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Identification as a strategy for effective environmental communication

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IDENTIFICATION AS A STRATEGY FOR EFFECTIVE ENVIRONMENTAL COMMUNICATION

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ABSTRACT

IDENTIFICATION
AS A STRATEGY FOR
EFFECTIVE ENVIRONMENTAL COMMUNICATION

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In view of the belief that much environmental communication is not effective, this study examines the persuasive strategy of 'identification' for increasing effectiveness. Though its use, messages are linked to audiences by including shared commonalties, leading audiences to personally identify with the communication topic. Theoretically, if identification exists, persuasion is more likely to follow.

Two models of environmental communication, one with and one without identification strategies, were developed and tested on three focus groups to determine if identification's inclusion affected participants' responses. The groups were also interviewed about related attitudes and opinions regarding environmental communication.

Data analysis consisted of transcribing, coding, and disassembling the transcripts to reveal repeating patterns. The data was then reassembled in displays designed around the research questions.

The participants' responses demonstrated a positive relationship with identification. This leads to the possibility that emphasizing this strategy may increase the effectiveness of environmental communication.

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CHAPTER ONE

ENVIRONMENTAL COMMUNICATION VERSUS ENVIRONMENTAL DEGRADATION

Introduction

Undoubtedly, this is a world that revolves around communication. Societies run by it, lives are lived through it, and every day, the advancement of technology improves upon it. In such a world, effective communication is key to any concerted societal action, including environmental protection.

In the face of long-standing efforts to alleviate environmental problems, the continuance of environmental degradation can be viewed, in part, as a result of faulty communication. It appears that in many cases environmental communicators are not addressing the issues and consequences of environmental degradation effectively enough to halt its continuing spread. While some problems, such as toxic waste and point-source pollution, have been brought relatively under control, other issues of significant importance remain, such as an ever-increasing human population, global climate change, and the loss of natural diversity (Beattie 1995). Relative to all three of these issues, ten percent of the world's tropical rainforests have vanished in the last decade alone, yet the destruction advances unchecked as societies continue to demand the land and products found within these regions (Reed 1995).

Regardless of these and other serious threats to the natural environment, polls show a majority of Americans "believe our major environmental problems have been solved" (Beattie 1995, 1). In the face of constant coverage of ongoing degradation, such polling results appear to suggest that the communications addressing these issues have not been completely effective.

However, there are specific channels of communication, such as print and electronic media, which could be effective in helping to alleviate environmental degradation if current practices were altered to fit the task (Ornstein and Ehrlich 1989; Hertsgaard 1992; Elgin 1994). Brown (in Elgin 1994) emphasizes the importance of the communications industry as environmental educators, noting, "The communications industry is the only instrument that has the capacity to educate on a scale that is needed and in the time available" (p. 6).

But simply educating an audience about environmental problems does not guarantee their alleviation (Cantrill 1993; Hines, Hungerford, and Tomera 1987). Addressing this "dilemma" in 1949, Leopold noted that while the usual answer to degradation is "more conservation education," it may be that something is lacking in the *"content"* of education (1991 reprint, 243), which can be extended to also mean the content of the communication. More recently, Orr (1994) echoed this view, noting that the problem is not the amount of environmental education, but inadequacies and misdirection *in* the education. Again, 'education' can be synonymous with 'communication.'

Following the belief that common practices of environmental education/communication have been inadequate, an Indiana zoo introduced a program which illustrates how the establishment of a personal connection between the zoo's visitors and its inhabitants can help ensure that "the animals and their habitats, and the conservation of both, become part of every visitor's reality" (Grote 1995, 46). Yet, regardless of the success of such programs which promote establishing personal connections to nature, the answer seemingly most often heard in response to environmental degradation is to simply increase the amount of education/communication (Ornstein and Ehrlich 1989; Hertsgaard 1992; Elgin 1994). While this may not be a bad idea, the content and strategy must also be carefully considered as important factors in determining the communication effort's effectiveness.

In the face of continuing environmental degradation, it may be expedient to shift the emphasis from educating audiences about the issues to also providing them with the motivation for behavioral modifications (Hines, Hungerford, and Tomera 1987). Focusing on communication as the conveyor of environmental messages, a close examination of its methods is necessary in an effort to distinguish a strategy for improving its effectiveness. In consideration of such a task, this study examines current practices of environmental communication and considers the persuasive strategy of 'identification' as it relates to enhancing the communication's effectiveness.

Background on Environmental Communication

Taking various forms and shapes, communication can be spoken, sung, painted, or written. There are numerous definitions for communication as well, but for the purposes of this study, it is generalized as a process by which people create meaning through interaction—a process which is learned and carried out with the intent of influencing or affecting (Fortner, Smith-Sebasto, and Mullins [in press]).

Despite this study's focus on recent techniques, purposes, and definitions, communicating about nature is an age-old artform. Reith (1991) notes that for a millennium, poets and artists have focused on the natural environment because they were inspired and driven by personal vision or intense passion.

Today, many contemporary writers and artists are continuing the tradition, but, according to Reith, it is with an "underlying and intensifying awareness that the celebration may soon be over" as natural habitats continue to be altered and degraded (1991, 12). Driven by such an impetus, a large body of work has accumulated and expanded into a field now referred to specifically as 'environmental communication.'

While environmental communication can be thought of as persuasive communication, Chary (1991) provides a broad definition as follows:

> Communication is the fundamental underpinning of organizing, the driving activity of any effort geared at social, behavioral, or attitudinal change. . . . When these ideas, events and information relate to the impact of human beings on the planet earth (and its inhabitants), that process is called *environmental communication* [italics added for emphasis], and it is put to use in the service of education, persuasion and the achievement of some end. (Chary 1991, 15)

In addition, Chary notes that the process, dialogue, and questions actively promoted through environmental communication are all related to changes society needs to make.

Smith-Sebasto further clarifies Chary's definition, explaining that environmental communication is "the deliberate and systematic attempt to convey information about the environment, or an environmental issue, in such a manner as to induce a specific type of change in a specific target audience about the environment as a whole or a specific environmental issue" (1993, 4).

Frankel enlarges the definition to include the communicators, who are first and foremost "environmental ambassadors" (1991, 6). In such a capacity, he explains, the communicator has two sets of duties: the first is to help people re-define the nature of their relationship to the environment, and the second is to provide guidance and vision in a time of environmental crisis.

Somewhat similar to Frankel's duties outlined above, Brown (1991) notes that environmental communication occurs within two broad contexts: the first involves analyzing and changing human relationships to the environment, and the second involves working within an existing decision-making system to influence an outcome. Winning is not key to environmental communication, but rather changing the relationship of humans to the earth (Chary 1991).

It is precisely this relationship, or lack thereof, which many view as the driving force behind environmental destruction, as well as the key to its preservation (Beattie 1995; Leopold 1991; Roszak 1979; Roszak 1994a; Shepard 1982; Stewart 1995), for without any personal connection between humans and the environment, there is little reason to care about its demise. A front page news story cited this specific dilemma as a threat to the future of America's national park system (Clifford 1994). Addressing the issue of an ethnic and socioeconomic imbalance in those who visit the national parks versus America's total population, Clifford writes, "If coming generations of Americans . . . are indifferent to the nation's most spectacular outdoor places, what will happen to public support for protecting natural resources?" (p. 6A).

In this example, 'indifferent' people are unconnected to, or do not identify with the national parks because they never visit them; therefore, they do not care if the parks lose financial support.

A major challenge to environmental communicators is convincing their readers, viewers, or listeners that the issue or topic is worthy of attention and involvement in the first place (Riddell 1991). But once the audience's attention is caught, Riddell notes the goal is to edge them closer to the view of the communicator. While she admits this is manipulation, she feels it is justified because those whom she is attempting to reach are constantly bombarded by manipulative messages motivated by a range of issues often including financial gain. "The least I can do is provide balance by helping [the audience] hear from a river otter, an ant, an orchid—or some other rare life form that doesn't have a profit motive" (1991, 10).

Another environmental communicator explains, "Part of what you're doing as a [communicator] is to make that silent language of mountains and trees and water part of your language" (Peterson 1990, 5). It is this view which best explains the underlying purpose behind this study—how to make the silent language audible and relevant in an effort to enhance the effectiveness of environmental communication.

Mendenhall writes that environmental communication can be considered effective when "the public begins to understand the message" (1991, 11). If this view is correct, then environmental communication has already served its purpose as numerous national and international polls show a broad awareness and concern about the environmental issues facing society (Beattie 1995; Dunlap, Gallup, and Gallup 1992; Kohut and Shriver

1989; McAney and Moore 1994; Saad 1993). Air pollution, global warming, ozone holes, deforestation, toxic chemicals, overpopulation, and species extinction are but a few of the commonly cited issues. However, being aware of or concerned about a problem does not guarantee its alleviation. As Hines, Hungerford, and Tomera note, "an individual must possess a desire to act" before any problems can be solved (1987, 7)

Moving beyond Mendenhall's view, additional definitions of environmental communication state that like persuasive communication, it is intended to promote and produce change within the audience (Brown 1991; Chary 1991; Smith-Sebasto 1993). Therefore, environmental communication should be considered effective only when change actually occurs.

Chary's definitive statement that "effective communication in any field is distinguished by its ability to make people think about old things in a new and better way, and as a result, to eventually change their [related] behavior" is particularly applicable to this study (1991, 15). In effect, this statement suggests that much of today's environmental communication is not truly effective. If it were, environmental degradation would decrease as the messages were disseminated. However, many types of degradation continue unabated and some have grown worse, such as the loss of natural habitats and species (Beattie 1995) and local air quality (Bay Area Air Quality Management District 1995), despite prolific coverage in many media including newspapers, magazines, television, radio, and even global computer networks.[1] It appears that many people are aware of the issues and

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[1] Global computer networks, such as the World Wide Web, provide environmental communication through the Internet. For example, EcoNet can be accessed at webweaver@econet.apc.org.

possible consequences of environmental degradation, but do not appear to be changing the underlying behaviors to the extent of stopping the destruction.

Persuasive Strategies in Environmental Communication

When studying communication of any type, it is helpful to distinguish between three common types: pure information-giving, pure expression, and pure persuasion (Woodward and Denton 1992). While most communication contains elements of all three, this study focuses on persuasion.

Persuasive communication is intended to alter attitudes or actions (Woodward and Denton 1992). As such, environmental communication can be most accurately described as persuasive communication. O'Keefe (1990) describes the paradigm of persuasion as including a specific goal, achieving the goal through communication, and producing a change in the mental state of the receiver. O'Keefe also notes that forcing people into action is not genuine persuasion as true persuasion always involves freedom of choice.

