. Greenpeace currently has three different types of environmental messages in the form of public service announcements airing throughout the world.

Six messages to test have been chosen. Two use fear or shock to convey an environmental issue. Two messages use emotional appeal to communicate an environmental issue. Two use humor to present an environmental issue. Undergraduate students, both male and female, mostly between the ages of 18 and 22, will be exposed to these messages. The exposure will take place in four scenarios. One group will be exposed to shock or fear appeal. Another will be exposed to emotional appeal messages. A third group will be exposed to humor messaging, and the final, or control group, will be exposed to a content neutral environmental lecture.

McGuire's Information Processing Theory is a theory of persuasion and attitude change. Based on an individual's response to a pre- and post-questionnaire, prior to and following each type of environmental message, three pieces of information will be sought. First, information about attitude or perception change will be measured. In other words, whether the message is effective in changing the attitude or perception an individual has about the issue will be measured. Next, whether the receiver of the message determines the message to be a credible source of information will be measured. In other words, it needs to be determined whether the individual trusts the source of information. Finally, gauging the level at which an individual feels the issue is an important environmental issue facing America today

will be measured. Demographics will also be gathered in order to gain an understanding of how different people interpret messages. Emphasis will be placed on the difference between males and females in interpreting the different types of Greenpeace messages.

The shock or fear appeal messages were designed by Greenpeace to frighten or scare people into becoming active for their cause. These messages are graphic and generally give the receivers a feeling of fear or disgust not only for what they are viewing, but fear for what might happen if they do not do something about the situation. According to Dillard and Pfau (2002), "fear is generally aroused when a situation is perceived as both threatening to one's physical or psychological self and out of one's control" (p. 291). An individual's response to fear is determined by biological, psychological, and sociocultural factors.

Emotional appeal messages are used to appeal to a receiver's sense of a variety of emotions including guilt, anger, disgust, happiness, hope and compassion (Dillard & Pfau, 2002). They state, "emotions can stimulate careful information processing. Researchers true to the cognitive response tradition of persuasion argue that under conditions of moderate or high elaboration, emotions influence the direction or depth of information processing" (p. 299).

Finally, the humor messages use humor, in the form of sarcasm, to provide an environmental message. Dillard and Pfau (2002) claim, " humor can induce persuasion through its distracting influence," but also offer that "humor attempts deemed by an audience to be offensive or inappropriate may be counterproductive to persuasive goals" (p. 296).

With the amount of time, effort, and resources organizations, interest groups, lobbyists, and the government put into environmental messaging, it is increasingly important to determine what types of messages will influence which audiences and in what ways. Corbett (2006) states, "for as long as people have had sentiments about the environment, researchers have tried to measure, understand, and influence them" (p. 58). Many factors come into play when determining attitude change following a message including resources, knowledge, experience, values, skills, social factors, and obstacles.

Using the way a message is framed alongside the psychological steps an individual may take after being exposed to a message, it may become more clear which type of message is affecting whom, and how. This information can be useful to any organization or institution that is designing environmental messages for its cause. When describing why environmental communication is important, Corbett (2006) states, "environmental issues are not just the purview and concern of scientists and policymakers, but involve every single individual. Whether or not you consider yourself a radical tree hugger, a concerned conservationist, or just an average citizen with other things to think about, environmental communication and practices affect you every single day" (p. 11). Research shows that understanding how society communicates about the natural world on an individual level as well as at a group level, verbally and non-verbally, will provide important insights into environmental obstacles of the future (Corbett, 2006). This research is intended to advance knowledge on message framing, particularly environmental message framing.

Chapter Two

Literature Review

Environmental communication has existed since humans first began discussing nature. Corbett (2006) defines environmental communication as "the various ways we communicate about the natural world" (p. 2). Mass communication, as defined by Severin and Tankard (2001), has the following three characteristics:

1. It is directed toward relatively large, heterogeneous, and anonymous audiences.
2. Messages are transmitted publicly, are often timed to reach most audience members simultaneously, and are transient in character.
3. The communicator tends to be or operate within a complex organization that may involve great expense (p. 4).

Mass communication concerning the environment contains all of the above elements as the communication refers to the environment, or nature. The mass level of environmental communication began in the 1960's. It was at this time that the first photographs from space revealed photographs of the Earth no one had ever seen before (Allan, Adam, & Carter, 2000). These images evoked emotions about the environment that had not been expressed until this point. Graphic visual images of the planet in its entirety began discussions that centered on the fact that this is the only planet we have, and we ought to protect it. Around this same time, several

human-caused disasters, including oil drilling and nuclear testing, were making national headlines, due in large part to a newly formed environmental activist organization called Greenpeace (van Ginneken, 2003).

Greenpeace

Greenpeace is an organization that was created by a small group of activists that began to form in the late nineteen sixties (van Ginneken, 2003). Greenpeace, named after the original boat that was dedicated to the environmental causes of this group, became a common name in the media relatively quickly after its inception (Weyler, 2004). Just before Greenpeace's maiden voyage, Jim Bohlen, one of the founders of Greenpeace, scribbled a note about which individuals he wanted on the maiden voyage to Alaska, which was to draw attention to nuclear testing. The note said "300 to 500 people including press" (Weyler, 2004, p. 67).

Immediately, the local newspapers in Canada were made aware of the issue, and the Associated Press wire sent the story around the United States (Weyler, 2004). Since it's beginning, Greenpeace has been renowned for using the media to draw attention to their cause. In describing an activist event that occurred in 1985, Jim Bohlen states, "about two hours before the cruise was expected, the media arrived – by helicopter and van. It was quite a scene. There, in the middle of the frozen Alberta tundra, representatives from ABC, CBS, NBC, ITV, and Japan TV, gathered" (Bohlen, 2001, 100). Greenpeace's use of the mass media has been effective in their campaigns for the environment. They have consistently been able to draw national and international headlines for nearly thirty years (Bohlen, 2001).

Environmental Communication

Environmental communication takes many forms, including activist-driven initiatives such as Greenpeace. It also takes the form in mainstream and everyday news as a "beat." After the growth and awareness of environmental causes of the nineteen seventies, the environment became its own news beat. According to Friedman (2004), "the environmental beat has never really been stable, riding a cycle of ups and downs like an elevator. These cycles, and consequent increases or decreases in numbers of environmental reporters and their space or air time, appear to be driven by public interest and events, as well as economic conditions" (p. 177).

For over thirty years, deliverers of environmental messages have had difficulty in creating and maintaining a strong public interest in the environment. Because "the environment" is such a broad topic, journalists have difficulty maintaining a comfort level with such a broad array of issues. Not only are environmental stories occasionally thought of as boring, or too scientific, the array of topics covered under 'the environment' umbrella is so vast that it requires the skill sets from a variety of reporters (Corbett, 2006). According to Corbett, "on any given day, an environmental story may be assigned to a science specialist, a health care reporter, a general assignment reporter, or even a business reporter. This means that decisions about what environmental stories to cover may be made at numerous levels by editors and individual reporters" (p. 217).

Not only are environmental issues far-reaching and broad, they are complex scientific issues. Dillard and Pfau (2002) note "the complexity of most environmental issues, and the solutions to them, can at times seem insurmountable to

lay citizens and policy makers alike. The interconnectedness of elements in ecological systems renders most environmental problems more vexing than even those found in public health, politics, or global economics" (p. 662). On top of the complexity of the issues, conflicting arguments from scientists holding opposing viewpoints on the same issues add to audience confusion.

Since environmental topics are portrayed to the masses on so many levels, social scientists are left wondering how this diverse array of media coverage affects society. The effects that environmental media messages have on an individual are all affected by factors such as "experience, interpersonal communication, selective perception, and message salience" (Corbett, 2006, p. 218). A single message is not going to have a cumulative effect on an individual with regard to behavior or attitude change. A combination of factors is likely to affect an individual's opinion, behavior, or attitude about an issue. The way in which environmental messages are framed before, during, and after delivery will affect the way an individual processes the information from the message.

Framing

According to McCombs (2004), "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" (p. 87). Lakoff (2004) describes frames as "mental structures that shape the way we see the world" (p. xv). The way a message is portrayed to an audience will have a significant impact on how

that audience interprets the message. The concept of framing comes from agenda setting theory.

McCombs states, “framing is the selection of – and emphasis upon – particular attributes for the media agenda when talking about an object (p. 87). The theory of framing can be traced back to a book written by Erving Goffman (1974). This book, *Frame analysis: An essay on the Organization of Experience,* suggests “an individuals’ primary framework is either their own socially constructed concepts they perceive as ‘natural’, or a direct reflection of their physical experience” (p. 21). Physical experience includes mass media messages.

Before framing became a theory discussion, news coverage of all major issues was discussed as being biased. This bias was either classified as negative, positive, or occasionally neutral (Severin & Tankard, 2001). As more research on framing was undertaken, social science scholars began exploring the concept that everything presented was essentially packaged, or “framed” in a way that would affect the outcome of the message. Entman (1993) stated that media frames perform four functions. Frames define problems, diagnose causes, make moral judgments, and diagnose remedies.

Like all forms of communication, environmental communication is subject to framing. Before a message is even distributed to the public, framing is taking place. How an environmental issue reaches the desk of a journalist is the beginning of a frame. Journalists are either assigned a particular issue, or an outsider tip sets off a chain of events that may result in a story. The source of the story becomes a frame, and will determine to a large extent, how that story is packaged.

Corbett (2006) states “although journalists make the ultimate decision of which news tips to act upon and which to ignore, they are nonetheless subject to influence when newsworthy information is presented to them by outside sources, often by public relations officials employed by large organizations” (p. 219). Environmental news stories coming from public relations professionals are sure to be framed in the light of the organization that they represent. For example, if an organization is the subject of an environmental audit, its public relations representative is sure to communicate issues to the media that casts the organization in a positive light. Items such as what the organization has done for the environment in the past and conservation fund donations are topics that will reach the reporter from a public relations standpoint. If a journalist happens to interview the Environmental Protection Agency’s auditor, the story may be communicated differently.

Research shows, “when environmental groups approach media with information subsidies, they are already at a disadvantage as a less powerful (and perhaps more threatening) entity in the social system” (Corbett, 2006, p. 222). From a study based in San Francisco, it was found that more than fifty percent of environmental news stories were based on facts and figures mostly from government agencies (Sachsman, 2001). In an area where more than half of the environmental news stories come from government agencies, environmental stories presented to the public will likely have similar frames.

Environmental news stories are generated not only to create public interest, but also to create an activist public. Most environmental news stories are stories

aimed at creating awareness and generally contain a call-to-action. In many cases, greater environmental protection can be afforded if citizens are willing to pay for it. Research shows, "Americans are willing to pay for cleaner air and water; they are not, however, willing to pay any price for greater environmental protection" (Bardes & Oldendick, 2003, p. 141).

While the American public seems to genuinely want to make a change, they do not want it enough to pay a substantial increase for goods and services that might be more environmentally friendly. In these cases, environmental stories or public service announcements that are not asking for or demanding more money may be more effective in convincing the public about certain issues. Perhaps the audience is willing to donate time but not money to a cause they feel is important. The communicators of these messages would want to know this in order to send a message in a way this is not offensive.

When delivering news stories about the environment, in many cases, frames are necessary. Because environmental issues are generally complex and scientific, framing an issue can make the issue more relatable for the public. Environmental stories would not make the evening news if people did not understand them. Corbett (2006) states, "some sort of ordering and choosing is necessary, of course. Journalists must actively make sense of an immense quantity of information, selecting some points or news sources as critical, while discarding and downplaying others. News frames help simplify, prioritize, and structure the narrative flow of events" (p. 236).

Journalists construct these news frames, but often times the frames do not reflect the journalist's personal influence. Many outside influences including source

of the news story, cultural values, and social power drive frames. Most environmental news stories are framed around the concept of people. In other words, journalists generally attempt to make an environmental news story pertinent to the average individual. Whether they do this by stating the environmental issue as a human-caused issue, or conveying the story in a way that sends the message "one person can make a difference" depends on the issue being communicated (Corbett, 2006). Along with delivering an issue, environmental news frames usually make an attempt to define a problem, address a solution, or define a victim. "Categorizing or labeling incidents or participants either as concerned citizens or deviant lawbreakers is a powerful framing device" (Corbett, 2006, p. 239). The same environmental story or issue can play out many different ways in the media depending upon how it is framed.

Two frame types are found most often in environmental news stories. These frames are called *status quo frames* and *challenger frames*. Challenger frames are generally aimed at an activist audience and are usually initiated by environmental groups. Status quo frames are generally used in response to a challenger-framed issue and stress some type of social change (Corbett, 2006).

A number of experiments have been performed to evaluate the effects of different environmental frame types on audience members. Members of one study were asked to view an environmental protest story that either depicted a high or low degree of support for the status quo. In the case of the protest, the status quo was the police. According to Corbett (2006), "the level of status quo support within the news stories did indeed affect the audience's perceptions of the protest, such as whether

police should be criticized and whether the audience could identify with the protestors and their demands" (p. 241).