Historically, environmental communication has relied upon various strategies, such as motivational appeals, as the main persuasive force. In fact, a major difference between communication designed solely to transmit information, such as an objective news story, and communication designed to persuade, such as environmental communication, is the use of such appeals (Bettinghaus 1973).

Many practitioners of persuasive communication strongly advocate motivation through the use of emotional appeals. They do so with the understanding that persuasion will occur if emotions are aroused by relating the message to the emotional needs and desires of the receivers (Bettinghaus

1973). Obvious examples of this persuasive strategy can be found throughout environmental communication (Roszak 1993b).

However, Bettinghaus and Roszak warn it is wise to proceed cautiously when using emotional appeals. Bettinghaus (1973) cites a selection of studies resulting in a wide variety of responses, serving to illustrate the fact that it is very difficult to predict how general audiences will respond to emotional appeals (pp. 159-61). A more recent study comparing a persuasive message containing emotionally laden photographs with the same message minus the photographs found that the lowest response rate was related to the emotional photos. This led the researchers to conclude that highly emotional appeals tend to produce an avoidance reaction which can negate the communication (Dyck and Coldevin 1992). Nevertheless, emotionally laden photographs continue to be used throughout environmental communication.[1]

Commenting on the environmental communicator's propensity for relying on emotional appeals, Roszak (1993a) warns:

> Start from the assumption that people are greedy brutes, and the tone of all you say will be one of contempt. Assume that people are self-destructively stupid, and your tactics are apt to become overbearing at best, dictatorial at worst. As for those on the receiving end of the assumption, shame has always been among the most unpredictable motivations in politics; it too easily laps over into resentment. Call someone's entire way of life into question—as environmental activists are prone to do—and what you are apt to produce is defensive rigidity. (Roszak 1993a, 62)

Appealing to fear is a hotly contested, yet common variation of emotional appeal employed throughout environmental communication (Bailey 1995; Easterbrook 1995; Roszak 1993b; Simon 1995). Essentially,

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[1] Organizations such as People For the Ethical Treatment of Animals (PETA) rely upon this strategy in much of their persuasive material.

doomsday or apocalyptic statements are intended to frighten or scare the audience into the desired response. Bettinghaus (1973) cites a study with findings very similar to Dyck and Coldevin's study (1992), concluding that high levels of fear appeals seem to produce an avoidance reaction essentially nullifying the communication. The implication was that high fear appeals produce high anxiety in receivers, and as a consequence, they pay little attention to the communication. However, Burgoon and Bettinghaus (1980) cite numerous studies showing a wide range of responses to fear appeals. They note the findings are confusing and have no simple explanations. Bettinghaus (1973) concludes that while more research on fear appeals is necessary, the existing studies suggest that if little is known about the audience, the communicator is best advised to "cast his [her] message into a form which does not use high levels of fear appeal" (p. 159). However, environmental communication still commonly relies upon this persuasive tactic in an attempt to scare the audience into action.[1]

Metaphors, another type of motivational appeal, are also relied upon in environmental communication as they tend to communicate a stronger attitude than conventional expressions. Bettinghaus (1973) cites the example, "Passing this bill means the *rape* of our woodlands" (p. 133). However, research shows that while metaphors are useful in eliciting attitude change, the change will not necessarily be in the desired direction. Overall, receivers tend to react negatively toward extremely intense language (Bettinghaus 1973); therefore, metaphors should be chosen carefully.

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[1] *Earth in the Balance* (Gore 1993) is an example of a recent publication which has received much criticism for its reliance on fear appeals, or what many refer to as a "doomsday" approach (Bailey 1995, 14; Easterbrook 1995, 1; Moore 1995, 114).

Reward appeals are also commonly employed throughout environmental communication. These messages can be extremely effective, appealing to or offering the receiver some type of personal gain (Bettinghaus 1973). Bettinghaus notes that if a communicator can point out how the control of pollution will personally benefit the receiver (economically or otherwise), the receiver is more likely to accept and act upon the message. Gilbreath (1984) also stresses the effectiveness of this strategy.[1]

Overall, while many textbooks on persuasion suggest that communicators appeal to motives which appear to affect people, such as fear, sadness, and security, few studies which have examined the value of these approaches have reported conclusive results. Instead, they report these appeals are highly dependent on the individual, and with the range of individual differences so large, communicators should not expect positive results simply by using motivational appeals (Bettinghaus 1973). Nevertheless, motivational appeals remain an integral part of the over-all strategy of persuasive communication because they can be very effective (i.e., reward appeals).

Motivational appeals also remain as one of the most common persuasive tactics for environmental communication. This is due in part to the fact that there are strategies which can be used to provide positive and non-offensive outcomes to environmental problems. One specific strategy falling under the description of a motivational appeal is the subject of this study: *identification*. Similar to reward appeals, identification can be

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[1] Some readers may feel that these types of appeals present humans in a negative manner, driven mainly by self interest. This issue will be addressed further in the upcoming section *Contentious Issues and Limitations*.

effectively used to lead people to feel and understand how they are personally connected to the environment; therefore, any actions affecting the environment—positive or negative—are also understood as affecting them.

Identification

Communication theorists Burke (1952) and Rybacki and Rybacki (1991) suggest identification as a strategy to affect persuasion through communication. Through its use, messages are personalized for audiences through the inclusion of specific ideals, experiences, desires, and subjects, which the audience may feel an affinity for as personally relevant or important. Such commonalties between the message and the audience serve to connect the audience to the issue or topic of communication. In effect, the audience is led to personally 'identify' with the message and/or the communicator.

As a component of persuasive communication, identification, like reward appeals, can be relied upon to achieve desirable responses (Foss 1985; Woodward and Denton 1992). It is frequently used for influencing attitudes and behaviors as audiences come to view the issues as personally relevant. Theoretically, if an audience identifies with the message and/or the communicator, successful persuasion is more likely to follow (Burke 1952).

Burke describes the process of identification as *A* (the receiver or audience) identifying with *B* (the communicator and/or the environmental issue) if *A* is persuaded by the content of the communication to believe that she or he has interests in common with *B* (Burke 1952). Burke further explains that a communicator persuades receivers with identification by using their language, order, image, attitudes, ideas, or identifying with their ways. In other words, the message is designed to suggest or point out common links between the communication and the audience. Through linguistic strategies, the communicator creates a sense of identification between the audience and the message, and thereby increases the chances of achieving persuasion (Applbaum and Anatol 1974).

A common tactic of identification is to refer to receivers' experiences, appealing to what they have seen, heard, read, felt, believed, or done. For example, a seemingly unrelated message to audiences in California about tropical deforestation in South America could point out how deforestation impacts specific migratory birds commonly seen in California, but who overwinter in South America. In this manner, the communicator associates the message with the receivers' probable experiences, interests, and knowledge regarding these birds. The underlying expectation is that if the audience has any interest in these birds, they will then adopt or be responsive to the communicator's position because it appears consistent with their accepted frames of reference (Applbaum and Anatol 1974). In addition, Applbaum and Anatol note that when the receivers believe they share particular attitudes with the communicator, they are more likely to accept new attitudes. Conversely, if receivers perceive dissimilarity with the communicator, identification or persuasion will be more difficult.

Another proven tactic of identification is the use of positive and negative reference groups (Bettinghaus 1973). The term "reference group" is used to denote a group to which the audience identifies and relates their attitudes or behaviors (p. 78). A positive reference group is one which the audience belongs to, or aspires to belong to. An example of environmental message using a positive reference group could be a statement such as "most members of the Sierra Club recycle a majority of household garbage." A negative reference group is one with which the audience does not care to be identified. A similar example may be "criminals do not care about recycling household garbage."[1]

Directly related to identification, Bettinghaus notes that learning is easier when the communicator's materials are made meaningful to the receiver. This approach proved highly successful at the aforementioned Indiana zoo where visitors "are encouraged at every turn to interact with the animals and their environments" (Grote 1995, 48). The zoo director explains the program's premise as, "We believe the best way to understand the animal world is to become as much a part of it as possible" (p. 46); therefore, it becomes "part of every visitor's reality" (p. 48). Through such an experience, the animals and their habitats become a meaningful part of the visitors' frame of reference. In effect, they identify with them and any communication regarding them.

Over the past few decades, numerous studies on environmental advocacy have concluded that most people have a poorly integrated view of their place in the environment and are most often influenced by a self-serving bias (Cantrill 1993). This generalization helps to explain the continuance of environmental destruction. It would appear people are striving to help themselves by stripping an environment to which they feel no strong connections.

[1] These statements are not presented as facts, but are used as examples only.

However, by employing identification within environmental communication, the self-serving bias can work in favor of the environment. The basic premise is that once someone personally identifies with the environment or environmental issues, any actions which go against the environment are then perceived as directly going against her or his self-interest.

Identification in Environmental Communication

Identification has historically been employed throughout environmental communication. Although not directly referred to, its importance has repeatedly been addressed in the creation of ties between people and the environment.

In his 1905 essay, *The Gospel of Nature,* Burroughs wrote, "Not till the bird becomes a part of your life can its coming and its going mean much to you. And it becomes a part of your life when you . . . have established associations with it" (Burroughs 1990 reprint, 26). Here, 'associations' can be understood as a synonym for identification. In Stewart (1995), Krutch commented that one can almost say Thoreau's work is about "himself in connection with nature" (p. xx). Here, 'connection' serves as a synonym for identification. And when writing his famous *Land Ethic* in 1949, Leopold stated that he believed society could only be ethical "in relation to something we can see, feel, understand, love, or otherwise have faith in" (Leopold 1991 reprint, 251). In other words, Leopold believed society could only be ethical toward something it could identify with.

Today, communicators are again focusing on the importance of connecting or identifying with the environment. Some note that "a fundamental shift in one's consciousness is the first step" toward restoration (EarthCare 1994), while others attempt to enlarge the cracks they see appearing in the premise that humankind stands outside nature, suggesting that this attitude is largely responsible for environmental destruction (Frankel 1991).

It is this *first step* toward restoration which can be effectively prompted through the use of identification within environmental communication. In fact, if Burke (1952) and Rybacki and Rybacki (1991) are correct, it may be that for any persuasion to take place at all, there must first exist some element of identification between the communicator and/or message and the audience. The power of identification is emphasized in Roszak's statement, "Where this sense of *shared identity* [italics added for emphasis] is experienced . . . the result is spontaneous loyalty" (1993a, 62).