In another situation, audience members were asked to read an environmental news story. One group was given the news story with the status quo frame, another group was given the same story with a social change frame, and a third group was given the same story with a balanced frame. Results indicated that those individuals who read the article framed using a status quo frame were much more likely to believe the particular environmental issue was a hazard to their health (Corbett, 2006). A third experiment used five different articles, each with a different frame, discussing a large hog farm. Results indicated that those individuals that read the article that was framed positively toward the hog farm described the situation in terms of economics. Those individuals that read the articles negatively framing the large hog farm described the issue in environmental terms (Corbett, 2006).

As environmental issues become more salient, journalists and environmental issue messengers should become more aware of the difficulties in communicating such complex messages. Obermiller (1995) discusses three reasons environmental marketing and environmental communications have faced challenges. "One is the lack of resources to conduct sophisticated advertising campaigns or testing of advertisements. A second is perceived constraints on acceptable types of appeals that might limit use of fear, humor, or anything other than straightforward presentation of information. A third is the felt need to communicate large amounts of information, which probably precludes many subtle communication appeals" (p. 55).

In one particular experiment, Obermiller discusses what he calls the "sick baby" appeal. This appeal frames a message in a way that focuses on the problem, in hopes that audience members will use their energy to focus on a problem that is severe. In a counterargument, Fine (1990) questions the need to highlight the problem believing that doing so might give a doom-and-gloom message and turn people off. Fine proposed a new approach, calling it the "well baby" approach. He felt this would "increase belief that one can do something to solve the problem" (Obermiller, 1995, p. 55). Obermiller designed an experiment in which the "sick baby" appeal was tested against the "well baby" appeal. He had the following two hypotheses for this experiment:

> H1: Well baby appeals will be more successful (relative to sick baby appeals) when prior salience of the issue is high; sick baby appeals will be more successful (relative to well baby appeals) when prior salience of the issue is low.
>
> H2: Specific action information will have effects independent of the sick/well baby appeal distinction. A) When issue salience is low, specific action information will enhance well baby appeals. B) When issue salience is high, specific action information is likely to be unnecessary, and it will have no additional effect (p. 58).

Results indicated that effectiveness of the separate appeals is dependent upon the issue. Obermiller concluded, "when dealing with a problem that people regard as relatively unimportant or about which they are relatively unaware, the impact of a sick baby appeal may offer advantages. Alternatively, when concern for an issue is

high, the sick baby appeal may offer a redundant warning, or worse, cause a boomerang effect" (p. 66). Results of such studies give the deliverers of environmental issues a clearer picture for an approach when designing communication about environmental problems.

Another experiment on message framing as it concerns the environment was conducted using recycling as the base issue. Davis (1995) states that while individuals "acknowledge that solutions to environmental problems must be forthcoming, their concern does not easily translate into environmentally responsible behaviors, such as conservation, recycling, and incorporating environmental considerations in buying products" (p. 285). Davis's concern was in finding out how to present environmental issues in ways that change attitude or behavior intentions.

Davis (1995) constructed paragraph booklets containing eight short paragraphs about recycling. The booklets were four pages long and depicted test paragraphs representing two types of environmental behavior; "taking less" and "doing more." Three questions followed each paragraph and measured the believability, manipulation, and satisfaction of each experimental environmental condition. Outcome framing was then assessed on a 9-point scale with the endpoints of the scale reading, "this paragraph discussed the potential for negative changes or deterioration in environmental quality (coded 1), and this paragraph discussed the potential for positive changes or improvements in environmental quality (coded 9)" (p. 288).

Results of the study indicated that framing effects do have an impact on an individual's response to environmental communication and intention to participate in

environmentally responsible behaviors post-experiment. Results also showed that "individuals in this study population were most favorable (and most influenced by) a communication which emphasized the negative consequences of their own inaction on themselves and their own generation" (Davis, 1995, p. 295). Analysis of the total data set allowed Davis to conclude "intentions to participate in environmentally-responsible behaviors are best fostered through communications which present simple, clear, and understandable actions presented in a context which stresses how the target will be personally, negatively affected if they continue to be inactive participants in environmentally-responsible behaviors" (p. 295).

A majority of environmental communication studies focus on specific issue-frames as opposed to a general presentation frame. Emphasis was usually placed on positive and negative framing, anthropocentric framing, source framing, status quo framing, and challenger framing. The literature also suggests that the way in which the entire message is presented can have an effect on perception of a message. Research indicates that emotional appeals of various forms, as an overarching frame for an issue, can alter audience perception of the issue.

Dillard & Pfau (2002) state, "the emotion process, as conceptualized by functional theorists, involves first perceiving an object or event in the environment and appraising its relevance for personal well-being" (p. 290). Evoking a variety of emotions, including fear, shock, joy, sadness, anger, compassion, happiness, guilt, humor, and joy will significantly impact an audience's perception of a message. This is the same across the board, not just with environmental messages. However, because environmental messages are generally depicted as impacting the self, or

perhaps more dramatically, the entire planet, these emotions may be heightened as an individual's sense of security, safety, and well-being is threatened.

Fear and Shock Appeal

Fear or shock messaging is used in environmental communication to frame a message so that an audience member is so shocked by what he or she is witnessing, something must be done about it. Walton (2000) defines fear appeal as "a persuasive message that attempts to arouse the emotion of fear by depicting a personally relevant and significant threat and then follows this description of the threat by outlining recommendations presented as effective and feasible in deterring the threat" (p. 1). The desired emotion is that the message receiver feels "some terrible consequence or harm that will befall the individual for not adopting the recommended response" (Walton, 2000, p. 1). Walton describes an *ad baculum* argument as "an argument deriving its strength from appeal to human timidity or fears; it may contain, implicitly or explicitly, a threat" (p. 24).

The first unnamed appearance of an *ad baculum* argument dates to 1662 (Walton, 2000). This type of appeal became increasingly prevalent through the centuries, and in the early 1940's, fear and shock appeals were on the increase. In 1956, "the appeal to fear" or "the scare technique" were officially documented for the first time(Walton, 2000). Additionally, the 1930 broadcast by Orsen Wells, *War of the Worlds* became one of the first large scale documentations of fear arousal in mass communication. Walton (2000) states, "by arousing sufficient fear in a person or a group of people, it is frequently possible to make them believe things which they would reject as false in calmer moments" (p. 38).

Into the 1900's, fear, shock, and violent appeals were becoming more common. The first complaints about violence and the mass media are documented from eighteen ninety-seven onward. The complaints stemmed from violence in "moving pictures". "The Corbett-Fitzsimmons fight of 1897, for example, was one of the first moving picture 'hits.' A number of observers were distressed at the use of violent themes as a form of general entertainment" (Newton, 1996, p. 7). As time progressed through the 1900's to present day, media violence, shock and fear appeal have grown into somewhat of a separate research focus. Tan (1985) points out, "considerable research has been given to fear appeals in the past two decades" (p. 149). In addition, shock or fear appeals have gone through much scrutiny in the mass media as to their outcome and desired effects (Walton, 2000).

One of the first studies by Janis and Feshbach (1953) points out, "low fear appeals in a message are more effective than high fear appeals in producing attitude change" (Tan, 1985, p. 161). Other studies conducted since then, however, have shown just the opposite. As with all messages, the effectiveness depends on a number of factors.

Dillard & Pfau (2002) state that fear messages are positively associated with attitude and behavior change, but that many factors can affect this including age and gender. Fear appeal research indicates that the following four variables may influence fear messaging: (1) type of fear, (2) expectation of a message containing reassuring information, (3) type of behavior advocated, and (4) issue familiarity (Dillard & Pfau, 2002). Many researchers argue that fear or shock advertising sends a

helpless message of doom and gloom. Other research suggests that fear or shock messages should contain a "call to action" to be most effective (Corbett, 2006).

Obermiller (1995) states, "given already high concern for the environment, further promotion of the severity of the problem may make it seem too large to be solved" (p. 56). Researchers studying attitude and behavior change suggest that a more upbeat, or positive emotional framing, such as using humor to lighten a very serious issue may cause and audience member to accept the message more easily. Framing a message positively as opposed to negatively could give the communicator an advantage. Dillard & Pfau (2002) indicate, "saving a few dollars a month by conserving energy, for example, may have more citizen appeal than forecasting ahead to black-outs and potential calamity" (p. 663).

Gelb, Hong, & Zinkhan (1985) claim the controversial effectiveness of fear appeals is the relationship between the level of fear and the amount of persuasion. In Agres, Edell, and Dubitsky (1990), they discuss the Drive Explanation Model for fear appeals, which states, "the perceived fear, which is aroused by the persuasive message, creates a state of drive that is unpleasant to the receiver. The receiver must perform some action in order to reduce the drive" (p. 89). According to this model, "the receiver will change his or her attitudes and behaviors as a means of drive reduction" (p. 89). This model predicts that the higher the fear content, the higher the perceived fear of the audience.

In Agres, Edell, and Dubitsky (1990), Janis and Feshback (1953) point out, "implicit in the use of fear appeals is the assumption that, when emotional tension is aroused, the audience will become motivated to accept the reassuring beliefs or

recommendations advocated by the communicator in order to reduce the tension" (p. 90). This approach means that as fear increases, the attitudes of the audience will more closely be linked to the recommended attitude of the message" (Agres, Edell, and Dubitsky, 1990, p. 89).

According to Agres, Edell, and Dubitsky (1990), "the most common use of fear is social disapproval" (p. 94). Evans, Rozelle, Lasater, Dembroski, and Allen (1970) found that fear was more effective "in persuading potential customers when it dealt with social rather than physical threats" (p. 94). As in most advertising appeals, fear or shock effectiveness depends upon the audience. In Agres, Edell and Dubitsky (1990), Ray and Wilkie (1970) claim, "fear appeals are most likely to be persuasive when the receiver is self-confident and less subject to anxieties" (p. 94). In the same text, Stuteville (1970) claims, "fear appeals are more likely to be effective when the level of anxiety is moderate, rather than high or low, and when the consumer can take some action based on the appeal" (p. 94). Following Stuteville's claims, environmental messages concluding with a call to action may be most effective when using shock or fear appeals.

HumorAppeal

There are well over thirty advertising studies on the use of humor in advertising and mass communication (Oakner, 2002). According to Oakner (2002), "humor is one of the most commonly employed communication strategies" (p. 1). He goes on to state "humor, when used appropriately, can increase the recall of advertising messages, raise the level of favorability toward the ad, and improve the impact of the ad among its target audiences" (p. 2).

According to Gulas and Weinberger (2006), the first concrete documented uses of humor in advertising can be traced back to England. George Packwood, a razor strop and razor strop paste salesman, began using humor for advertising in the late seventeen hundreds. He utilized methods such as "riddles, proverbs, fables, slogans, jokes, jingles, anecdotes, facts, aphorisms, puns, poems, songs, nursery rhymes, parodies, pastiches, stories, dialogues, definitions, conundrums, letters, and metaphors" (p. 4). The first periodical ad featuring a humorous illustration can be attributed to Warren's Shoe Blacking from 1820. (Gulas & Weinberger, 2006). This ad featured a cat hissing at its own reflection on a shiny boot and proved to be quite successful. While these ads were some of the first documented uses of humor in advertising, Gulas and Weinberger state, "humor in advertising certainly predates Packwood and may extend back to the very beginnings of advertising, broadly defined" (p. 7).

The use of humor in advertising did not become a mainstream accepted practice for many years. "In the United States it was not until the beginning of the twentieth century that mainstream advertising evolved beyond simple declarative statements" (Gulas & Weinberger, 2006, p. 9). Oakner (2002) claims, "even as late as the mid-1950's, advertising agencies, on behalf of their clients, treated copy as sacred as the Bill of Rights" (p. 3). Humor used in an advertisement in the early 1960's was considered risky and dangerous (Oakner, 2002). During the 1960's and 1970's, humor was considered a "hotly debated topic" among advertising executives and press in the industry (Oakner, 2002, p. 3). When the first humorous advertisements were successful in the mid 1970's, it was considered groundbreaking.

At this time, humor was only used for "fun" lifestyle products such as beverages, deodorants, and household cleaners (Oakner, 2002). "It was only in the late 1970's that humor was acceptable for more serious advertisers, including banks, life insurance, and *Time* magazine" (Oakner, 2002, p. 3). Cantor (1976) states, "in addition to serving as the central element of much "pure entertainment" fare, humor seems to be becoming a more and more prevalent component of traditionally serious offerings, particularly on television" (p. 501).

One of the reasons many ads were not made humorous "had to do with the extreme level of control that agencies exerted over every aspect of the presentation" (Oakner, 2002, p. 3). During the 1950's, 1960's, and into the 1970's, companies used radio as one of their main forms of advertising. Oakner (2002) points out, "in the early days of commercial radio, many of the top radio programs were packaged by the leading advertising agencies as single sponsor vehicles for their major clients. This gave sponsors and their agency representatives tremendous power over everything, from the content and personalities in the shows to the ads" (p. 3). As humor gradually made its way into radio advertising messages, agencies began to study whether or not this approach was working.

Jack Benny became one of the first radio comedians to spoof his sponsors. To prove that humor had a positive effect, "the Young & Rubicam ad agency conducted national research to determine whether listeners could identify the sponsor of the Jack Benny program. Benny's was the only radio show on the air to score a 91 percent immediate sponsor recall – a record that had never been bested. It was proof that

humor was a powerful tool in helping sponsors communicate their message" (Oakner, 2002, p. 6).