Relative to identification, some environmental philosophers have come to believe that society's lack of connection or identification with the natural world is a driving force behind the destruction of the ecosystem (Roszak 1979; Roszak 1994a; Shepard 1982). Rational thought should lead to the belief that most humans would not willingly destroy anything they personally identified with as it would negatively affect them. Yet, as many researchers have noted, environmental degradation is negatively affecting many, both emotionally (Windle 1992) and physically (Brown 1993; Miller 1985; Owen and Chiras 1990).

This leads to the assumption that there are many environmentally destructive behaviors emanating from individuals who do not personally identify with or feel connected to the environment they are harming. Continuing with this line of reasoning, through the use of identification, environmental communication could be an effective conduit for connecting these members of society to environmental issues, or the environment as a whole, in an effort to alter environmentally destructive behaviors.

Related Theory

Ecopsychology

While attending a conference at the Esalen Institute in Big Sur, a journalist from the *San Francisco Chronicle* asked, "Are there ways of speaking that awaken our senses? . . . Must our deep psychological investment in literacy censor our capacity to experience the animate and magical in nature?" (Nelson 1994). After the conference, the journalist wrote, "It seemed evident that we cannot repair the damage we are doing to the Earth without rediscovering the psyche's need for an intimate relation to the elemental processes that sustain life on the planet" (Nelson 1994).

Thoughts and questions such as these, emerging from a new field of inquiry dubbed 'ecopsychology,' are a major force behind this study. The strategy of identification in environmental communication aligns neatly with ecopsychology's premise that environmental advocacy requires the sensitivity of psychology to help persuade the public (Roszak 1993a). Toward this end, a number of "adventurous" psychologists troubled by the environmental disconnection of their profession are attempting to create ecologically relevant forms of therapy (Roszak 1993a, 61). Concerned by the fact that environmental issues have absolutely no role or coverage in mainstream psychiatric training, they have joined forces with other individuals with a goal to expand the framework of psychiatric thought to include the natural environment. The over-riding belief is that the time has come to define sanity within a biospheric context (Roszak 1993a).

As a developing branch of psychology, ecopsychology is directed toward finding answers to ecological and societal ills, with a close eye on the relationship between both. Within the theoretical framework, to be sane means to be integrated with the environment. Emotional trauma occurs when the bonds are broken, resulting in psychological disorders (Windle 1992). Disassociation—common to many psychological disorders—is believed to account for the current destructive relationship between the human psyche and nature (Nelson 1994) and "healing it may require that we finds ways to prescribe nature" (Roszak 1993a, 61).

In general terms, disassociation is the opposite of identification. As such, it, and the resultant environmental destruction, may be inevitable when humans do not identify with their natural environment.

Specifically, the need is to incorporate nature back into the psyche. Ecopsychologists contend that every person has a sense of connectedness with nature, as deeply rooted in the psyche as the libido (Roszak 1993b). Therefore, somewhere deep within the psyche, every individual identifies with nature. But for many, this ecological unconsciousness lies dormant, waiting to be drawn upon as a means to restore environmental harmony.

The underlying tenets of ecopsychology stress an explicit emphasis on the human relationship with the natural world as illustrated by the following statement:

> Without a connection to our own sources of inspiration, our 'inner wells' run dry, and our actions, once the expression of our souls, begin to feel empty and meaningless. By learning to recognize and honor our own natural cycles, we take an important step toward creating the just, sustainable, and compassionate world to which we are committed. (Gomes 1994, 5)

Additionally, there is a strong emphasis on the newborn baby's "intimate bond" with nature as a key to the higher order of environmental sanity (Roszak 1993a, 61). Psychologists believe that reappraising, instead of outgrowing, the infantile "oceanic feeling"[1] is valuable in retaining this sanity. Roszak believes that Freud himself may have even anticipated this revision. In fact, Roszak thinks Freud may deserve credit for inadvertently creating ecopsychology with his insight that "our present ego-feeling is only a shrunken residue of a much more inclusive—indeed, an all-embracing—feeling which corresponded to a more intimate bond between the ego and the world about it" (Roszak 1993a, 61).

Directly relevant to this study of identification, the participants of a 1990 ecopsychology conference concluded that if the self is expanded to include the environment, *the behaviors leading to the environment's destruction would be experienced as self-destruction* (Nelson 1994). Thus, the communication strategy of identification can have significant ramifications for ecopsychology as it can help reconnect the self to nature.

Balance Theories

The underlying forces driving the attitudinal and behavioral changes brought on by identification are explained by cognitive response theories.

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[1] The "oceanic feeling" is the infant's sense that it and the world flow together in a single, unbounded identity (Roszak 1993a, 61).

Relative to persuasive communication, these theories rest on an understanding of the process behind belief and attitude change and how it is revealed in observable responses. The assumption is that a change in an attitude or belief always precedes other changes, such as a behavioral modification (Bettinghaus 1973).

Bettinghaus refers to what are known as "balance theories" to explain how receivers respond to persuasive messages such as those of environmental communication (1973, 45). Although their origins are older, the theories were first proposed during the early 1940s, and since World War II they have provided one of the most fruitful areas of study within the communication and behavioral sciences (Bettinghaus 1973).

'Balance' is the term used to define the psychological mechanism driving specific responses to communication. The pressure toward cognitive balance or consistency is believed to be an important factor in shaping an individual's reference frame, as well as their responses and behaviors (Bettinghaus 1973).

The guiding premise of balance theories is that humans possess a need for cognitive consistency. Any changes in their frame of reference or behavior will likely be toward more consistency (Bettinghaus 1973). Bettinghaus explains that an individual does not perceive the world as a series of unrelated stimuli. Instead, when a new event is noted, the mind processes it within a pre-existing frame of reference. The result is toward "minimizing the internal inconsistencies" among items forming the reference frame (p. 45). Furthermore, the tendency to form a consistent or balanced reference frame also means that overt responses, such as opinions, perceptions, emotions, and actions, tend to be consistent with other behaviors.

Balance theories help explain why an attitude and/or behavioral change is expected when a new identification with the environment is established. Once a new connection is made, old perceptions and behaviors which are inconsistent with the new identification will create a state of internal discord. This uncomfortable dissonance persists until either the new identification is discarded or related attitudes and behaviors are aligned with the new association (Bettinghaus 1973).

One of the best known balance theories, Festinger's "Cognitive Dissonance Theory," forecasts that old behaviors *must* be changed to seek consistency with new attitudes (Woodward and Denton 1992, 161). The theory contends that dissonance results in a psychological disturbance to be followed by an attempt to reconcile the cognitions by creating a state of consistency (Applbaum and Anatol 1974).

Ittelson (1970), an environmental psychologist, noted this very strong need for internal reconciliation when confronted by cognitive dissonance. It is explained as follows:

> Behavior will be random and ineffective unless it takes off from some relatively stable and determined foundation. Once the situation changes, however, in such a way that this foundation ceases to be the best possible one on which to base action, preserving it ceases to be of functional value. . . . the consequence of action is a change in the individual's assumptive world, either reinforcing or modifying it. (Ittelson 1970, 119)

Bettinghaus (1973) provides additional explanation of the processes underlying balance theories. He states that an individual is unbalanced or faced with dissonance in the advent of any situation where the elements are perceived to be at odds with one another. The magnitude of the dissonance is a function of the stimuli's importance, the intensity of attitudes toward the stimuli, and the number of stimuli involved. In general, when dissonance is very high, the probability of major changes in the individual's frame of reference is also high if she or he is to succeed in reducing the discord. Persuasion is more likely when dissonance is low because it may require only a small amount of information to successfully change the situation (Bettinghaus 1973).

Another final consideration relative to balance theories is "exposure to inconsistency" (Bettinghaus 1973, 52). This area of explanation addresses the unconscious tendency of humans to harbor conflicting reference frames, attitudes, and beliefs. Yet, if the inconsistencies are pointed out, the balancing mechanism will predictably operate to produce an attitude change toward greater consistency.

These factors all serve to effectively produce changes of attitudes and behaviors whenever persuasive communication establishes an identification or connection. Specifically, if environmental communication succeeds in setting up an identification with the environment or a particular environmental issue, the receiver's attitudes and behaviors will likely change to maintain balance and consistency with previously accepted reference frames. For example, if a receiver's reference frame already encompasses a belief in protecting dolphins, a message which ties a specific company to killing dolphins should not only lead the receiver to personally identify with the message, but should also create a state of internal discord if the receiver had knowingly been supporting the company in any manner. The degree of discord will be proportionate to the intensity of the receiver's feelings for dolphins and will persist until the receiver either stops supporting the company or changes her or his reference frame to no longer include a belief in protecting dolphins. In this manner, the strategy of identification can work in concert with psychological balancing mechanisms to effectively produce environmentally beneficial behavior modifications.

Importance of Study

Due to the relative newness of the established field of environmental communication (Cantrill 1993), the importance of research within this area should not be overlooked. The reality is that while we have only recently begun to delve into the factors affecting environmental communication, environmental degradation is already well underway.

After undertaking a broad survey of communication, environmental, and journalistic research, I have been unable to locate any records of other studies with a specific focus on the effectiveness of identification in environmental communication. The lack of such research illustrates the possible significance of this study as baseline research on the role of identification in environmental communication.

It should be noted, however, that many studies have been conducted on the factors affecting environmentally responsible behaviors (see Hines, Hungerford, Tomera 1987), but to the best of my knowledge, none of them have focused on the influence of identification.[1] Additionally, there have been numerous studies on the strategies of environmental advocacy, but most of this research has not focused on what can be done to enhance the *effectiveness* of environmental communication (Cantrill 1993). As Fortner, Smith-Sebasto, and Mullins state, "There is a 'communication block' that must be broken" in order to produce good environmental communication, despite having a continuous supply of environmental issues about which to communicate ([in press], 9).

Aside from communication, there have been many technical and administrative actions taken to help alleviate environmental problems. But scientists and lawmakers can not be solely relied upon to prevent current and future degradation. Instead, it requires a basic reappraisal of attitudes, lifestyles, and society (Fortner, Smith-Sebasto, and Mullins [in press]). Therefore, it is my assumption that effective environmental communication can help mobilize communities for change by altering their view of and their relation to the environment. This is supported by Chary's (1991) definition of effective communication being that which causes people to think about the issues in different ways, resulting in positive behavioral modifications.

If Fortner, Smith-Sebasto, and Mullins ([in press]) are correct in their claim that "the one universal similarity in all environmental issues is the notion that the problems facing humanity have to do with maladaptive behavior" (p. 10), there must be a serious search for effective ways to alter those behaviors consistent with democratic values and beliefs. Studies such

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[1] Krendl et. al's (1992) study on recycling behaviors did contain an element of identification, although not stated as such. The results illustrated strong tendencies relating identification with successful communication.

as this are important as they can, in part, contribute toward this end (Hines, Hungerford, and Tomera 1987; Roszak 1994b; Smith-Sebasto 1994).

Contentious Issues and Limitations

Some readers might call into question this study's focus on identification as a persuasion tactic. It may be interpreted as presenting humans as shallow, motivated only by self-interest and personal benefits. However, this view is not representative of the impetus behind this study. The thriving existence of many philanthropic and non-profit organizations bears witness to the fact that many individuals reach far beyond immediate self-interest in their motives for action. What this study questions are the forces propelling an individual into action, regardless of whether the action is self-serving or altruistic.

Still, Cantrill (1993) notes most people do "exhibit a self-serving bias supporting . . . human centeredness" (p. 71), concluding that "most people are relatively anthropocentric in their orientation to the world" (p. 86). In addition, he concludes that it is a person's self-interests which "serve as foundations for constructing and attending to environmental advocacy" (p. 86). However, relative to this study, it is my belief that once a basic self-serving foundation is established through identification, a frame of reference is in place for future identifications and behavioral modifications which may not be self-serving other than allowing for cognitive balance. In other words, a change in behavior caused by identification is not necessarily due to the desire to benefit one's self. In fact, identifications and related behavioral modifications can reach far beyond basic, self-serving motives and result in self-sacrifice. For instance, some people who feel strong identifications with nature have opted for a lifestyle which has less impact on the environment even though it is less convenient and is more physically demanding. Additionally, many people who strongly identify with animals choose to be vegetarians even though they may enjoy the taste of meat.

In the case of these examples, an initial and possibly self-serving identification had to first be established before it could develop into a strongly felt identification leading to more altruistic behaviors. However, as Hines, Hungerford, and Tomera (1987) point out, many individuals do not possess an altruistic personality characteristic which leads to a desire to help alleviate environmental problems for less than selfish reasons. Yet, "these individuals may be enticed into behaving responsibly toward the environment by the application of behavioral intervention strategies" (p. 7). In this case, persuasive strategies such as identification can be effectively employed to entice these individuals on a basic or self-serving level.

For the purposes of this study, I believe that identification can be the *first step* in developing strong ties to the environment. Essentially, once a relationship is established through self-interest or identification and behaviors begin to be modified, the platform for further growth is in place.[1] Then, as the connection between a person and the environment grows, values and other altruistic or intangible motivators—such as the view that all life forms have inherent rights (Leopold 1991)—come into play. In the absence of an initial identification, a deep environmental ethic could not

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[1] While this is a personal conviction, it is interesting to note that one of the research participants voiced this same view without solicitation. See *Conclusions* for further discussion.

exist. It is this primary step which I seek to study, driven by my belief that many people have not yet established basic identifications with environmental issues (Cantrill 1993).

Another contentious issue for consideration reaches as far back as the days of Aristotle. Bettinghaus (1973) notes that throughout history there have been many concerns voiced over the ethics of persuasive communication. Commonly thought of as the manipulation of people against their will, the very word 'persuasion' often suggests something unpleasant, unfair, or dishonest (Bettinghaus 1973).

The intent of this study is not to convince the reader that persuasive communication is moral or ethical. For those wishing to pursue this argument, Bettinghaus offers a concise philosophical view of the morality and importance of persuasion in a free society (1973, 22-27). I will only note that it is often used as an effective means to arrive at a positive solution, such as the prevention of war or slowing the rate of habitat destruction. Both are positive outcomes realized through persuasive communication.

Still, there are alternatives to persuasion and Bettinghaus notes "mankind has tried most," including "whips, chains, bribes, tortures, and warfare" (p. 24). While these methods may be even more effective in some situations, I believe persuasion is a more desirable method for behavior modification. As Bettinghaus states, failing to arrive at a consensus through persuasive means can result in "fighting, quarreling, murder, and warfare" (p. 24). But more to the point, it can also result in environmental degradation including destroyed habitats, endangered or extinct species, and the pollution of life-supporting systems such as air and water.

Despite a vast amount of effort and research devoted to the study of persuasion over the last two thousand years, there is still little known about the exact processes involved. There are theories on the subject, but no hard laws, and the accumulated knowledge allows only for noting the *tendencies* of audiences who receive persuasive messages (Woodward and Denton 1992). Still, this does allow for estimating a communication's *probable* effect on an audience. Woodward and Denton do note one possible law of persuasion, however: the "law of minimal effects" which emphasizes that even apparently effective messages will usually produce only minimal effects on the intended audience (p. 15). Nevertheless, in the case of environmental degradation, even minimal effects are more desirable than no effects.

As noted by Cantrill (1993), other significant obstacles specific to the study of environmental communication become evident when examining past research. First, because it is a relatively new field with much recent activity, there is little, if any, standardization with numerous definitions for key terms (e.g., environmental communication). Second, it is often difficult to distinguish between speculation and historical or empirical research because there have been many reports with only vague references to sources and methodologies. Third, most scholarly research has been limited to particular times, places, and events, creating problems when applying the results to other studies. And last, the lack of cross-disciplinary indexes keyed to social aspects of the environment make research reviews difficult. This lack of inter-disciplinary ties is also cited by Hines, Hungerford, and Tomera (1987) as a major impediment to gaining knowledge about the factors affecting the development of environmentally responsible behavior.

Also noteworthy as related to environmental communication is the hotly contested advocacy versus objective journalism debate (Detjen 1995; Focht 1995; LaMay and Dennis 1991; Ohnuma 1995). Given strict tenets of objective and balanced reporting, active and conscious efforts to persuade receivers stray from what many journalists see as their ethical duty: to present the audience with strictly objective information and never promote a personal agenda or viewpoint. However, environmental communication is not necessarily environmental journalism. In fact, according to Chary's (1991) definition, environmental communication is persuasive communication intended to move the audience toward environmental protection.

However, as some environmental communication inevitably finds its way into the mix of journalism, I can not condemn it. Instead, I agree with the environmental journalists who believe that balanced environmental reporting confuses the audience with more questions than answers, and does not encourage anyone to do anything (Ryan 1991). Ryan illustrates this belief in the following statement:

> The 'balanced' report, in some cases, may no longer be the most effective, or even the most informative. Indeed, it can be debilitating. Can we afford to wait for our audience to come to its own conclusions? (Ryan 1991, 89)

Instead of waiting for audiences to arrive at their own conclusions, Ryan believes in offering solutions and a path for change as steps toward countering apathy and promoting action. This specific research has been undertaken with such an effort in mind. It is my belief that identification may be one solution which can help guide audiences along a path toward environmental preservation.

Research Procedure

If there is little known about a particular social phenomenon, such as the effectiveness of identification in environmental communication, the nature of the required data best determines the research method employed (Stewart and Shamdasani 1990). As noted by Krippendorf in Stewart and Shamdasani, there are two types of data: *emic* and *etic*. Emic data is that which is generated in a natural form and is only minimally imposed upon by the researcher or research setting. In comparison, etic data represents the imposition of the researcher's view. Neither emic nor etic data is better; they simply differ. Each has its place in social science research and each compliments and compensates for the limitations of the other (Stewart and Shamdasani 1990).

When there is little known, the phenomenon is often first studied with methods yielding emic data (Stewart and Shamdasani 1990). Once it is better understood, methods yielding etic data dominate. Then, as the knowledge grows, it often becomes obvious that some explanations are incomplete, leading to the need for more emic data, and the research cycles continue.

More often, research methods and data are categorized as qualitative or quantitative. Qualitative data, which in some ways may be compared with emic data, focuses on words to express reality and attempts to describe people in natural situations. In comparison, quantitative methods, which appear more similar to etic data, rely on numbers to represent opinions or concepts.

In deciding upon a method to study a little-understood societal phenomenon, like the effects of identification in environmental communication, it appears most prudent to choose a method yielding emic and/or qualitative data (Miles and Huberman 1994; Stewart and Shamdasani 1990). Under these circumstances, Morgan (1988) states that the researcher is faced with initially confirming or denying hypothesis validity through the methods of participant observation, individual interviews, or focus groups.

Focus groups appear quite attractive in comparison (especially for student researchers) as they are often more expedient and cost-efficient (Krueger 1994; Morgan 1988; Stewart and Shamdasani 1990). Additionally, Krueger notes that focus groups are used when "insights are needed in exploratory or preliminary studies" and when "there is a communication or understanding gap between groups or categories of people" (p. 44). As such, focus groups are particularly applicable to this baseline study as they can be efficiently employed to test how participants respond to environmental communication which includes the strategy of identification.

Specifically, focus groups are in-depth group interviews used for both exploration and confirmation by social scientists (Krueger 1994). In most cases, focus groups provide emic data because participants respond in their own words. Other methods, such as survey research, tend to produce more etic data because response choices are usually prescribed by the researcher (Stewart and Shamdasani 1990).

The focus group is a qualitative method which enables a researcher to "get in tune with the respondent and discover how that person sees reality" (Krueger 1994, 29). Mariampolski, in Krueger, notes that qualitative research may yield a more in-depth analysis than quantitative research "because the moderator can challenge and probe for the most truthful responses" (p. 30).

A main point to focus group research is that the data can stand on its own as research results (Morgan 1988). As with emic data, the insights gained can then be used to develop efficient quantitative studies enabling the researcher to make inferences about the larger population.

Still, focus groups are criticized for not yielding hard or generalizable data. This is due mainly to the fact that the relatively small number of participants are not statistically representative of a larger population (Morgan 1988). Yet limitations are not unique to focus groups; all research tools in the social sciences have limitations. The point is that focus groups provide an insightful starting place for researchers because of their ability to uncover not only *what* participants think, but also *why* they think as they do (Morgan 1988). The key to using this method successfully is to assure that its use is consistent with the research objectives and purpose (Krueger 1994; Morgan 1988; Stewart and Shamdasani 1990). Therefore, with the objectives of this study in mind, focus groups will be used to uncover participant responses to environmental communication containing the strategy of identification in comparison to environmental communication conveying only facts.

Problem Statement and Research Question

Given that the requisite of effective communication is the ability to make people think about the issues in a different way which results in a positive behavioral modification (Chary 1991), the problem driving this study is that much of today's environmental communication does not appear to be effective to the point of changing the related-destructive behaviors. Societal members are faced with numerous messages addressing the current environmental problems, yet degradation continues unabated on many fronts.

Focusing on identification as a strategy to enhance the effectiveness of environmental communication, the research question this study asks is, When employed in environmental communication, does the persuasive strategy of identification promote favorable responses in audiences?