As television became more popular, humor became a generally accepted practice in advertising. In the 1970's, Cantor (1976) stated, "many news programs have become more entertainment oriented: Announcers frequently joke among themselves and often add humorous stories which would not be selected on the basis of their "news value" alone (p. 502). According to Gulas and Weinberger (2006), "television fueled a spending and creative advertising revolution that gave the advertising agencies a new platform and set of tools to express humor" (p. 16). Super Bowl ads of nineteen eighty four, the Apple Macintosh ad in particular, revolutionized Super Bowl advertising and demonstrated the "importance of breaking through the clutter" (Gulas & Weinberger, 2006, p. 17). Every year since then, the importance of humor and Super Bowl advertising has risen, and humor advertisements in mass communication have become a popular practice.

The term *humor* comes with multiple definitions. According to Weinberger and Gulas (1992), "an all-encompassing definition of humor does not exist" (p. 49). The Merriam-Webster Dictionary (2004) defines humor as "comical or amusing entertainment" (351). Gulas and Weinberger (2006) point out three factors at play if humor is to be effective. The first is a "change of psychological state that involves either a shift in cognition (serious to non-serious state) and/or affect (boost in positive feelings or release of suppressed feelings)" (p. 33). Second, "the change of psychological state must be sudden. To laugh, we need to be caught off guard" (p.

33). Finally, "the psychological shift must be pleasant. The result is a feeling of amusement or mirth, which may or may not result in laughter" (p. 33).

The use of humor in advertising is generally used to put the audience into a happy state, or a state that may allow for higher acceptance of a message. "The most recent review of humor in advertising suggests that humor's persuasive influence is most likely found in the context of new, low involvement, and or feeling-oriented products" (David & Pfau, 2002, p. 296). Environmental messages are generally not thought of as new, or low-involvement. Countering that research, certain experiments have shown that humor can be an extremely effective persuasive technique because of its distracting influence (David & Pfau, 2002).

Cantor (1976) conducted one of the first content analysis studies examining humor. She was attempting to determine "how much time is spent, proportionally, in trying to be funny as opposed to being serious? How much of a part does humor play in the different types of programming which occur on television? How prevalent is humor in television commercials?" (p. 502). The data were analyzed "in terms of the occurrence and duration of humorous appeals for the programming in general, for the different program types, and for the different times of assessment" (p. 505). Examining a total of 301 programs, Cantor determined "humor indeed is a highly pervasive component of broadcast television. More than 80% of the programs sampled contained at least one attempt to be humorous" (p. 508).

Additional research also shows that what is interpreted as humor differs across ethnicities, subcultures, political affiliation, age, gender, education level, brand or product experience, and sense of humor (Gulas & Weinberger, 2006). "An ethnic

joke told by a member of a given ethnic group to an audience consisting of members of the same ethnic group is a high commonality situation. Thus the joke is likely to be perceived as humorous. However, the same joke told by an outsider, one with no perceived commonality, would likely be interpreted as offensive" (Gulas & Weinberger, 2006, p. 50). Studies have found "a gender effect for response to humor may in fact have found a gender effect for a particular humorous execution" (p. 193). In other words, men and women appreciate different types of humor.

Many studies indicate, "the distraction effect of humor might lead to persuasion" (Gulas & Weinberger, 2006, p. 114). However, many of these studies point out that the persuasive effectiveness of humor may not be greater than serious or emotional appeals. Brooker (1981) found a humorous appeal to be more persuasive than a fear appeal. The same study found neither humor nor fear to be more persuasive than a straightforward approach.

According to Gulas & Weinberger (2006), "overall the advertising literature has produced at least ten findings that found a positive effect of humor on persuasion. Five other studies produced equivocal findings" (p. 115). Gulas & Weinberger (2006) conclude, "since humor has a significant role in human behavior, it is natural that humor would have a role in marketing communications" (p.189). Humor advertising is as complex as any other form of advertising and depends on a number of factors including type of humor, target audience, and intended message.

Emotional Appeal

Finally, emotional appeal when communicating environmental messages is a specific type of appeal that targets a broad range of positive and negative sensing emotions including compassion, guilt, hope, empathy, disgust, and anger. These appeals usually use a broad array of stimulating visual images to draw an audience member into a place where he or she may be disgusted by the present situation, but uplifted by hope for the future. Tan (1995) states, "emotional appeals argue for a given belief by pointing out the desirability of consequents that would follow from holding the given belief" (p. 150).

According to Anderson and Guerrero (1998), "although the worldwide scientific study of emotion dates back to the 19th century, it is only within the past two decades that emotions have been studied extensively within social contexts" (p. 4). Researchers point out that emotions in the mass communications context date back to the earliest poets and novelists. However, social scientists have only just begun empirical work based on emotion and the appeal to emotions (Anderson & Guerrero, 1998).

There are many definitions of emotion. Ortony, Clore, and Foss (1987) define emotions as specific "internal mental states that are focused primarily on affect" (p. 325). Fehr and Russel (1984) asked individuals to list words that came to mind under the general category of 'emotion'. "Seven emotions surfaced most frequently: happiness, anger, sadness, love, fear, hate, and joy" (Fehr & Russell, 1984, p. 470). Regardless of how 'emotion' is defined, "virtually all theorists of emotion agree that

the experience and expression of emotion has served, and probably continues to serve, an important function in the survival of the species (Berscheid, 1983, p. 120).

Some research suggests, "framing environmental changes in terms of future generations may be the more persuasive alternative. Evoking images of the world today's children will inherit has been shown to exert a strong positive impact on attitudes and behavioral intentions" (Davis, 1995, 287). Included with this type of communication is generally a sense of guilt. David & Pfau (2002) state "characterized by a gnawing feeling that one has done something wrong, guilt's associated action tendency is to atone or make reparation for the harm done…" (p. 292).

In addition to the way a message is framed, it is important to focus on how messages are processed and attitudes are changed. McGuire's Information Processing Model as described by Severin & Tankard (2001) suggests that attitude change involves several steps. McGuire originally accounted for six steps, but in later models, he identified the following twelve steps of the persuasion process:

> (1) exposure to communication, (2) attending to it, (3) liking or becoming interested in it, (4) comprehending it (learning what), (5) skill acquisition (learning how), (6) yielding to it (attitude change), (7) memory storage of content and/or agreement, (8) information search and retrieval, (9) deciding on basis of retrieval, (10) behaving in accord with decision, (11) reinforcement of desired acts, and (12) post behavioral consolidating (p.174).

When an individual is faced with a persuasive message, he or she will go through the above stages of information processing before deciding what to do with that message. This process can be affected by an infinite number of factors.

Evoking emotions in an individual can determine how quickly that particular individual processes a message. According to Dillard & Pfau (2002), "emotion represents an internal alarm system to warn of problems that demand attention and immediate real-time resolutions" (p. 735). Research shows that responding to a message depicting images on a screen can have the same effect on the way an individual processes the information as if the person had witnessed those same images in real life. These emotions can have an overwhelming effect on how meaning is perceived as well as the persuasive appeal of the message (Dillard & Pfau, 2002).

According to Davis (1995), "it is often difficult to stop or start specific patterns of behavior. This phenomenon, psychological inertia, may partially explain why individuals have not yet fully translated their environmental attitudes and concerns into environmentally responsible behaviors" (p. 287). Even if an environmental message has its intended effect, attitude change, this may or may not directly affect behavior change in an individual. It is much more difficult to inspire behavior change.

Behavior Change and Credibility

Behavior change depends upon a number of factors including credibility of the source. Severin & Tankard (2001) contend that credibility is the most important tool a communicator has. Generally, if an individual does not have any credibility, he

or she may not have an audience. According to Dillard and Pfau (2002), a communicating source is said to be credible if the source has both expertise on the subject matter and is considered trustworthy. In fact, "research shows that offering the opinions of experts is particularly effective when the intended audience does not initially favor one's proposal" (Dillard & Pfau, 2002, p. 522). An audience's reliance on an expert is essentially a short-cut analysis of important issues. Generally, if an individual or an organization identifies itself as expert, or has established itself as expert, the communication becomes more important to the viewers. Tan (1985) states, "expertise depends on training, experience, ability, intelligence, professional attainment, and social status. An expert source is one who has valid and reliable knowledge about the issue" (p. 114).

Along with expertise, a communicator must also convince an audience that he or she is trustworthy. "Whereas expertise refers to a communicator's knowledge and experience, trustworthiness refers to the communicator's honesty and lack of bias" (Dillard & Pfau, 2002, p. 523). For the most part, audience members will trust those who have established themselves over a period of time. Tan (1985) states, "trustworthy sources are more likely than untrustworthy sources to change attitudes and behaviors because of our previous experiences with them" (p. 115).

For example, Greenpeace, having been in the news media for over thirty years may have established themselves as experts and trustworthy sources of environmental news in the minds of some individuals. Others may believe that Greenpeace members are experts but are too extreme to be trustworthy. While still others may feel that Greenpeace is neither expert on environmental issues nor a trustworthy

source of information. Further still, even if the institution of Greenpeace has established itself as expert in the environmental field, the specific spokesperson is for an issue will significantly affect audience perceptions of credibility. Experts Greenpeace might use in structuring an environmental message are physicists, botanists, biochemists, wildlife ecologists, zoologists, biologists, politicians, and geologists (Dillard & Pfau, 2002).

A study by Hovland and Weiss reviewed testimonials from high-credibility sources versus low credibility sources. They found "high-credibility sources did produce more opinion change" (Severin & Tankard, 2001, p. 157). In addition to expertise and trustworthiness, Whitehead (1968) found that qualities such as professionalism, dynamism, and objectivity also contribute to an audience's perception of credibility. Judging credibility as a function of the frame surrounding an environmental issue may help social scientists better understand what does and does not aid in establishing credibility.

Research also suggests that, although a source may exhibit credibility to an audience, if that audience is highly involved in the issue, such as members of a social group, they may perceive the content to be biased even when a source appears to be objectively credible (Dillard & Pfau, 2002). Dillard and Pfau sum up by adding, "credible communicators possess both expertise and trustworthiness; but without trustworthiness, even experts will not be very persuasive" (p. 524).

Gender

Along with the way an issue is framed and whether an audience perceives the source to be credible, many other factors contribute to how an individual processes a

message. One demographic that has shown significant variation in how an individual processes a message is gender. Kempf, Laczniak, & Smith (2006) discuss the differences in the way men and women process messages. They claim "women tend to engage in more detailed, elaborative, and comprehensive processing of information than do men, unless extrinsic motivations are present that prompt men to do so" (p. 5).

Research shows that men are more likely to process information through a process called item specific processing. This means they are less likely to decipher relationships between messages than women are. Women tend to go through a process called relational processing, where they focus less on individual cues, and more on the relationships between the cues (Kempf et al., 2006).

When men and women view the same messages, they are likely to have attitude and behavior change that differ across the board. These differences are attributed to biological factors such as sex chromosomes, sex hormones, and brain lateralization, and social factors such as schools of thought and gender identification (Putrevu, 2001). Purtrevu states "males tend to vigorously pursue such self-focused goals having great personal consequences. Females are guided by communal concerns emphasizing interpersonal affiliation and harmonious relationships" (p. 1).

These differences in gender will have a significant effect on how a message is perceived. Research shows that men tend to be more receptive to objective communication because they tend to conceptualize items in terms of physical attributes. They may also be more analytical and logical in their information processing than women, and are considered more detached and see issues from the

outside looking in. Women, on the other hand, are better at decoding nonverbal cues and are "generally considered to be more visually oriented, more intrinsically motivated, and more romantic compared to men" (Putrevu, 2001, p. 4). Women are more likely to participate in a story and attempt to experience a message from the inside (Putrevu, 2001).

Research also shows that these descriptions also depend highly on the message content, and whether it is high-involvement or high risk versus low-involvement or low risk. Putrevu (2001) concluded that men prefer messages that feature concepts such as competition and dominance, and women prefer messages that show importance to self as well as others (Putrevu, 2001). Some scientists have evaluated the way in which men and women process environmental messages. According to Guber (2003), "many scholars suggest that women are more environmentally concerned than men based on their maternal socialization as family nurturers and care givers" (p. 75).

Message Effectiveness

In general, environmental messages are difficult messages to communicate to a broad and diverse audience because of the endless controversy surrounding some of these issues, including complexity of the issue, source of the issue, and message frames. Dillard & Pfau (2002) state the difficulty in communicating such messages is "in part because of disagreement among many of the scientific findings themselves; differing results can occur depending on geographic location, type of measurement, or basic errors in methodology. Moreover, even similar results can be interpreted differently based on varying theoretical perspectives, vested interests in the issue, or

the context in and purposes for which the research was carried out" (p 663). Issues in framing the problem, carrying out the research, and making decisions about which messages to send are all based on key players. The key players for an environmental issue can range from government officials to commercial businesses, or even public community sectors of society (Dillard & Pfau, 2002).