Research Hypothesis

H1: The receivers of environmental communication will prefer messages employing the strategy of identification as being more personally relevant than messages conveying only the facts.

Summary

In today's society, effective communication is a key component of any societal action, including environmental protection. As such, specific channels of communication, such as the print and electronic media, could contribute to solving environmental problems if effective message strategies were employed. In consideration of such a task, this study examines the persuasive strategy of identification as it relates to enhancing the effectiveness of environmental communication.

Defined generally as communication which addresses environmental issues and actively promotes beneficial behavioral changes, environmental communication is key to changing the relationship between humans and the earth. However, in light of the definition of effective communication, much environmental communication can not be considered truly effective for if it were, degradation would be lessening as the communication spread instead of continuing unchecked in many cases.

Historically, environmental communication has relied upon a variety of motivational appeals as the main strategies for persuasion. However, many of these appeals are unreliable and linked to negative results, such as fear appeals. Nevertheless, there are motivational appeals which can be effectively employed to provide positive results.

As the subject of this study and a type of motivational appeal, the persuasive strategy of *identification* can be used in environmental communication to suggest or point out common links between the communication and the audience, which in effect, causes the audience to identify with the communication. This identification can then lead to environmentally beneficial attitude and behavior modifications. If this modification occurs, the communication can then be considered effective.

The underlying forces behind behavior changes resulting from identification are explained by cognitive response theories. The guiding premise is that humans possess a need for cognitive balance or consistency, explaining why an attitude or behavioral change is expected when a new identification is established.

With the established field of environmental communication still relatively new, I have been unable to locate any studies with the specific focus of identification as a strategy for improving its effectiveness. This points to the significance of this study as baseline research on the role of identification in environmental communication.

When researching such an unknown social phenomena, focus groups are suggested as in-depth group interviews applicable for both exploration and confirmation in social research. As a qualitative method allowing a researcher to discover how a person sees reality, focus group data can stand on its own as research results. The insights gained can then be used to develop quantitative studies enabling a researcher to make inferences about a larger population. The key to using this method effectively is to assure that its use is consistent with the research objectives and purpose. Therefore, considering the study's objectives, focus groups will be used to uncover participant responses to environmental communication employing the strategy of identification in comparison with responses to environmental communication conveying only facts.

Focusing on identification as a strategy to enchance the effectiveness of environmental communication, the research question addressed by this study is, When employed in environmental communication, does the persuasive strategy of identification promote favorable responses in audiences? In response, the hypothesis proposes that the receivers of environmental communication will prefer messages employing the strategy of identification as being more personally relevant than messages conveying only the facts.

CHAPTER TWO

METHOD AND PROCEDURE

The Methodological Approach

As previously addressed, in-depth group interviews, known as focus groups, will be relied upon as my research method considering their ability to uncover individuals' responses to identification within environmental communication. However, even more in line with the purposes of this study, Bettinghaus (1973) describes a method strikingly similar to focus groups—although not noted as such—involving a group of people convened to read an article and then be interviewed about their related opinions. While he notes this is an unnatural setting, it is still stressed as being much easier and far less expensive than a field experiment, as well as allowing for the detection of small changes in attitudes and beliefs which may not be measurable in a field experiment. Furthermore, it may also be a more natural setting than Bettinghaus notes due to the fact that opinions are not formed in a vacuum. The interaction of group members within the focus group itself more likely resembles the natural factors affecting the development of opinions and attitudes (Krueger 1994; Morgan 1988).

Considering my research purpose and the need to detect detailed, personal responses to specific styles of environmental communication, I found Bettinghaus's (1973) example of a focus group variation particularly well-suited for my research needs. Together with group discussions, the participants' responses to particular environmental communication models could be studied and analyzed.

The following progression, as directed by Stewart and Shamdasani (1990), are the steps I followed in conducting my focus group interviews:[1]

Problem Definition/Formulation of the Research Question
▼
Identification of Sampling Frame
▼
Identification of Moderator and Assistant
▼
Generation and Pre-Testing of Interview Guide and Stimulus Material
▼
Recruiting the Sample
▼
Conducting the Group
▼
Analysis and Interpretation of Data
▼
Writing the Report

Problem Definition/Formulation of the Research Question

In regard to this study, the problem has been stated that much of today's environmental communication does not appear to be effective to the point of changing the related destructive behaviors. As such, the research question is, When employed in environmental communication, does the persuasive strategy of identification promote favorable responses in audiences? Considered with the research hypothesis—that the receivers of environmental communication will prefer messages employing the strategy of identification—the underlying emphasis of the focus group studies will be

[1] Because focus groups use human subjects, permission from San Jose State University's 'Human Subject-Institutional Review Board' had to be obtained first before any steps could be taken. See Appendix A for a copy of the letter of permission.

how the participants respond to two specific communication models, one with statements intended to create identification and one without.

Identification of Sampling Frame

Because it is inappropriate to generalize far beyond the members of focus groups, the sampling frame need be only a good approximation of the population of interest (Stewart and Shamdasani 1990). For the purposes of this baseline study, the communication in question is understood as targeting the general public; therefore, the population of interest encompasses everyone. However, considering the groups' focus on identification in written communication, a necessity for participation is literacy in English. This criterion is imperative for completing the required consent form and for comprehending the stimulus material. Accordingly, the sampling frame consists of English literate adult members of the general public.

Adults were selected because they not only influence children, but are most often in the position of making the major decisions which directly affect the environment, such as land development. In addition, working with adults precludes the legal maneuvers necessary when working with children.

Identification of Moderator and Assistant

As the leader of the focus group, the moderator is key in the success or failure of the focus group process (Stewart and Shamdasani 1990). She or he must be compatible with the group to help ensure greater interaction and open communication. Additionally, the moderator must be familiar with interviewing techniques, as well as the intended research. Because of my in-depth knowledge of this study, my past experience in interviewing, and my limited funds, I decided upon myself as the moderator. And because I would also be recruiting the participants, I believed that those individuals who felt comfortable with me would be more likely to participate, thereby helping to ensure our compatibility during the actual focus group sessions.

The assistant moderator is also crucial to the interview's success (Stewart and Shamdasani 1990). Carrying out most duties aside from moderating, the assistant allows the moderator to focus her or his entire attention upon the group process. With such a critical job at stake, I prevailed upon a trusted friend, Kuljeet Rai, M.D., to serve as my assistant. With his extensive training in interviewing and observation, I felt he possessed the qualities necessary for this position.

Generation and Pre-Testing of Interview Guide and Stimulus Material

The interview guide, or research instrument (see Appendix B), sets the agenda for the group discussion and is developed directly from the research question (Stewart and Shamdasani 1990). It is important to realize focus groups often take on a life of their own and the agenda becomes controlled by the natural flow of discussion. Thus the guide is just that—a guide that can be modified when necessary.

When designing the guide, a main consideration is the amount of time required to discuss a particular topic. It is almost impossible to conduct a focus group for more than two hours without exhausting everyone; the length of the guide should reflect this time constraint. Most interview guides consist of about twelve questions (Krueger 1994; Stewart and Shamdasani 1990), though the moderator is free to probe responses and add new questions as needed. Because the group interview is so dynamic, this flexibility is critical to success (Stewart and Shamdasani 1990).

The central issue in determining the amount of structure necessary for the guide is in preserving the aforementioned emic, or qualitative mode of data collection (Stewart and Shamdasani 1990). Focus groups are convened to determine how participants view the world, not how they respond to the researcher's view. This calls for the questions to be phrased relatively unstructured, or open, so as not to draw specific attention to any particular aspect or dimension of the topic. The respondents are then free to focus their answers on areas which they feel are important.

When more structure is necessary, it can be incorporated by including aspects of a topic within a question. In this manner, the participants may be asked questions intended to elicit a particular response or refer to a particular dimension of the topic. However, the moderator can not lead the participants by providing or suggesting an answer, either verbally or physically.

Following the general guidelines provided by Stewart and Shamdasani (1990) and Stewart and Cash (1991), the interview guide was developed for the purpose of answering my research question. Additionally, I developed a sampling of two short environmental communication models—one with and one without statements intended to create identification—for use as my focus group "stimulus material" (Morgan 1988, 12). Both models were centered around the subject of species extinction, a topic chosen for its current relevancy within a society appearing relatively unconcerned about the repercussions of diminishing biodiversity. The first model, which I titled *Species Extinction Facts #1 (Facts #1)*, was originally written and circulated by

The Nature Conservancy (see Appendix C). I selected it specifically because it lacked any obvious statements which would cause readers to identify with the topic. For example, threatened species were addressed in very general terms, such as "mammal species," "bird species in the Amazon Basin," and "plant species in Central and South America" (The Nature Conservancy n.d.). It was my feeling that these terms would not have strong, personal relevancy to San Jose residents, unless they had visited or lived in Central or South America.

I wrote the second model, *Species Extinction Facts #2 (Facts #2),* mimicking the format of *Facts #1* (see Appendix D). However, throughout the body of *Facts #2*, I inserted general statements intended to lead the reader to identify with the topic. Specifically, I highlighted endangered species local to the south Bay Area and addressed the effects of tropical deforestation on local songbirds. I also discussed the results of species extinction as it relates to important, yet common, crop plants, such as corn and rice, as well as medications and non-prescription drugs. My belief was that most readers would identify with these dietary staples and medications. Additionally, I related species extinction to a subject many people identify with: children. This was accomplished by focusing on the children's future of limited diversity and natural beauty. Through such statements generally related to local residents, I believed the reader would be led to personally identify with the topic of species extinction.

Despite the best laid plans and precautions, it is very difficult to predict the way participants will interpret and respond to questions and stimulus material. This makes pretesting the guide and stimuli important steps in determining if the wording is appropriate, if they elicit discussion, and if they are easily understood (Stewart and Shamdasani 1990).

For the purposes of this study, pretesting was conducted in two steps. First, as recommended by Krueger (1994), the questions were carefully considered by the assistant moderator who was familiar with the study, and an outside collaborator, unfamiliar with the study. Following their advice, the sequence and wording of a few questions was altered to allow for an increase in clarity.

The second, and most telling pretest, was carried out in concert with conducting the first focus group. The results of this step, which is more accurately described as a "pilot test" (Krueger 1994, 69), are discussed at greater length below in the section *Conducting the Group.*

Recruiting the Sample

Because many focus groups—including the ones in this study—require only a generally defined group of people, recruitment is relatively easy. As noted by Morgan (1988), "the issue is sample bias, not generalizability" (p. 44).