All of these conflicts in environmental communication affect whether the public understands the messages presented. If the public does not understand a message, it is certainly not going to act upon it. If the public does understand a message, and attempts to act upon it, environmental behavior change is difficult to positively reinforce (Dillard & Pfau, 2002). When an individual responds to a persuasive message, he or she is looking for some sort of reinforcement that his or her behavior change has made a difference. Water quality, air quality, and even global warming messages are nearly impossible to quantify with regard to an individual's behavior change.

For example, following a message asking an individual to change the type of light bulbs in the home, an individual acts upon the message. It is nearly impossible to quantify or show this individual the positive effects that this behavior change will have on the planet. This "can be a critical ingredient; people want to see that their efforts are indeed making a difference" (Dillard & Pfau, 2001, p. 663).

Studies conducted in the 1990's indicated more than seventy-five percent of Americans surveyed were concerned or very concerned about the environment. These studies also reflected a willingness to act or support public policy as it concerns environmental issues (Dillard & Pfau, 2002). These numbers were similar thirty

years ago as environmental activists began making appearances on national and international news stations. As public concern and sentiment over the environment has fluctuated over the years, so has the way in which the environment is portrayed to the public. A central theme among communications scholars is media effects and message effectiveness. Designing a message best suited to a particular audience is in the best interest of those who wish to change attitudes and motivate change.

Factors including message frames, source credibility and complexity of an issue will all have an affect on how an audience perceives a message. Unfortunately, for the environmental movement, environmental communicators are often "asking citizens to take actions that may at times be expensive, effortful, and risky and that may not bear fruit in terms of environmental change for years or decades to come. Psychologically, this is not always an easy sell to the public at large" (Dillard & Pfau, 2002, p. 682). Oftentimes, framing messages in a way that offers credible source information, and encourages public buy-in and participation will thwart the negative effects of complexity and skepticism. Determining how message frames, source credibility, and issue relevance affect the outcomes of environmental messages will prove to be invaluable information.

Hypotheses

In an attempt to better understand the effects of message frames on attitude or perception change, credibility of the message, and importance of the issue with regard to three types of Greenpeace messages, humor, emotional appeal, and shock, and one control, the following three hypotheses will be explored:

H1: Greenpeace messages depicting an emotional appeal will have a greater impact on female individuals versus male individuals as it concerns attitude or perception change, credibility of the message, and importance of the issue.

H2: Greenpeace messages depicting humor appeal will have a greater impact on male individuals versus female individuals as it concerns attitude or perception change, credibility of the message, and importance of the issue.

H3: Greenpeace messages depicting shock or fear appeal will have a greater impact on male individuals versus female individuals as it concerns attitude or perception change, credibility of the message, and importance of the issue.

The challenge facing Greenpeace today is not necessarily one of issues acceptance as much as it is trying to find the balance between the message and its intended effects. Americans have been labeled as "sympathetic, but not active within the environmental movement" (Guber, 2003, p. 54). According to Guber, there is no single group of people that is opposed to environmentally friendly behavior. The issue then becomes what the public is willing to sacrifice in order to make environmentally friendly choices.

The different ways an issue is presented, or framed, will encourage different responses and various levels of behavior change. Guber (2003) concludes "the way in which environmental issues shape behavior may be dependent ultimately on the cues or symbols that are cognitively linked to it" (p. 173). The above hypotheses will attempt to aid in a clarification of which types of messages affect these cues for men and women. Determining which types of frames promote the desired behavior change in an audience will add to environmental persuasion research, and will

ultimately assist the designers of environmental messages and the deliverers of environmental communication.

Chapter 3

Methodology

A modified experimental design was used to examine how framing strategies influence different audience segments including those of different gender and other student population demographic differences. Wimmer and Dominick (2006) state that there are four main advantages to experimental design including "evidence of causality, control, cost, and replication" (pp. 231-232). Experiments can help establish cause and effect, researchers have control over variables such as the environment and subjects during the experiment, costs are generally low, and experiments can be easily replicated (Wimmer & Dominick, 2006). The three variables being measured for this experiment are perception and attitude change, message credibility, and issue importance.

Treatments were prepared for three groups of undergraduate students. A fourth group served as a control group. Each treatment group viewed a video message treatment designed with the expectation of creating some influence among group members. The control group received a "neutral" lecture on global warming. Neutral is defined in this case as material not considered controversial in the global warming debate.

All groups received a pre- questionnaire regarding the environment. The groups then received the video message treatment, or the (control group) neutral lecture on global warming. Following the message treatments or lecture, each group

received a post questionnaire created to examine the influence of the exposure to the framed message. For this experiment, the design is considered pretest > experimental treatment > posttest (Wimmer & Dominick, 2006).

The activist environmental group Greenpeace produced the three "framed" messages viewed by the student audiences. The fourth message, which was delivered to a control group, is a neutral environmental lecture developed by the researcher with the assistance of non-activist faculty members. The researcher understands that all messages contain elements of bias, but these were minimized through the use of the non-involved faculty member.

Message Description

The three Greenpeace environmental messages were delivered in the form of a visual taped message on DVD, similar to a commercial or public service announcement. These messages were produced by Greenpeace, but have not publicly aired on television in the United States. While Greenpeace produced the messages, all references to this activist organization were removed from the videos in order to avoid the potential for source message bias.

Two treatments for each message frame were chosen. Two humor messages were delivered to one group of undergraduate students, two emotional appeal messages were delivered to a second group of undergraduate students, and two shock appeal messages were delivered to a third group of undergraduate students. The control group was exposed to the previously described environmental lecture. Exposure to these messages took place in the students' classroom either at the

beginning or the end of class. All data collection took place over a four-day period to minimize extraneous influences.

The humor messages are couched in the form of satire and sarcasm to convey two different, but related environmental concerns. The two humor messages, each in a commercial format, depict the affects of harmful chemicals on sperm delivery, and the use of environmentally "un-friendly" automobiles respectively.

The emotional appeal messages were intended to conjure specific feelings and emotions in an individual, which can potentially lead to a change in the attitude of an individual. While it is recognized that attitude change is extremely difficult to measure, the questionnaire is designed to get to at least the temporary examination of attitude change.

The shock messages were intended to conjure specific feelings of fear or shock in an individual. As described by the literature above, shock messages are intended to create behavior change through the use of graphic, violent, or shocking images, generally followed by a call-to-action.

As for message detail, the first emotional appeal message is depicted visually by offering contrasting scenery of the earth, first with beauty and then countered with images of the earth succumbing to the effects of "global warming." It is couched in terms of creating a sense of urgency. The second emotional appeal focuses on a young teenager speaking harshly to "adults." The angry child mocks and chastises adults for not doing enough about the environmental problems he "knew" existed. This emotional appeal message is designed to conjure feelings of guilt, using mainly verbal cues. Both visual and word-driven messages were chosen to give participants

a forthright and “in your face” exposure to the different types of emotional appeal strategies used by environmental communicators.

The shock appeal messages are both messages that depict “disturbing” or “shocking” images of animals and their habitats being harmed or killed, in order to “shock” or “frighten” individuals into “action.” One depicts the violent and bloody seal hunt in northern Canada, and the other depicts habitat destruction to great ape forests in Africa.

The first humor message pokes fun at an individual who drives a sport utility vehicle. This message uses satire in the form of social unacceptability with regard to driving a vehicle that is harmful to the environment. The second humor message uses humor to depict damaged sperm in the form of humans with various disabilities, thus showing the consequences that harmful chemicals have on male sperm.

The environmental lecture is designed as a control variable for testing the influences of the other messages on their various audiences. It is short and generally explanatory with minimal influence. The lecture and corresponding Power Point presentation depicts both “sides” of global warming; scientific data stating global climate change is human-caused and scientific data stating global climate change is a natural occurring phenomenon. It presented scant, neutral environmental content, depicting factual data only to establish a reason for the questionnaire.

Data Collection

A convenience sample of undergraduate students in an introductory mass communications course from a large southern university was used. According to Wimmer and Dominick (2006), a convenience sample “is a collection of readily

accessible subjects for study, such as a group of students enrolled in an introductory mass media course or shoppers in a mall" (p. 90). Four different classroom scenarios were used as treatment groups one through four. Group one received the humor treatments, and group two received the emotional appeal treatments. Group three received the shock message treatment, and group four received a control neutral environmental lecture.

Using this type of sample allows a large number of students to view the various message frames. The students received a brief introduction, completed the first questionnaire, and then received two messages of the same treatment or a neutral lecture followed by a post-message questionnaire. This questionnaire measured variables based on audience perception of attitude or perception change, perceived credibility of the message, and issue importance. These were measured on a Likert scale with a "Strongly agree" statement measuring as a 5 and a "Strongly disagree" statement measuring as a 1. Demographics, including age, sex, year in college, and racial affiliation, were measured.

According to Wimmer and Dominick (2006), Likert scales are "perhaps the most commonly used scale in mass media research" (p. 57). Using five items on a Likert scale allows for "broad differentiation in opinions, perceptions, and feelings. This is important because it gives the researcher more information" (p. 55). Likert scales also allow for ease in coding responses. The high scores represent stronger agreement with the statement in question, and the low scores represent weaker agreement with the statement in question. Likert scales allow for the specific measurement of various issues (Wimmer and Dominick, 2006).

Questionnaires are useful in experiments because "a large amount of data can be collected with relative ease, and they allow researchers to examine many variables and to use a variety of statistics to analyze the data" (Wimmer and Dominick, 2006, p. 180). A pre-questionnaire was administered in an attempt to gather basic environmental data from the respondents. This pre-questionnaire allowed the researcher to more accurately measure actual environmental knowledge versus the self-reported environmental knowledge from the post-questionnaire.

The first ten questions on the post-questionnaire were designed to measure a respondent's attitude or perception change following the specific messages he or she received, respondent's self-reported knowledge, and whether the message was informative or added knowledge and awareness to the respondent's understanding of the issue. If a respondent already came to the table with a high level of knowledge about each issue, his or her attitude or perception change would be dramatically different from a respondent with very little information about the particular issue. Sometimes, attitude and perception change may lead to behavior change. Two statements in this section were designed to judge a respondent's self-reported environmentally friendly behavior prior to and following review of the messages.

The next section of the post-questionnaire was designed to measure respondents' perceptions of message credibility. An individual who is always skeptical of messages concerning the environment will have vastly different credibility beliefs than an individual who generally accepts any environmental message delivered. Statements in this section were designed to measure skepticism. The statements about factuality, scientifically sound data, and credibility were

designed to measure whether a respondent felt these specific messages were credible messages based on factual data. Additional statements in this section were designed to measure whether the respondent generally accepts messages presented in this format, or whether they were "turned off" by messages presented in this format. Respondents may already be aware of the types of messages that affect them most, and these two statements allowed measurement of this.

The next set of statements was designed to measure issue importance. Some of these statements were used to determine whether an individual generally feels environmental issues are important. Data collected from individuals who do not feel issues are important could be substantially different, and perhaps even more significant, than data collected from individuals who already feel environmental issues are important. Additional statements in this section were designed to measure whether the respondent already felt the specific issues presented in the messages were important environmental issues or whether a respondent had given much thought, prior to these messages, to environmental issues. There is a difference between believing issues are important and taking the time to consider an issue in one's own life. This section was meant to see if an individual had given much thought prior to these messages, and if they felt these issues were important enough to address following message viewing.

The next data collection for the post-questionnaire was designed to re-administer the environmental statements from the pre-questionnaire. This way, the researcher could position the pre- and post-questionnaires against each other as well as with the control group. Administering the five environmental knowledge questions

on both the pre-questionnaire and post-questionnaire could allow the researcher to test for knowledge gained following the viewing of the environmental messages or neutral lecture.

The final section of the post-questionnaire was designed to gather demographic data. This collection was used to analyze similarities and differences of framing effects between males and females, year level in school, age, or racial identification.

Chapter Four

Results

The results of this study are shown below and are organized by first showing descriptive statistics of the sample. This is followed by an analysis of the data regarding the study hypotheses using independent *t*-test analyses, and additional findings using one-way ANOVA and two-way ANCOVA analyses. Data analysis was performed using SPSS for Windows version 15.0.

General Discussion

Table 1 displays the frequencies for the demographic variables. Demographics including sex, school level, race, and age were determined for the entire sample of 68 participants. Age was the only continuous demographic. Ages ranged from 18 to 27 years (M = 20.9, SD = 1.9). Out of the four classes studied, a majority of the students in the study population were females (69.1%). A majority of the students were in their junior year of school (54.4%), and 67.6% of the students in the study group were of Caucasian decent.

Four classes were studied, consisting of a total of 68 participants. There were 16 participants in the humor treatment group, 17 participants in the emotional appeal treatment, 17 participants in the shock appeal treatment and 18 individuals in the control treatment.

Each class was given a separate message treatment. The message treatments delivered were humor, emotion, shock, and a control group. The study hypotheses

predicted that emotional appeal messages would have a greater impact on females versus males, humor messages would have a greater impact on males versus females, and that the shock messages would have a greater impact on males versus females. Table 2 presents the frequencies and percentages of males and females in each experimental group.