With a sampling frame consisting of adult members of the general public, I recruited from the general community population, making it possible for me to literally "take people off the street" (Morgan 1988, 45). But, as Stewart and Shamdasani (1990) note, to increase the likelihood of participation, recruitment should take place in close proximity to the planned location of the focus groups. As I had scheduled the groups in the Student Union at San Jose State University, I recruited from a variety of public areas around downtown San Jose. Public property was targeted to circumvent the necessity of obtaining permission from private property owners and because of my belief that varying the location would allow for a diverse selection of participants. In fact, any adult who was literate in English and had no prior knowledge of the study could have been a participant. However, I targeted adults of varying ages who appeared to have different social and cultural backgrounds. It was my belief that this mix would not only more closely represent the general public, but would also provide richer data.

Deciding how many

The first step in deciding how many participants need to be recruited is deciding how many focus groups to conduct. There are no general rules defining the optimal number of groups. Morgan (1988) advises that the research goals should determine the number of groups and in general, "the goal is to do only as many groups as are required to provide an adequate answer to the research question" (p. 43).

Stewart and Shamdasani (1990) note that most focus group research involves more than one group, but seldom more than three or four. They advise that when the research is very complex or involves numerous types of people, more focus groups are necessary. But, when the research question is relatively simple and the sample frame is relatively homogeneous, a single group may be sufficient. Conversely, Morgan warns that "one group is never enough: you may be observing little more than the dynamics of that unique set of participants" (1988, 42), and Krueger (1994) advises that focus group research should almost always involve at least three groups. Krueger and Morgan both note that a good indication of when enough groups have been conducted is when no new answers are offered for the same questions. While my exploratory study is not complex, my sample frame is not homogeneous. As such, I chose to err on the side of caution with three groups.

Traditionally, the recommended size of focus groups ranges from six to twelve participants (Krueger 1994). Fewer makes for a dull discussion and more are difficult to manage. Additionally, it is wise to recruit extra as most often a few members will cancel or not show the day of the interview. A good rule of thumb is to recruit at least two extra participants per group (Stewart and Shamdasani 1990).

Following Krueger's "ideal size" recommendation (1994, 78), I chose to have six to nine members per group. Therefore, for three groups I needed to recruit at least twenty four participants.

Location and time

The location and timing of focus groups are important considerations as they can directly influence the success of participant recruitment (Stewart and Shamdasani 1990). The decision to recruit in public areas of downtown San Jose was driven by the expectation that the people found there would likely be familiar with the area or have convenient access to it. Therefore, holding the focus groups near downtown would also be convenient for them.

Additionally, many prospective participants are understandably reluctant to travel to undesirable parts of town and are more likely to be agreeable toward interviews held in safe, well-traveled areas (Stewart and Shamdasani 1990). I attempted to overcome any possible fears associated with the location by scheduling the groups during the day and providing complete directions for Light-Rail and parking availability close to the Student Union.

The likelihood of participation is further increased by offering more than one group with a convenient time and date (Stewart and Shamdasani 1990). Accordingly, all three were scheduled on two Saturdays: Focus Group One was on April 22, 1995, 10:30 A.M. to 12:30 P.M.; Focus Group Two was on May 6, 1995, 10:30 A.M. to 12:30 P.M.; and Focus Group Three was also on May 6, 2 P.M. to 4 P.M.

Aside from recruitment, research suggests that the actual setting and seating arrangement of the focus groups have an effect on group participation and interaction (Krueger 1994; Stewart and Shamdasani 1990). Stewart and Shamdasani suggest that groups be held in neutral, nondescript settings to lessen distractions and help focus attention on the topic of discussion. In addition, they suggest the seating be arranged in a circle, or at least in a manner where all members can easily see one another without anyone in a position of dominance. This helps facilitate an open discussion and reduce the tendency for particular members to dominate.

The Pacheco Room in the Student Union was chosen as fitting all of these requirements. In a relatively safe, accessible, and attractive location, the room is nondescript and contains an oval table large enough for my purposes, but small enough to encourage interaction among group members.

Incentives

Because focus groups are a time-consuming activity, it is customary to offer group members an incentive to encourage participation (Krueger 1994;

Stewart and Shamdasani 1990). Most often, participants are given money and/or some other incentive with universal appeal.

Serving refreshments is an advisable incentive as it tends to relax participants and encourage participation by eliminating any concern about missing a meal (Stewart and Shamdasani 1990). In addition, participation itself can be an incentive because focus groups are generally an enjoyable experience (Stewart and Shamdasani 1990). Following the directive of San Jose State University's Human Subjects-Institutional Review Board (HS-IRB), the only incentives for participation were refreshments, the reimbursement of parking or Light-Rail costs, and an enjoyable experience.

Making contact

My initial contact with prospective focus group members occurred during the recruitment phase. To help ensure my personal safety and a broad selection of candidates, I recruited only during daylight hours, morning to early evening. I selectively addressed an approximately equal number of women and men who appeared to meet my criteria of varying age, social, and cultural backgrounds. I then asked a few questions to determine if the individual was open to the idea and if she or he met the age (at least eighteen years old) and English literacy criteria for participation in the focus group.

If the contact was appropriate for inclusion, she or he was then informed of the general research topic—the effectiveness of communication strategies— including the fact that the interview would involve a group discussion. To help prevent biasing possible participants, care was taken not to reveal the study's main focus on environmental communication. Instead, the importance of each individual's participation was emphasized, along with the offer of refreshments and other incentives. The location and times of the focus groups were noted and everyone was offered a choice of which group to attend. The confidential nature of the groups was also stressed and all were assured that their names would never be connected to any research results.

The individuals who agreed to participate were then asked to fill out a form with their name, address, and telephone number, allowing me to send a confirmation letter and map shortly thereafter. Stewart and Shamdasani (1990) note a personal letter is preferable to a telephone call as it is more formal and implies an obligation which serves to increase the commitment, as well as providing a means for delivering directions to the site. However, all participants were also telephoned two days prior to their scheduled focus group to remind them of their agreement and to field any questions.

In all, ten individuals agreed to participate in the first group, ten in the second group, and twelve in the third group. These large numbers allowed for the expected participant drop-off rate.

Conducting the Group

On the actual days of the focus groups, participant drop-off proved to be slightly more than expected despite all the steps taken to prevent it. This may be due to the fact that altruism—not money—was the driving force. Focus Group One ended up with six participants; three women and three men. Focus Group Two had seven participants; five women and two men. And Focus Group Three had six participants; one woman and five men. In total, there were nineteen participants; nine women and ten men.

Although personal histories of the participants were irrelevant to this study, the approximate ages of group members ranged from early twenties to post-retirement. Moreover, all the indicators were that the participants represented a broad variety of social and cultural backgrounds. As such, all the criteria I had set for my focus groups were met, including the ideal size.

As the moderator, I led all three focus groups through the questions on the interview guide and attempted to facilitate responses from all members. To ensure the possibility of further analysis, the groups were audiotaped by two recorders in the event one malfunctioned.

To help protect the integrity of the data and guard against interviewer bias, I strove to follow my neutral interview guide as closely as possible and probe only with non-leading questions. Moreover, the assistant moderator was directed to guard against and notify me of leading questions, enabling me to strike or rephrase the offending question. Silent actions such as head nodding were also monitored in an attempt to stay neutral and non-leading.

In consideration of the stimulus material—*Species Extinction Facts #1* and *Species Extinction Facts #2*—the possibility of participants being influenced by the order in which they read the material was acknowledged and an attempt was made to balance out such effects. Half of the participants in each group read *Facts #1* first, and the other half read *Facts #2* first.

As previously stated, Focus Group One was my true "pilot test" (see above, *Generation and Pre-Testing of Interview Guide*). Accordingly, the responses from this group highlighted the fact that some questions were redundant or unclear and particular phrases within the stimulus material were unnecessary or elicited undesirable responses. As such, both the interview guide and stimulus material were re-worded for use on groups Two and Three. (See Appendix E for the original questions and Appendixes F and G for the original stimulus material.) The re-wording was minor, however, and the focal points or subjects remained the same, allowing the data collected from group one to still be used in the research.

It must also be noted that I made an error in moderating judgment during Focus Group One, which may have affected the data. Prior to the commencement of the actual interview, a curious participant asked for the definition of 'communication strategies.' I explained them to be different approaches for reaching audiences, using the example of the picture of "the starving child" as "a guilt communication strategy" or "an emotional appeal using guilt." In retrospect, I should have declined to answer and while my assistant moderator did attempt to stop me, I missed his cue. When comparing the data from Group One, the repeated use of the words "guilt" and "emotional appeals" stand out and very often have a negative connotation. Because these words do not show up in the same manner or consistency in Groups Two or Three, it may be assumed that I planted them as seeds to grow into Group One's answers. However, there were enough participants who appeared to be relatively uninfluenced to still warrant the inclusion of Group One's data in this study.

Concluding the interview

Immediately following the interviewing portion of all focus groups, a group debriefing was carried out as directed by the HS-IRB (see *Debriefing Statement* in Appendix B). At this time, all participants were fully briefed as to the study's purpose and were advised that anyone who wished to withdraw from the research at this point was still free to do so without any threat of negative repercussions. However, no one chose to withdraw.[1]

Summary

The following steps outline the progression of focus group interviews as conducted for this study:

1. Problem Definition/Formulation of the Research Question
2. Identification of Sampling Frame
3. Identification of Moderator and Assistant
4. Generation and Pre-Testing of Interview Guide and Stimulus Material
5. Recruiting the Sample
6. Conducting the Group
7. Analysis and Interpretation of Data
8. Writing the Report

In relation to step four, a sampling of two short environmental communication models was developed—one with and one without statements intended to establish identification. Both models were similar in style and both addressed the subject of species extinction. The first was chosen specifically because it lacked any obvious statements which might cause the participants to identify with the topic, while the second model was written to include general statements intended to lead the reader to identify with the topic. These models were then used as stimulus material for all three focus groups.

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[1] The next step in conducting a focus group—*Analysis and Interpretation of Data*—is covered in the following chapter. The final step—*Writing the Report*—is the concluding chapter for this thesis, titled *Discussion and Conclusions.*

CHAPTER THREE

DATA ANALYSIS

The analysis of focus group data presents a research conundrum. According to Krueger (1994), there is no one way to correctly approach it and "no part of the focus group interview is as ill-structured as analysis" (p. 126). However, this characteristic does not preclude the absence of rigor, for as Miles and Huberman stress, "the strengths of qualitative data rest very centrally on the competence with which their analysis is carried out" (1994, 10). This presents the conscientious researcher with an intriguing challenge of how best to analyze the data of her or his particular study.

In general, and similar to other research methods, the analysis of focus group data is driven by the research question and objective (Stewart and Shamdasani 1990). Yin, in Krueger (1994), explains focus group data analysis as "examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study" (p. 140). Accordingly, the first step is to reflect on the intent of the study and herein lies direction for the degree of rigor necessary (Krueger 1994).

For the purposes of this exploratory baseline study seeking to examine the effectiveness of identification within environmental communication, the questions and answers were relatively straightforward. There was no expectation or appearance of any hidden issues, allowing for statements to be accepted and analyzed at face value.

As suggested by Krueger (1994) and Miles and Huberman (1994), the second step in determining an analysis method is to consider a sequence of relevant sub-questions which can then be used to establish categories. With my research purpose in mind—determining if the persuasive strategy of identification promotes desirable responses in audiences—the sub-questions I developed for further data analysis were:

sQ1. How do the participants respond to the stimulus material containing identification?

sQ2. How do the participants respond to the stimulus material not containing identification?

sQ3. What issues or topics do the participants appear to relate to within environmental communication in general?

sQ4. What are the perceived problems with environmental communication in general?

sQ5. What are the suggested strategies for improving the effectiveness of environmental communication in general?

The first two questions, sQ1 and sQ2, were designed to locate the most direct and obvious answers to the central research question, When employed in environmental communication, does the persuasive strategy of identification promote favorable responses in audiences? By comparing the answers to sQ1 with those from sQ2, I felt it would become evident which stimulus material appeared to produce more favorable responses from the group participants, and thus provide an answer to the central question. In addition, these answers could provide support for my hypothesis that audiences of environmental communication prefer messages employing the strategy of identification as being more personally relevant than messages containing only the facts.

SQ3 was designed as a general question for locating statements which appeared to illustrate the participants' areas of personal affinities and interests in relation to environmental communication. My reasoning behind this question was that if a participant showed an affinity for or an interest in a specific subject or issue, she or he would identify with messages which relate to that subject or issue. Additionally, this question was intended to be used in an examination of all of the focus group data, including, but not limited to, the statements made in relation to the stimulus material. Although not designed to directly provide an answer to the central research question, the answers to sQ3 could point to a preference for environmental communication which the participants find personally relevant, thus providing supplementary information for answering the central question. Furthermore, the answers to sQ3 could provide insight into which subjects and issues may promote effective identification when addressed in the context of environmental communication.

In consideration of my research problem, sQ4 was designed to test the strength of my premise that much of today's environmental communication does not appear to be effective. In addition, I intended it for locating specific weaknesses the participants referred to regarding current environmental communication efforts. In this manner, I hoped to gain more understanding of how effective the participants feel environmental communication actually is, as well as what they feel the problems with environmental communication are. For example, if someone stated that she or he felt environmental messages were redundant so they habitually threw them away, I would know that redundancy was perceived as a problem leading to ineffective communication as the messages were not read. More to the point, if a participant said that many environmental messages addressed problems affecting distant locations which were unrelated to her or him, I would know that a lack of identification was a problem which likely led to ineffective messages.

The final question, sQ5, was not only designed as a general question to illustrate the participants own suggestions for improving environmental communication, but it was also intended to see if any participants keyed in on the strategy of identification after reading the stimulus, *Facts* #2. It was my belief that some might, and as such, this data could be used in direct support of the hypothesis that the receivers of environmental communication prefer messages employing the strategy of identification.

Considering the purpose of my study and moving toward answering its central question, as well as these five sub-questions, I chose to begin analysis with the methods known as "tape-based analysis" (Krueger 1994, 143) and the "cut-and-paste technique" (Stewart and Shamdasani 1990, 104).

Taped-Based Analysis

Tape-based analysis begins with carefully listening to the recordings of the groups and then preparing an abridged transcript. Somewhat more manageable in size than a verbatim record, the abridged transcript only contains comments related to the research topic and question sequence, plus any summary statements made at the conclusion of the group (Krueger 1994).[1] This abbreviated transcript is also noted as my first step toward "data

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[1] Tapes and transcripts are in the possession of the author and are available for review.

reduction," defined as "the process of selecting, focusing, simplifying, abstracting, and transforming the data" (Miles and Huberman 1994, 10).

To allow for individual and group identification and easy location of specific data, all of the questions and responses in the transcript were coded to denote the source and location. Individuals were defined by the first letter(s) in their name and the moderator and assistant moderator were labeled as "Mod" and "AMod." Following the source code was the number 1, 2, or 3, denoting the specific focus group. Location within the text was noted at the end of each statement by the response order and page number. Thus, the imaginary source code K3 could denote an individual named Kathy in the third focus group. The corresponding location code 13,p.7 would mean it was the thirteenth statement on page seven within the text of focus group three. Statements carrying over onto the next page were coded as to their initial location. In this manner, it was possible to separate and combine the data from all three groups and still know the original source, its location within the text, and the order of particular responses.

Cut-and-Paste Technique

In preparation for the cut-and-paste technique, the fifty three pages of combined transcripts were repeatedly read to identify statements relating to the five previous sub-questions, as well as to discern any other repeating patterns and themes (Miles and Huberman 1994; Stewart and Shamdasani 1990).

I first noted the major themes relating to sQ1 and sQ2 by highlighting the related text with yellow and orange markers. The transcripts were then highlighted with pink, green, and blue to illustrate statements relating to sQ3, sQ4, and sQ5. Next, the transcripts were repeatedly reread, with abbreviated codes corresponding to any distinguishable recurring patterns being noted in the left margin of the text. For example, text illustrating the recurring pattern of participants relating personal experiences relative to the group discussion was marked with "PerExp" in the left margin. In addition, many statements corresponded to more than one pattern and so were marked with more than one code.

Once all the obvious patterns and themes were noted and the coding completed, the process of data reduction continued as the transcripts were cut apart and sorted into categories consisting of these themes and patterns. This closely scrutinizing step uncovered approximately twenty additional patterns and sub-patterns previously unnoticed. In the event that a particular statement fit into more than one pattern, I cut apart additional copies of the transcripts, thus allowing the statement to be simultaneously placed in more than one category. In addition, to help prevent the inclusion of data which may have been a single phenomenon or due to one person's thoughts or a single group's interaction, patterns and themes were constructed using Miles' and Huberman's "decision rule of two confirmations" (p. 131), as well as one cross-group confirmation. In this manner, all the data comprising the categories included related statements from at least three individuals ("two confirmations") who were in at least two groups (cross-group confirmation). This helped to ensure my categories were not comprised of rare data occurring in only one group. While the ensuing set of categories was very diverse and large,[1] they did provide answers to all five of my sub-questions and many were directly applicable to my main research question and objective. Moreover, the numerous categories provided me with additional interesting data to follow up on as necessary.

Data Display

Moving beyond data reduction, the next step in qualitative data analysis is "data display" (Miles and Huberman 1994, 11). As Miles and Huberman note, when working with qualitative data, a researcher moves toward condensing "more and more data into a more and more coherent understanding" (p. 91). Toward this end, displays serve to provide "an organized, compressed assembly of information that permits conclusion drawing and action" (p. 11).

In the past, the typical mode of display has been the unreduced or extensive text remaining after the coding and cut-and-paste processes, from which the researcher writes even more extended text as the case study report (Miles and Huberman 1994). However, Miles and Huberman note that such text alone is "weak and cumbersome" and does not allow for easy comparison (p. 91). They stress that valid analysis requires, and is driven by displays which are systematically arranged to answer the research question(s) at hand and are focused enough to allow for the viewing of a full data set in the same location. Most importantly, Miles and Huberman note "the chances of drawing and verifying valid conclusions are much greater than for extended text because the display is arranged coherently to permit careful comparisons"

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[1] See Appendix H for a listing of the patterns and themes noted in the focus group transcripts.

(p. 92). But, because there are "few agreed-on data setups among qualitative researchers," the lay-outs for displays are decided by the rule that "form follows function" (p. 93).

With the above rule in mind, the main considerations in creating the lay-outs for my data displays were 1) the central research question asking if the persuasive strategy of identification promotes favorable responses in audiences of environmental communication and 2) the research hypothesis stating that the receivers of environmental communication would prefer messages employing identification as being more personally relevant than messages conveying only the facts. Additionally, because this was a relatively straightforward study without an attempt to account for psychological underpinnings, my choice of data display and presentation reflects the decision to accept participants' statements at face value.

In consideration of my central question and hypothesis, I began analysis by arranging the answers to sQ1 and sQ2 (participant responses to the stimulus material) in tables corresponding to the three focus groups (see Tables 1-3). To allow for as "thick" and "rich" data as possible (Miles and Huberman 1994, 242), the cell entries within each table are direct or paraphrased quotes from the participants listed in the column to the far left. Separate statements are set apart by semicolons and lengthy quotes are pared down to the most pertinent information with the use of ellipsis points. Being central to the research question and hypothesis, these are the statements which will be used to provide the main basis for argument in my final chapter, *Discussion and Conclusions.*

TABLE 1

PARTICIPANT RESPONSE TO STIMULUS MATERIAL, FOCUS GROUP ONE

Group Participant	Statements re. Stimulus #1 (without identification)	Statements re. Stimulus #2 (with identification)	Stated Preferences
A1	#1 contrasts #2.	#2 contrasts #1; attempting to "manipulate" people by their emotions can "insult their intelligence by not presenting the facts."	
J1	both were "very informative"; #1's "numbers and figures reinforced" #2.	both were "very informative...#2 drew my attention to what was being said"; caught interest by "working on my emotions"; is not offended by emotional appeals... "If I'm not emotionally involved...I will not get involved at all"; people "have to get emotionally involved first" before going deeper; helps people "associate" with the issue.	"I prefer them both."
B1	"I felt bombarded by statistics in effective way...some people might say they were dry statistics and not as emotionally effective"; the facts and figures "quantitize" what's being destroyed and tell "how many gears" in environmental process "are being pulled out."	presented in "human terms" is an "approach that doesn't work for me"...you don't "need to justify stopping destruction...that's kind of pandering to the masses"; "...approach gets tried so often—playing on people's fears and feelings—that I take a rather cynical view of it"; "I felt it was an attempt to maniuplate me by appealing to my feelings."	prefers #1 because it "was more effective to me."
T1	does not believe that "because it's statistics, it's factual"; likes statistics tied in with a "play to your emotion."	likes how the "play to emotions" is tied in with statistics; agrees with J1 about importance of emotional involvement..."I'm an emotional person, so that pulled me in."	prefers #2 because it "pulled me in" first.
E1	"It gets you very concerned seeing the statistics...makes me wake up to reality and then the next question is what can we do now?"	becoming emotionally involved is "like a spark plug that starts the motor running."	
Th1	"Numbers sometimes seem more convincing than playing on a person's fears"; can be "very difficult to argue with numbers"; would "rather look at facts and figures then read something else to reason it out and justify it"; facts and figures "catch" her first because of "the way we were brought up."	#2 is "focusing more on benefits to the so-called civilized society as opposed to the benefits to the world."	prefers #1 because "it's a statement of fact."