Table 1

Frequencies for Categorical Demographic Variables (N = 68)

	Frequency	*Percent*
Sex		
Male	21	30.9%
Female	47	69.1%
School level		
Freshman	1	1.5%
Sophomore	24	35.3%
Junior	37	54.4%
Senior	6	8.8%
Race		
Caucasian	46	67.6%
Hispanic	9	13.2%
African American	4	5.9%
Biracial	4	5.9%
Asian	2	2.9%
Other	2	2.9%
Did not answer	1	1.5%

Table 2

Frequencies for Experimental Groups by Sex (N = 68)

Group	*Males*	*Females*	*Total*
Humor	4 (25.0%)	12 (75.0%)	16
Emotion	5 (29.4%)	12 (70.6%)	17
Shock	5 (29.4%)	12 (70.6%)	17
Control	7 (38.9%)	11 (61.1%)	18
Total	21 (30.9%)	47 (69.1%)	68

Pre-questionnaires and Post-questionnaires

A pre-questionnaire developed to create a baseline level of general environmental knowledge was given before the treatment. The same questions were asked of the participants as part of the treatment effects questionnaire. Due to an error in data collection, pre-questionnaire participants and post-questionnaire participants could not be matched up. Pre-questionnaire and post-questionnaire results were scored as follows: as students got closer to the correct answer, they were given more points and received a higher score. Students with higher scores for the environmental portion are said to have a higher level of existing environmental knowledge.

If the same participants could have been identified, then paired *t*-tests would have been used to compare pre-questionnaire and post-questionnaire scores for each person. Furthermore, difference scores computed by subtracting the pretest score from the posttest score could have been computed for each person and the difference scores could have been compared across the four treatment groups.

However, because the pre-questionnaire and post-questionnaire scores could not be matched by person, this could not be done. Instead, an independent *t*-test was used to compare the mean of the pretest scores to the mean of the posttest scores instead. The means on the pretest and the posttest were exactly the same ($M = 17.15$) so there was no difference to report. A one-way ANOVA comparing the posttest scores across the four treatment groups was significant, $F(3, 64) = 2.95$, $p < .05$. However, the trend in the posttest scores across *groups* was the same as the trend across groups for the pretest scores, so this difference is most likely not due to an experimental effect. See Table 3 for the means and standard deviations for each group.

Table 3

Means, Standard Deviations, and One-Way Analysis of Variance (ANOVA) for Pretest and Posttest Scores

Scale	Humor *M (SD)*	Emotion *M (SD)*	Shock *M (SD)*	Control *M (SD)*	Total *M (SD)*	ANOVA *F (3,64)*
Pretest	18.06 (2.29)	16.18 (2.65)	17.12 (2.91)	17.28 (2.11)	17.15 (2.54)	1.58
Posttest	18.06 (2.21)	16.00 (2.21)	17.82 (2.48)	16.78 (2.21)	17.15 (2.38)	2.95*

*$p < .05$.

Post Questionnaire: Other Questions

The post-questionnaire was divided into the following five groups in order to test the hypotheses: attitude or perception change, message credibility, issue importance, environmental knowledge, and demographics. The first ten questions on the post-questionnaire referred to attitude or perception change following the viewing

of the environmental message treatment. In order to code the attitude and perception measure, questions 3, 4, 5, 8, and 10 were summed to create a "change in attitude or perception" score. Each of these questions refers to an individual's knowledge, attitude, or perception change following the message treatment. Questions 1, 2, and 9 referred to previous knowledge and attitude, so they were summed to create a "previous knowledge and attitude" score to be used as a control variable.

The next eight items on the questionnaire referred to an individual's perception of message credibility. For this measure, credibility questions 4, 5, and 6 were summed to measure message credibility. In order to create a skepticism index, questions 1, 3, and 7 were summed and questions 2 and 8 were reversed and added to the group. The higher the skepticism score, the less accepting the participants were in general. The skepticism scale was created as a way to control for pre-existing skepticism. This scale used the credibility statements related to an individuals' level of skepticism to analyze against other factors. For example, statements 1, 3, and 7 speak directly to an individual's skepticism, questions 2 and 8 do as well, only in reverse, relating to issue acceptance. That is why these scores are reverse coded.

The next six items on the questionnaire referred to an individual's perception of issue importance. Questions 1, 2, 3, 5, and 6 were summed to measure an individual's perception of the importance of the current messages.

Table 4 presents the means, standard deviations, and one-way ANOVA for the effects of the message manipulations on the above-mentioned scales.

Table 4

Means, Standard Deviations, and One-Way Analysis of Variance (ANOVA) for Effects of Message Manipulation on Four Scales

Scale	*Humor* M (SD)	*Emotion* M (SD)	*Shock* M (SD)	*Control* M (SD)	*Total* M (SD)	*ANOVA* F (3,64)
Attitude	12.19 (4.58)	14.24 (4.87)	19.24 (5.27)	16.5 (4.00)	15.6 (5.28)	6.91***
Credibility	11.19 (2.48)	9.65 (3.08)	12.82 (1.59)	12.22 (1.90)	11.49 (2.58)	6.11**
Importance	19.50 (3.52)	20.29 (3.77)	20.94 (3.63)	20.72 (2.72)	20.38 (3.39)	0.57
Skepticism	12.06 (3.28)	12.53 (3.06)	10.24 (3.25)	13.06 (2.92)	11.99 (3.24)	2.66

**$p < .01$. ***$p < .001$.

The one-way ANOVA was used to compare the group means on each variable across the four groups. The overall ANOVA was significant for attitude change and message credibility. Tukey HSD post hoc tests were therefore conducted to determine specifically which groups were different from each other. Post hoc tests indicated that for attitude change, the humor group differed from the shock group (p = .000), the humor group differed from the control group (p = .046), and the emotion group differed from the shock group (p = .015). For credibility, the emotion group differed from the shock group (p = .001) and the emotion group differed from the control group (p = .009). There were not significant differences in the group means across the four groups for issue importance or skepticism. However, skepticism was

nearly significant (p = .056). Overall, this analysis confirmed that different message frames are associated with message effectiveness as it relates to attitude change and message credibility. Figures 1-4 graphically illustrate the differences in group means for the four scales across the four treatment groups.

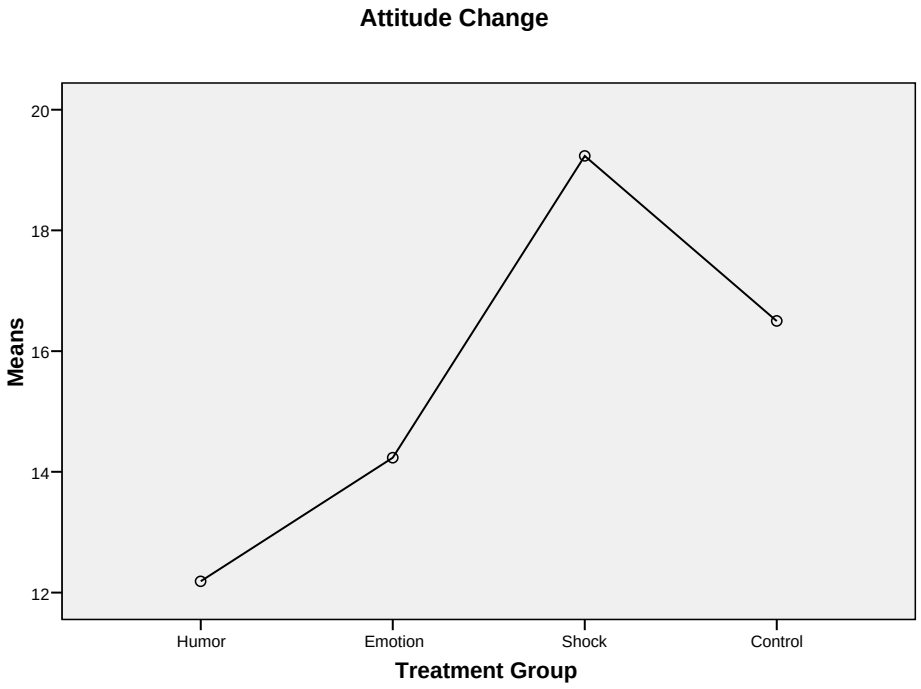

Figure 1. Means for attitude change across the four treatment groups.

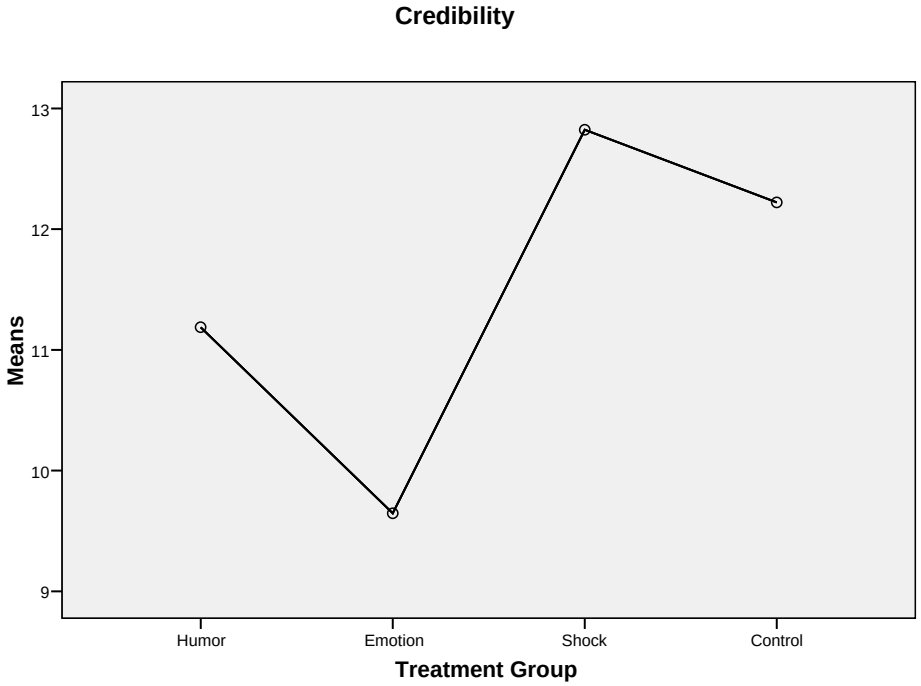

Figure 2. Means for credibility across the four treatment groups.

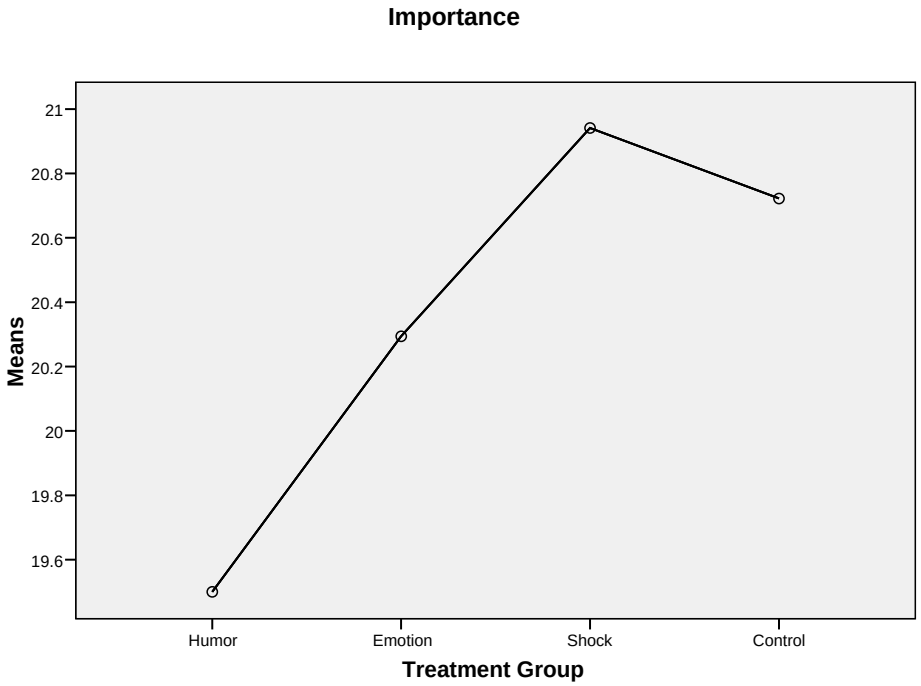

Figure 3. Means for importance across the four treatment groups.

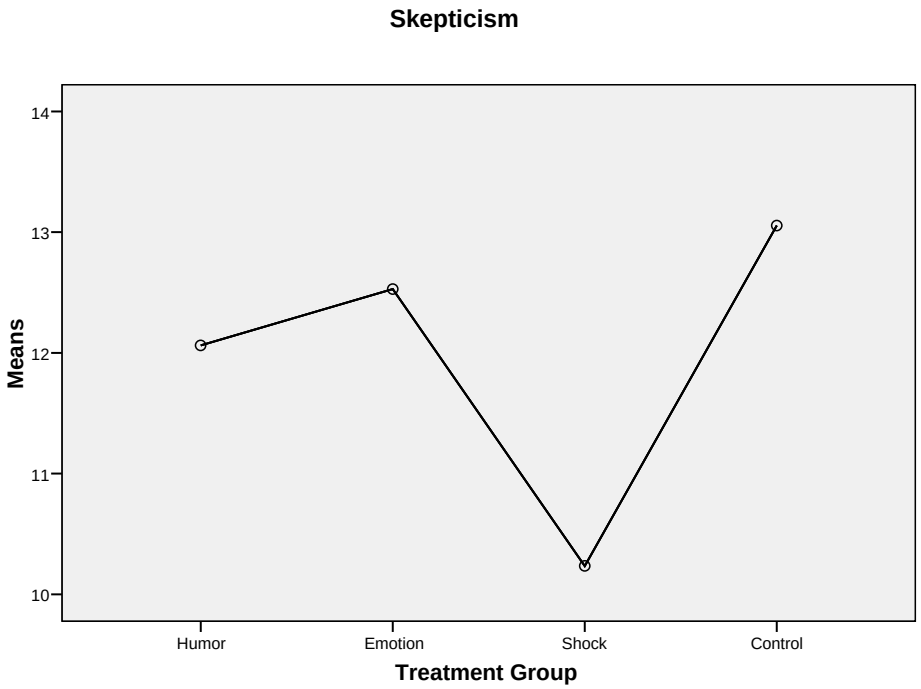

Figure 4. Means for skepticism across the four treatment groups.

Hypothesis 1

The first hypothesis in this study predicted that emotional appeal messages would have a greater impact on female individuals versus male individuals regarding attitude or perception change, message credibility, and importance of the issues. Table 5 shows the comparison of means for males and females from each treatment group. Independent *t*-tests were used to directly address this hypothesis. None of the dependent variables -- attitude change, credibility, or issue importance -- showed significant differences between males and females for the emotional appeal category, which could be due to the small sample size used in the study. The trend in the means was in the hypothesized direction (larger for females) for attitude change and issue importance, but not for credibility.

The trends for this group do show females having a higher change in attitude and an increased belief of issue importance as it relates to the emotionally framed messages. Although not significant, these trends are consistent with the predictions of Hypothesis 1. Data trends for this group show males with a higher belief that the issues presented using the emotional frames have more credibility. This is inconsistent with the predictions of Hypothesis 1. It is important to note, however, that none of these findings is significant, possibly due to such small sample sizes.

Table 5

Independent t-tests to Address Hypotheses

Variable	*Males* M (SD)	*Females* M (SD)	t (df)
Hypothesis 1: Emotional appeal			
Attitude change	12.80 (3.63)	14.83 (5.32)	-0.78 (15)
Credibility	10.20 (2.05)	9.42 (3.48)	0.47 (15)
Importance	18.40 (2.97)	21.08 (3.90)	-1.37 (15)
Hypothesis 2: Humor appeal			
Attitude change	10.25 (5.12)	12.83 (4.43)	-0.98 (14)
Credibility	8.50 (3.11)	12.08 (1.51)	-3.16 (14)**
Importance	17.25 (3.78)	20.25 (3.25)	-1.54 (14)
Hypothesis 3: Shock appeal			
Attitude change	16.40 (2.07)	20.42 (5.81)	-1.48 (15)
Credibility	11.60 (0.55)	13.33 (1.61)	-2.31 (15)*
Importance	18.80 (2.49)	21.83 (3.74)	-1.65 (15)

*$p < .05$. **$p < .01$.

Hypothesis 2

The second hypothesis in this study predicted that humorous messages would have a greater impact on male individuals versus female individuals as related to attitude or perception change, message credibility, and importance of the issues.

Table 5 shows the comparison of means for males and females from each treatment group. Independent *t*-tests were used to directly address this hypothesis.

The only significant value for the humor analysis was credibility, but not in the predicted direction of Hypothesis 2. These data show that humor messages had a greater impact on females versus males with regards to message credibility.

Trends in the rest of the means for the humor frame show humor having a greater impact on females as related to attitude change and issue importance. These analyses are not significant, however, possibly due to small sample sizes. They are also not consistent with the predictions of Hypothesis 2.

Hypothesis 3

The third hypothesis in this study predicted that shock messages would have a greater impact on male individuals versus female individuals concerning attitude or perception change, message credibility, and importance of the issues. Table 5 shows the comparison of means for males and females from each treatment group. Independent *t*-tests were used to directly address this hypothesis.

Again, the only significant *t*-value for the shock means shows that shock messages had a greater impact on females versus males as related to message credibility. This is opposite of the direction predicted in Hypothesis 3.

Trends for the shock frame mean data show that shock messages have a greater impact on females regarding attitude change and issue importance. These analyses are not significant, however, possibly due to small sample sizes. They are also not consistent with the predictions of Hypothesis 3.

Additional Findings

Next, two-way ANCOVA analyses were run to test for the effects of experimental treatment groups and sex for each dependent variable. The design set up is a 3 (treatment group) × 2 (sex) factorial design. Table 6 presents descriptive statistics broken down by group and sex for each dependent variable and for the covariate that was used in the analyses, the skepticism scale.

Table 6

Descriptive Statistics for Dependent Variables and Covariate broken down by Experimental Group and Sex

Variable	*Males* M (SD)	*Females* M (SD)	*Total sample* M (SD)
Attitude change			
Humor	10.25 (5.12)	12.83 (4.43)	12.19 (4.58)
Emotion	12.80 (3.63)	14.83 (5.32)	14.24 (4.87)
Shock	16.40 (2.07)	20.42 (5.81)	19.24 (5.27)
Control	18.71 (4.23)	15.09 (3.30)	16.50 (4.00)
Total	15.14 (4.88)	15.81 (5.49)	15.60 (5.28)
Credibility			
Humor	8.50 (3.11)	12.08 (1.51)	11.19 (2.48)
Emotion	10.20 (2.05)	9.42 (3.48)	9.65 (3.08)
Shock	11.60 (0.55)	13.33 (1.61)	12.82 (1.59)
Control	11.86 (1.77)	12.45 (2.02)	12.22 (1.90)
Total	10.76 (2.23)	11.81 (2.66)	11.49 (2.58)
Importance			
Humor	17.25 (3.78)	20.25 (3.25)	19.50 (3.52)
Emotion	18.40 (2.97)	21.08 (3.90)	20.29 (3.77)
Shock	18.80 (2.49)	21.83 (3.74)	20.94 (3.63)
Control	22.71 (1.80)	19.45 (2.47)	20.72 (2.72)
Total	19.71 (3.33)	20.68 (3.41)	20.38 (3.40)
Skepticism			
Humor	14.25 (2.99)	11.33 (3.14)	12.06 (3.28)
Emotion	13.60 (0.89)	12.08 (3.55)	12.53 (3.06)
Shock	12.20 (3.63)	9.42 (2.84)	10.24 (3.25)
Control	13.86 (3.44)	12.55 (2.58)	13.06 (2.92)
Total	13.48 (2.87)	11.32 (3.20)	11.99 (3.24)

Two-way ANCOVAs were used to examine the effects of group and sex for each dependent variable. Covarying models were run with the covariate of skepticism. Table 7 presents the results for the models that included the covariate of skepticism in addition to treatment group, sex and the interaction of group × sex. For the first model with attitude change as the dependent variable, there was only a significant effect of treatment group; sex and skepticism were not able to add significantly to the explained variance in attitude change. Without skepticism, the R^2 value for attitude change was .324 and increased only to .352 with skepticism.

In the second model with credibility as the dependent variable, the main effect of group was nearly significant, but did not reach the appropriate .05 level to claim significance ($p = .057$). Additionally, the model without skepticism had an R^2 value of .341, and it increased to .628 with the addition of skepticism. This indicates that previous levels of skepticism play a large role in determining the level of credibility that subjects will assign to environmental information. For credibility, there is a significant interaction effect for group × sex ($p = .041$). Credibility scores differ by gender in different ways depending on treatment. This can be seen in Figure 6, estimated marginal means for credibility.

For the third model with importance as the dependent variable, there were no significant main effects of treatment group or sex. There was a significant effect of skepticism as a covariate. Figure 5 graphically illustrates the estimated marginal means (estimated from the model) for attitude change for both males and females across the treatment groups. Figure 6 shows the marginal means for credibility and

Figure 7 for importance. In designs with multiple factors, marginal means for one factor are the means for that factor averaged across all levels of the other factors.

The ANCOVA results indicate that there are no significant main effects of gender for any of the dependent variables (attitude change, credibility, or importance). The results also show that females have higher credibility scores in the humor and shock group (although not significant for the shock group), and females have lower credibility scores in the emotion group. The differences between genders differ depending on treatment group.

Table 7

Two-Way Analyses of Variance (ANCOVAs) for Experimental Group and Sex with Skepticism as Covariate for Three Dependent Variables without Control Group

Source	Df	MS	F	R^2
Attitude change				.352
Skepticism	1	25.95	1.09	
Group	2	128.22	5.40**	
Sex	1	45.65	1.92	
Group × sex	2	2.87	0.12	
Error	43	23.74		
Credibility				.628
Skepticism	1	95.52	29.77***	
Group	2	9.86	3.07	
Sex	1	1.16	0.36	
Group × sex	2	11.05	3.44	
Error	43	3.21		
Importance				.348
Skepticism	1	121.29	12.47**	
Group	2	3.38	0.35	
Sex	1	22.82	2.35	
Group × sex	2	0.17	0.12	
Error	43	9.73		

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

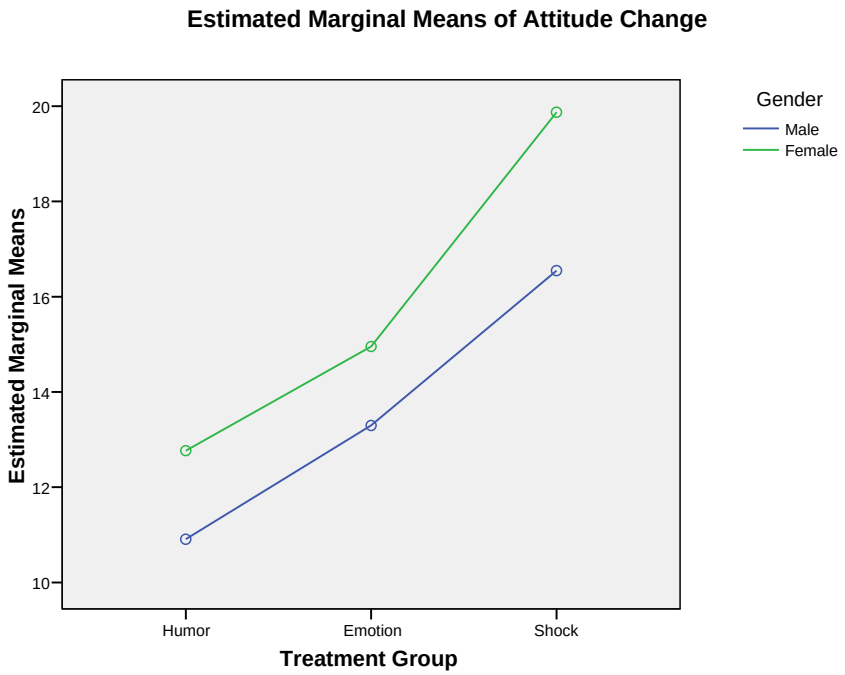

Figure 5. Estimated marginal means of attitude change by treatment group and sex with skepticism as a covariate.

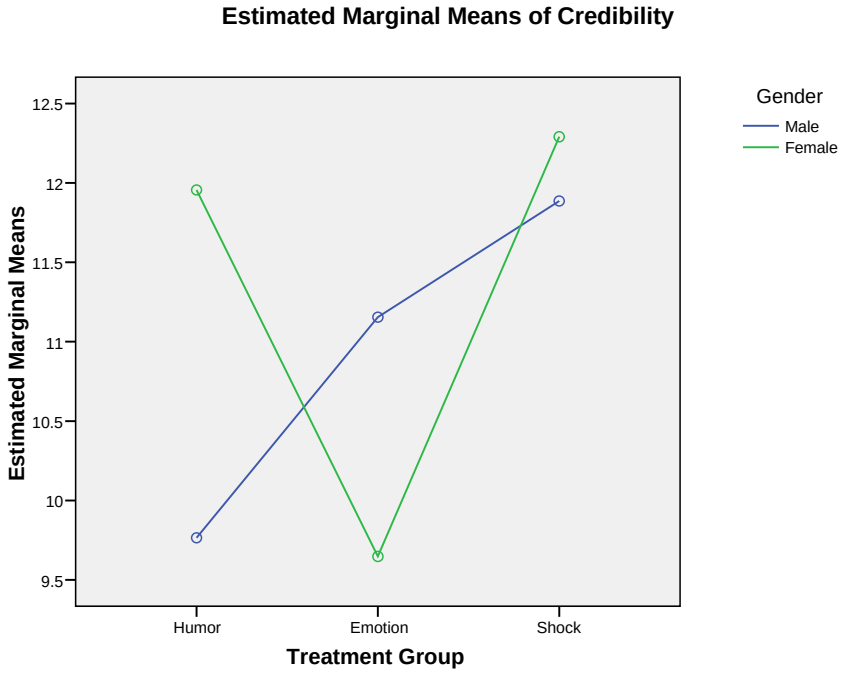

Figure 6. Estimated marginal means of credibility by treatment group and sex with skepticism as a covariate.

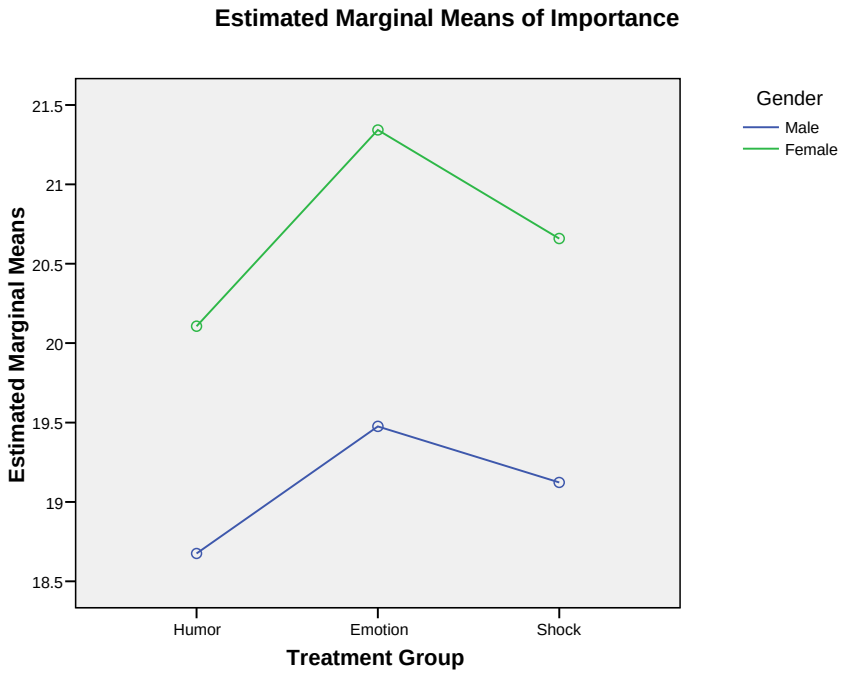

Figure 7. Estimated marginal means of importance by treatment group and sex with skepticism as a covariate.

Tukey post hoc analyses were run for the factorial designs to determine which groups of variables were different from the others. For attitude change, the overall ANCOVA comparing across the groups was significant ($p = .002$). Under attitude change, humor males were significantly different from shock females ($p = .01$), humor females were significantly different from shock females ($p = .005$), and shock females were significantly different from humor males ($p = .01$) and humor females ($p = .005$).

For credibility, the overall ANCOVA comparing across the groups was significant ($p = .001$). Humor males were significantly different from shock females ($p = .009$), emotion females were significantly different from shock females ($p = .002$), and shock females were significantly different from humor males ($p = .009$)

and emotion females (p = .002). For issue importance, the overall ANCOVA comparing across the groups was not significant (p = .163).

Results Summary

This study used framing and McGuire's Information Processing Theory to explore individuals' reactions to three treatments of environmental messages, emotional appeal, humor appeal, and shock appeal. The study also sought to explore differences in male and female reactions to each frame treatment. To study message effectiveness, three hypotheses were tested measuring individuals' attitude or perception change, credibility of the message, and issue importance.

H1 predicted that the environmental emotion treatment would have a greater impact on females over males for attitude or perception change, credibility of the message, and issue importance. This hypothesis was not supported by the results of the data, in part likely due to small sample size.

The trend in the means for the emotional treatment did support the hypothesis, showing that females had higher mean scores for attitude or perception change and issue importance, however none of the results were significant findings. The female means for attitude change were 14.83, while the male means were 12.80. The female mean for issue importance was 21.08, while the male mean was 18.40. The trend for credibility showed opposite results with the female mean at 9.42 and the male mean at 10.20. However, these were not significant findings.

Literature reviewed for this hypothesis showed that "women tend to engage in more detailed, elaborative, and comprehensive processing of information than do men…" (Kempf, Laczniak, & Smith, 2006, p. 5). Women also go through a process

called relational processing where they focus less on individual cues, and more on relationships between the cues (Kempf et al., 2006). Women are also considered to be more visually oriented than men (Putrevu, 2001, p. 4).

The two emotional appeal messages were visually stimulating. The first message depicted dramatic scenes of the earth succumbing to the effects of global warming, natural and human caused disasters. This message also had various themes as different scenes flashed across the screen. It may be likely that the women were able to process a connection between all of the information and men were not as able to make that connection across the messages. Kempf, Laczniak, & Smith (2006) state, "men are less likely to decipher relationships between messages than women are" (p. 5).

H2 predicted that the humor appeal messages would have a greater impact on male individuals versus female individuals as it concerns attitude or perception change, credibility of the message, and importance of the issue. This hypothesis was not supported by the data.

In fact, the opposite was found for credibility. Women were shown to have a higher belief of message credibility using humor as an environmental message frame than men. These results were significant, with a female mean of 12.08 and the male mean at 8.50. Trends in the data also showed that humor was more effective for women for attitude or perception change with a female mean of 12.83 and issue importance with a female mean 20.25 than men, with means of 10.25 and 17.25 respectively. These findings were not significant, but may have been if the population sample had been larger.

H3 predicted that shock messages would have a greater effect on men than women as they relate to attitude change, credibility, and issue importance. Significant findings show the opposite for credibility, with a mean of 13.33 for the females and only 11.60 for the males. This result was significant. Trends for attitude change and issue importance also show shock messages having a greater impact on females with means for attitude change at 20.42 for females and 16.40 for males, and an issue importance mean of 21.83 for females and 18.80 for males.

When sex differences were removed, the one-way ANOVA analysis showed important trends across message treatments. These results showed significant differences for attitude change and message credibility. Post hoc analysis showed that the humor treatment differed from the shock and the control groups, and that the emotional appeal treatments differed from the shock group. This analysis also showed that the emotional appeal differed from shock appeal and the control group for message credibility. These findings are important because they show that message frames do have an effect on attitude change and message credibility.

The 3 × 2 factorial design two-way ANCOVA was not part of the original analysis plan. However, running this analysis seemed appropriate after the data collection was complete and the initial results showed potential for interaction. This study includes a number of variables. It is important to attempt to determine which variables are influencing one another. The covariate for this analysis was the skepticism scale, as previously described. The intention for this analysis was to gauge message effectiveness compared to an individuals general skepticism of environmental messages and communication. Attitude change showed significant

effects by treatment group (humor, shock, emotion). Sex and skepticism did not add to the explained variance for attitude change. R^2 value for attitude change was at .324 and jumped to .352 with skepticism, not a large leap.

However, for credibility, significant findings were found for treatment group by sex. These findings indicate that credibility scores differ by gender in different ways depending on treatment group. For this group, R^2 values jumped from .341 to .628 with skepticism added. This indicates that an individual's pre- existing skepticism level plays a major factor in whether or not they consider environmental messages credible for all treatment groups.

Finally, for issue importance, significant findings indicated that males and females exhibited different responses to the treatment manipulations. There were also significant findings for skepticism. R^2 jumped from .195 to .348 with the addition of skepticism, showing that an individual's existing skepticism level plays a major factor across all treatment groups on whether males and females find the issues presented important.

Post hoc analyses of the factorial design showed humor and shock differing significantly from each other concerning attitude change and credibility across genders. The female emotion group showed significant differences from the female shock group, and issue importance did not show statistical differences across groups in the post hoc comparisons.

Chapter Five

Conclusions

It is clear that environmental message frames do have an impact on overall message effectiveness. It is also clear that in this study, messages were significantly more effective on female participants than on male participants. These findings could be attributed to a variety of reasons. First, there were substantially more female participants (69.1%) than male participants. Second, studies have shown that females are generally considered more environmentally conscientious than males.

In addition to message frames, a large number of possibilities could have an impact on overall message effectiveness for environmental messages. Because environmental messages are so complex, it is often difficult to communicate an exact "call to action". According to Corbett (2006), "a reader won't find one sentence that states 'the frame is…' but nevertheless will be able to make that conclusion from reading the entire story. Individual story factors that influence frames include syntactic structures (word phrase patterns), script structures (such as what's highlighted as most newsworthy), thematic structures (that point to a causal theme), and rhetorical devices (stylistic choices)" (p. 239). As with all types of messages, any number of factors, or combination of these factors will play a role in determining how an individual reacts to a message.

The data show, in general, environmental messages for all three treatments were more effective for females than for males. This could be due to the small

sample size, or it could be a general trend for environmental messages. According to Guber (2003), "many scholars suggest that women are more environmentally concerned than men based on their maternal socialization as family nurturers and care givers" (p. 75). All environmental messages, no matter the frame, could be more effective on females than males.

While none of the three hypotheses of this study was supported, important findings were discovered about environmental message frames, and their effects on men and women regarding attitude change, credibility, and issue importance. This study was very complicated. Not only did it attempt to analyze environmental message frames on men versus women, but also attempted to measure message effectiveness on three levels, attitude change, credibility, and issue importance over three treatment groups, humor, shock and emotional appeal.

Due to the complex nature of the analysis, ANCOVAs were run to determine which variables were affecting each other and the significance of those interactions. While this was not part of the original analysis plan, running these data along with the post hoc analysis showed in greater detail the influences the variables were having on one another.

Future Research

Guber (2003) states that Americans are "sympathetic, but not active within the environmental movement" (p. 54). It could be said that environmental messages with a specific "call-to-action" may be most effective at getting Americans involved. One shock message and one emotional appeal message had a specific call-to-action. For

future studies, measuring intended behavior change following a message treatment would be very helpful for the designers of environmental messages.

Measuring specific treatment type, not sex, would be important for future research. It is practical in a classroom setting, but in a real-world setting, it is not often the case that men and women are separated when viewing any type of television message. A study designed to measure overall effect on males *and* females should be an area of study for this type of research.

Additional research should focus specifically on one variable, either message credibility, issue importance, or attitude change. Having multiple dependent and independent variables was also a limitation of this study. Multiple variables were being analyzed at the same time. It is difficult to measure all of these variables with a small study population. Future research should also focus more in depth on an individual's existing skepticism. Which type of message effect overcomes an individual's existing skepticism is an important component to explore.

Future research should also focus on other demographics including age, race, and education level as it relates to environmental message effectiveness. These are important demographics to consider when designing an environmental message to create attitude or behavior change. Additionally, further research across treatment group and gender would provide scholars and the designers of environmental messages with information regarding how these variables are linked and related.

Limitations of the Study

This study was undertaken using undergraduate students in four different classrooms at the University of South Florida. Because of this, the results of this

study cannot be generalized to a larger population. The population studied also does not represent a random sample of the entire student population and cannot be generalized beyond the students tested.

Because there was only a total of 68 participants in the entire study, data analysis did not represent significant findings for all of the models run. It is difficult to have significant findings with such a small population study. Additionally, pre-existing bias toward environmental issues could have caused certain responses to the pre- and post-questionnaires.

Student populations are an important demographic to study, especially for environmental or activist organizations. Students are often seeking what is most important to them in their lives, and are susceptible to information in the form of television messages. They are also inclined to become activists and get involved in causes they feel are important. Despite the limitations, this study contributes to an understanding of message effectiveness for environmental communication. With future research in this area, deliverers of environmental communication will have a better understanding of how to produce their messages for specific target audiences.

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Appendix A
Pre-Questionnaire

Pre-Questionnaire

Please rate your response to the question below using the scale 1-5, where 1 represents strong disagreement, and 5 represents strong agreement.

1. Thinking about the country as a whole, most of the electricity in the U.S. is generated by burning fossil fuels, such as coal and oil.

1 2 3 4 5

2. Carbon monoxide is a major contributor to air pollution in the U.S. People breathing is the biggest source of carbon monoxide.

1 2 3 4 5

3. The main benefit of wetlands is to help control global climate change.

1 2 3 4 5

4. The main cause of global climate change is carbon emissions from autos, homes, and industry.

1 2 3 4 5

5. The name of the primary federal agency that works to protect the environment is called the National Environmental Agency (NEA).

1 2 3 4 5

Appendix B
Post Questionnaire

Post-Questionnaire

Please rate your response to the question below using the scale 1-5, where 1 represents strong disagreement, and 5 represents strong agreement.

I have a high level of environmental knowledge about the issue presented in the first message.

1 2 3 4 5

I have a high level of environmental knowledge about the issue presented in the second message.

1 2 3 4 5

The messages increased my knowledge about the environmental issue.

1 2 3 4 5

The messages increased my awareness about the environmental issue.

1 2 3 4 5

The messages changed how I feel about the environmental issues presented.

1 2 3 4 5

The messages changed my attitude from one of pro-environment to one of negativity towards the environment.

1 2 3 4 5

The messages changed my attitude from one of negativity towards the environment to one of pro-environment.

1 2 3 4 5

The messages changed my perception of the environmental issues presented.

1 2 3 4 5

I normally behave in a way that is environmentally friendly.

1 2 3 4 5

Following these messages, I intend to increase my environmentally friendly behaviors.

1 2 3 4 5

Generally speaking, I am skeptical of most environmental messages.

1 2 3 4 5

Generally speaking, I am accepting of most environmental messages.

1 2 3 4 5

I tend to only believe environmental messages from particular sources.

1 2 3 4 5

I believe the information presented in these messages is factual.

1 2 3 4 5

I believe the information presented in these messages came from sound scientific data.

1 2 3 4 5

I believe the source that published these messages is credible.

1 2 3 4 5

I am generally skeptical of messages presented in this format.

1 2 3 4 5

I am generally accepting of messages presented in this format.

1 2 3 4 5

I believe that issues regarding the environment are important issues.

1 2 3 4 5

I believe the issue depicted in the first message is an important environmental issue.

1 2 3 4 5

I believe the issue depicted in the second message is an important environmental issue.

1 2 3 4 5

Prior to viewing these messages, I had not given much thought to environmental issues.

1 2 3 4 5

After viewing these messages, I believe these issues are important enough to address.

1 2 3 4 5

After viewing these messages, I will seek out additional information on these issues.

1 2 3 4 5

1. Thinking about the country as a whole, most of the electricity in the U.S. generated by
burning fossil fuels, such as coal and oil.

1 2 3 4 5

2. Carbon monoxide is a major contributor to air pollution in the U.S. People breathing
is the biggest source of carbon monoxide.

1 2 3 4 5

3. The main benefit of wetlands is to help control global climate change.

1 2 3 4 5

4. The main cause of global climate change is carbon emissions from autos, homes, and industry.

1 2 3 4 5

5. The name of the primary federal agency that works to protect the environment is called the National Environmental Agency (NEA).

1 2 3 4 5

Demographics

What is your age? _____

What is your gender (circle the appropriate answer)?

Male Female

What is your level in school (circle the appropriate answer)?

Freshman Sophomore Junior Senior

What racial or ethnic group best describes you (circle the appropriate answer)?

African American
American Indian
Asian, Asian American, or Pacific Islander
White or Caucasian
Hispanic, Latino, or Spanish origin
Biracial or multiracial
Other, please specify _____

Appendix C
Neutral Lecture

Slide 1

Global climate change is defined as the increase in the average temperature of the Earth's near surface air and oceans in recent decades.

There are two main theories for global climate change by which scientists subscribe.

Slide 2

The first theory argues that global climate change is a clear and present threat, caused mostly by humans and pollutant emissions.

Slide 3

The second theory states that global climate change is a natural process that has occurred on Planet Earth for hundreds of millions of years, and that we are currently in a warming trend of the Earth's natural temperature fluctuations.

Slide 4

Let's talk about global climate change as a human-caused issue. According to the Climate Change Report for 2007 presented to the Intergovernmental Panel on Climate Change, the global average air temperature near the Earth's surface rose .74 plus or minus .18 degrees Celsius during the 100-year period ending in 2005. This data shows that this climate change is higher than an earlier estimate of .6 plus or minus .2 degrees Celsius for the period ending in 2000.

Slide 5

The Intergovernmental Panel on Climate Change concludes "most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in greenhouse gas concentrations via the green house gas effect."

Slide 6

The green house gas effect is defined as the process in which the emission of infrared radiation by the atmosphere warms a planet's surface.

Slide 7

Increases in global temperature will cause sea levels to rise and is expected to increase the intensity of extreme weather events and to change the amount and pattern

of precipitation. Other effects of global warming include changes in agricultural yields, trade routes, glacier retreat, species extinctions and increases in the ranges of disease vectors.

Slide 8

Uncertainties include the amount of warming expected in the future, and how warming and related changes will vary from region to region around the globe.

Slide 9

Some scientists, including the Intergovernmental Panel on Climate Change, condclude that "most of the observed increase in globally averaged temperatures since the mid 20th century is very likely due to the observed increase in human caused greenhouse gas concentrations."

Slide 10

Now, let's talk about the other side of the debate. Other scientists believe that natural phenomena such as solar variation combined with volcanoes have warming effects on the earth. They indicate that the Earth's climate changes in response to external forces including variations in its solar orbit around the sun, and volcanic eruptions across the globe, and that the Earth naturally experiences warming and cooling trends.

Slide 11

Earth has experienced warming and cooling many times in the past. A rapid buildup of greenhouse gases caused warming in the early Jurassic period (about 80 million years ago), with average temperatures rising by 5 degrees Celcius. Research indicates that the warming caused the rate of rock weathering to increase by 400%. Such weathering locks away carbon in calcite and dolomite, and CO2 levels dropped back to normal over roughly the next 150,000 years.

Slide 12

Some studies indicate that the Sun's contribution may have been underestimated. Researchers at Duke University have estimated that the Sun may have contributed about 45% to 50% of the increase in the average global surface temperature over the period between 1900 and 2000. Other scientific studies indicate that climate models overestimate the relative effect of greenhouse gases compared to solar forces.

Additional hypotheses include the variations in solar output, possibly amplified by cloud seeding via galactic cosmic rays, may have contributed to recent warming. This hypothesis suggests that magnetic activity of the sun is a crucial factor which deflects cosmic rays that may influence the generation of cloud condensation nuclei and thereby affect the climate.

Slide 13

To conclude, it may be likely that the warming of the Earth's temperatures is caused by a variety of factors, including human-caused and naturally occuring phenomenon.

Appendix D
Neutral Lecture Power Point

Slide1

Global Climate Change:

The increase in the average temperature of the Earth's near surface air and oceans in recent decades.

Slide 2

Global Climate Change:

Clear and present threat, caused mostly by humans and pollutant emissions.

Slide 3

Global Climate Change:

Natural process that has occurred on Earth for hundreds of millions of years

Slide 4

Global Climate Change:
A Human Made Problem

Earth's surface rose nearly an entire degree Celsius over the last 100 years

Slide 5

Global Climate Change – A Human Made Problem:

"Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in greenhouse gas concentrations via the green house gas effect."
-Intergovernmental Panel on Climate Change

Slide 6

Green house gas effect:

The process in which the emission of infrared radiation by the atmosphere warms a planet's surface.

Slide 7

Effects of Global Climate Change:

Rise in sea levels, increase in intensity of extreme weather events, change in amount and pattern of precipitation, changes in agricultural yields, trade routes, glacier retreat, species extinctions, and increase in the range of disease vectors

Slide 8

Uncertainties with Global Climate Change:

Amount of warming in the future, how warming and related changes will vary from region to region

Slide 9

Global Climate Change – A Human Made Problem:

"Most of the observed increase in globally averaged temperatures since the mid 20th century is very likely due to the the observed increase in anthropogenic [human-caused] greenhouse gas concentrations."

-Intergovernmental Panel on Climate Change

Slide 10

Global Climate Change: A Natural Process

Solar variation combined with volcanoes have warming effects on the earth.

Slide 11

Global Climate Change – A Natural Process:

Earth has experienced warming and cooling many times in the past.

Slide 12

Global Climate Change – A Natural Process:

Some studies indicate that the Sun's contribution may have been underestimated.

Slide 13

Global Climate Change – A Combination of Both?

It may be likely that the warming of the Earth's temperatures is caused by a variety of factors, including human-caused and naturally occurring phenomenon.

Appendix E
Emotional Appeal Transcript/Description

Emotional Appeal 1: Pole to Pole; produced by Greenpeace

3 minutes, 15 seconds of dramatic music accompanied by visual images of natural and human-caused disasters including icebergs crumbling, glaciers melting, hurricanes and hurricane damage, tornados, animals starving, people starving, polar bears drowning, and floods.

Emotional Appeal 2: The Angry Kid; produced by Greenpeace

1 minute, 45 seconds depicting a child angrily and passionately stating the following:

"The scientific community released a report that proves beyond a doubt that the Earth is getting warmer. This global warming is caused by things you grown-ups do. And by the things you don't. If drastic measures aren't taken soon, by the time I grow up, there won't be any fish left in the sea. Rainforests and clean air will be a thing of the past. The polar ice caps will be gone. Oceans will rise. Entire countries will disappear. Life will change in ways you can't even imagine. There could be famine, worldwide epidemics, life expectancy will be lower. And we're not just talking about 'the future.' We're talking about *my* future."

"But this is no surprise. You adults have known about this for years. And though you could have done something about it, you haven't. You can say, "it's not my problem." You can say, "I won't be around in 50 years." But from now on, you can't say, "I didn't know." Starting today, the lines are drawn. You have to choose sides. Either you're for my future, or you're against it. You're a friend, or you're an enemy. I may just be a kid today, but tomorrow will be different. This is the last time I'll be talking to you adults. You've had your chance to fix this problem. Now we have ours. We won't be cute. We won't be patronized. And we will not be denied our future."

Appendix F
Humor Appeal Transcript/Description

Humor Appeal 1: City Gas Guzzler; Produced by Greenpeace

1 minute, 34 second video depicting a man entering his up-scale office building, and interacting with his co-workers:

Man to receptionist: “Morning.”
Receptionist to man: “Morning” {She gives man a dirty look as he walks past}
Now in the office, man pats co-worker on the back: “Morning, Chris.”
Chris: “Oh, morning.”
Man to Chris: “How you doing this morning?”
Man answers: “Good” {Chris nods to other employee and gives a dirty look, referring to the man, other employee places his middle finger on his face to push up his glasses, reiterating their mutual disgust for this man}
{Man’s assistant, making his coffee spits in his cup before handing it to him}
{Man sitting alone at the lunch table in a crowded room, one person walks up, and squeezes into a very crowded table to avoid having to sit with the man}
{Man walks into the office restroom, other men give him dirty looks, and one man calls him a ‘wanker’}
{End of the day, man grabs his keys to leave, as he walks away, I AM A PRICK sticky notes have been pasted on his back without his knowledge}
{Man goes to unlock his car, it’s an SUV}
End verbiage says: City Gas Guzzler, What does your car say about you?

Humor Appeal 2; Toxic Sperm; Produced by Greenpeace

1 minute, 6 second film depicting men all in white sitting in a white tunnel.

All of the men have some sort of an ailment. Some are visibly injured, some are little people, and others are in wheelchairs and carrying oxygen tanks. An alarm goes off. All of the men begin to get up and try to make their way to the opening of the tunnel. They have hard time because they are all visibly disabled. They are clearly fighting to get to the front of the tunnel. A message pops up on the screen: Warning: Toxic Chemicals Can Damage Your Sperm. The tunnel opens, they all begin to run out, and fall and trip over each other. In the end, only one man, the little person makes his way out of the tunnel limping.

Appendix G
Shock Appeal Transcript

Shock Appeal 1: The Ancient Forests; Produced by Greenpeace

2 minutes, 39 second video begins with a family sitting in their living room watching a shark documentary on TV.

You hear: “The white shark has a body language of its own, which we are only beginning to recognize.”

{Children are watching the fin of the shark circling in the ocean.}

You hear “This inquisitive shark uses it’s…” {voice fades out}

From the TV: “It’s suppertime!”

{The family’s home begins to be attacked by chainsaws, they are screaming in terror as machines rip through their living room. They attempt to hid under a table.}

Father screams: “Go away!”

{Pictures are being cut through, glass breaks apart, and the home is being destroyed with them in it.}

{As the family screams, scene faces out}

Voice comes on: “Scary, isn’t it? Having your home destroyed right around you.”

{Scene is now in an pristine African rainforest}

Voice: “But your home can be rebuilt. Ours has taken thousands of years to grow.”

{Images of great apes and their rainforest habitat.}

Voice: “Without our forest home, we apes will become extinct, in *your* lifetime.

{Images of trees falling down, chainsaws cutting down the rainforest, apes screaming}

Voice: “And its not just us, thousands of other species will also disappear. An area of ancient forest the size of a football field is destroyed every two seconds, 24 hours a day, 7 days a week. That’s bigger than France and Spain in the last 10 years.”

{Images of trees being hauled to make lumber, lumber yard, warehouse, ape in warehouse looking at the products made from it’s home.}

Voice: “Rainforest timber like this is used on building sites, sometimes only once, and then thrown away. These doors were trees in Africa, our forest home. Much of it chopped down illegally by international logging companies. Thousand year old trees are destroyed, just for stuff like this.”
{Image of Gorilla looking over stacks of toilet paper}
Voice: “Why destroy ancient forests for wood and paper, when it could all come from responsibly logged timber?”
Voice of David Attenborough: “He can’t stop his ancient forests from being destroyed, but we can. To keep the world’s ancient forests safe from the animals and people that live in them, make sure the wood and paper products you buy have been certified by the Forest Stewardship Council.”

Shock Appeal Message 2: Baby Seals; produced by Greenpeace and Sea Shepard Conservation Society

This 2 minute, 48 second video depicts the slaughter of Canada’s seal pups.
First screen: Warning: This video contains graphic material that may be disturbing for some viewers. You have been warned.
{Images of baby seals in Canada}
Voice of Charlie Sheen: “This year 350,000 or more harp seal pups will cruelly be slaughtered on the ice flows off Eastern Canada. Next year, another 350,000 will die.”
{Images of baby seals being slaughtered, bloody and violent}
Charlie Sheen: “They will be shot, drowned in nets, clubbed, and sometimes even skinned alive. This annual ritual of blood and slaughter must be stopped. The Sea Shepherd Conservation Society is dedicated to protecting the seals. The cruel seal hunt is now larger than it has ever been before. In fact, it is the largest mass slaughter of a wild animal species on the planet. The Sea Shepherd Conservation Society needs your support to defend and protect these defenseless and innocent seal pups from the savage clubs of the sealers.