TABLE 2

PARTICIPANT RESPONSE TO STIMULUS MATERIAL, FOCUS GROUP TWO

Group Participant	Statements re. Stimulus #1 (without identification)	Statements re. Stimulus #2 (with identification)	Stated Preferences
D2	article "is a dog"...should have been presented in a different manner.	"little more accessible" than #1, but article should be speaking to corporations because they are "the greatest polluters"; agrees with J2 that it generates impassioned response; last paragraph triggers emotional response.	"wouldn't have read either one."
K2	(no relevant comments)	(no relevant comments)	
R2	"kind of mind-numbing—all the numbers—in that sense it lacked communicative power"; all the numbers hide the impact; the facts "are important—I can see them as maybe footnotes to items in #2."	"more directed at an effective type response" than #1..."more directed toward persuasion"; "it pulls you toward looking at the future and putting yourself in the place to see how bad things really are or can get"; "more of an editorial piece, rather than just facts."	prefers #2 because it "would be the only one to respond to."
S2	targeting different audience than #2; "extremely general...just a lot of facts and figures put under broad umbrellas."	targeting different audience than #1; "grabs you more because it does use specific examples when you're reading it and it references everything to things you relate to."	prefers #2 because it "grabs you more."
L2	good, but "going for a different market" than #2; "fairly scientific—just the facts"; "it loses most people because it is so dry."	good, but "going for a different market" than #1; "had all the facts but it was relating them to how it would actually affect you and your family"; "has all the facts so you can use your intellect to argue your point of view, but then it also has all the emotional triggers"; "when I was reading this...I thought of relatives...my grand-daughter...so it really draws you in."	prefers #2 because "people want a hook, they want some action—emotion—so #2 is better."
J2	agrees w/ R2 re. numbers hiding impact; article "is interesting and depressing if you have some sense of consequences."	"brings you into it faster" with opening ref. to human population..."I want to know how this affects me"; "oriented to consequences of the facts...as such, it's much more compelling"; "generates more of an impassioned response ...hits you more on an emotional level...makes people start exploring these issues...and more inspired to take action."	prefers #2 because it "grabs you, holds your attention, and inspires you to move on even if you have limited time."
E2	seems designed for professionals in environmental movement, or more so than laymen, "which I consider myself in this area."	"designed more for the general explanation so that the ordinary person on the street may be able to understand the situation better."	prefers #2 because it is "easier to understand."

TABLE 3

PARTICIPANT RESPONSE TO STIMULUS MATERIAL, FOCUS GROUP THREE

Group Participant	Statements re. Stimulus #1 (without identification)	Statements re. Stimulus #2 (with identification)	Stated Preferences
T3	agrees with F3 that #1 presents just the facts.	agrees with F3 that #2 gets into the impact of the facts; "#2 gives you a sense of more urgency and alarm" by "the way it's written"; "brings it into the context that it affects...my own personal quality of life...if it comes all the way back around to number one or whoever, then they'll start to think about it."	prefers #2 "a lot better because it draws on the human emotion."
F3	"presents the facts and they sound terrible": not clear what the facts mean; "quantifies to me where the problem is... it's very focused in a very solid, quantified way...so that's much more effective communication to me."	"gets into what the impact is...so #2 has a much greater impact on you"; brings "home" what the facts mean.	prefers #1 because "I just understand numbers and percentages better than words."
W3	"since it only talks mostly about animals and land, it's like, so what?"	"maybe more people will listen if they present it like this where they think they're in trouble as human beings...I think maybe if they see this, that will affect them. Maybe they'll want to do more about it than what they're doing now."	prefers #2 because "more people will listen" if presented in this manner.
J3	"it's real basic."	tells directly how what's happening is affecting everything surrounding it, humans and animals, "and it makes you take notice a lot more than if you're just reading a fact sheet"; "makes you think more about how it affects you directly—how it affects others directly."	prefers #2 because it "makes you take notice a lot more" than #1.
G3	(no relevant comments)	its manner of presentation affects the reader; "it tells it like it's gonna be," how environmental losses are going to "affect our lives"...it puts "the emphasis on the person, on the reader."	prefers #2 because "it affects the reader."
Jb3	causes a strong feeling that "nothing can be done...because it doesn't talk about the effects it has on us, it almost takes us out of the picture as though we didn't do it in the first place."	(no relevant comments)	

As the next step toward further analysis, I found it necessary to combine all of the participants into one table to allow for easier cross-data comparison. However, an attempt to include the statements of nineteen participants in one display was unwieldy, at best. As such, I chose the 'Stated Preferences' in Tables 1-3 as a logical dividing factor. This allowed for a rearrangement of all participants into five categories; those who preferred *Facts #1* (three participants), those who preferred *Facts #2* (ten participants) those who preferred both (one participant), those who preferred none (one participant), and those who were uncommitted to any preference (four participants). These five groups could then serve as the central variables for further data analysis.

Moving on to answer the third sub-question, What issues or topics do the participants appear to relate to within environmental communication in general?, the category of stated preferences, as developed above, was compared with the areas in which the participants had shown a personal affinity or interest. A close examination of the existing patterns and themes revealed six general subjects which the participants expressed interest in, in regard to related coverage within environmental communication. These subjects were categorized as: the Self, the Self's family, Children in general, the Self's local community, Animals, and the Environment as an inter-related whole (see Table 4).

The purpose of Table 4 is to illustrate particular subjects or areas which all participants showed interest in, and therefore are likely to identify with, no matter what their stated preference in relation to the stimulus material. This display also illustrates additional relevant data unrelated to the stimulus

TABLE 4

AFFINITIES AND INTERESTS IN ENV. COMMUNICATION

STATED PREF.	Self	Self's family	Children in general	Self's local community	Animals	The environment as an inter-related whole
#1 without ID (3/19)				neighborhood involvement "can accomplish a lot."	"I watch a lot of wildlife shows."	"I've always been interested in...how everything is inter-related."
#2 with ID (10/19)	"I want to know how this affects me"; "you think more about how it affects you directly"; important focus is "what's in it for me?"; facts referenced "to things you can relate to" create more interest; "a lot of people" would be concerned if shown how something "affects their own personal quality of life"; "more people will listen" if they "think they're in trouble as human beings"; "show in a roundabout way how it comes back to the person...how it affects them as an individual."	interested in facts related to how they "would actually affect your family"; parents are affected by their children's env. messages; messages related to relatives "really draw you in"; interested in messages re. "where my folks are."	"once you bring children into the correlation, you involve many more people than you would otherwise"; addressing the children's future makes you "put yourself in the place to see how bad things really are or can get."	"local issues are the key"; there is much interest in local issues; "local issues" need to be made "important"; local issues are "as important as distant issues"; emphasis on "the local connection" is needed to show "how your personal behavior is actually affecting [others]."	"throw an animal in it, then I'm listening"; "I feel more for animals" because "they're living"; "I just love animals;" "I am an animal lover."	"in the big scheme of things, there's a balance, and when we take things away, we start taking away from ourselves"; interested in "biodiversity" because "everything is tied together"; interested in messages "looking at the whole picture"; "we tend to look at things in an isolated manner instead of looking at the full picture."
Both (1/19)		env. protection starts "in our own house... with our own family."	we are all responsible for the future of "our kids and grand-kids."	changes need to "start in our own neighborhoods."		"our neighborhood, our env., our families...I tie all that together."
Neither (1/19)				finds the thought of "community working together to achieve a goal" appealing.		"what appeals to me...the biodiversity idea—that what we do here is affecting other places."
Uncom-mitted (4/19)	messages need to be conveyed "on an individual level."	parents are affected by their children's env. messages; changes need to start "in your own house."		"I'm not doing enough for the community"; new attitude is "think locally and act locally...to save your local env."	"I love animals —an animal to me, it's like a human being."	

material, and therefore not included in Tables 1-3. Additionally, the entries within the categories of interest can provide insight into which areas may promote effective identification when addressed in the context of environmental communication.

An examination of the answers to the final sub-questions—regarding perceived problems with environmental communication in general and suggested strategies for improving its effectiveness—revealed numerous variations of both problems and strategies. However, unlike many situations in life, there were fewer notable problems than there were strategies for enhancement.

Beginning with the answers to sQ4, I arranged the notable problems with environmental communication to the right of their 'Stated Preference' group of origin. This allowed for a comparison and contrast between the groups' preferences of stimulus material and their opinions on the problems with environmental communication in general (see Table 5). While some of these noted problems can be directly related to identification, they also provide arguments in confirmation of the underlying research problem regarding the ineffectiveness of environmental communication. These points will be elaborated upon further in the final chapter of this thesis, *Discussion and Conclusions.*

Continuing with sQ5, after a close inspection of the related answers, it became evident that they were representative of two distinct types of strategies. The first were strategies for use in environmental communication, such as providing directives for immediate action. But, while the second type were related to the first as being promotable through communication, they

TABLE 5

NOTABLE PROBLEMS IN ENV. COMMUNICATION

STATED PREF.	
#1 without I D (3/19)	Creates apathy: after reading most environmental messages, "I just don't feel that I can have a big impact." Emotionally manipulating: messages are "playing on people's fears and feelings"; the "bombardment" of emotional appeals is "a guilt tactic...I just ignore those now." Exaggeration: env. communicators have "a tendency to catastrophize"; messages are "over-dramatic." Low credibility: if predictions don't come true, messages are "harder to believe the next time"; media discloses only their "favorite messages"; "I always suspect political motivation" behind choice and delivery of messages.
#2 with I D (10/19)	Creates apathy: "most of the time you feel so helpless" after exposure to environmental messages; "I just feel like what can I do besides what I do on a regular basis?"; "it's like, so what?" Emotionally manipulating: some people get really "turned off by emotional appeals [so] they respond with cynicism." Exaggeration: "apocalyptic messages" are "shoved to the back of the brain." Low credibility: some issues are "worse than the media really let us know"; "scientific community lost credibility for me...they manipulate numbers" making the facts in environmental communication untrustworthy; environmental media is "overcome by commercialism...they're there to make money; they don't give a damn"; many environmental messages are "puffery pieces" for improving corporate image. Contradictory/hypocritical: sheer amount of environmental messages are "contradicting what they're trying to tell us" by creating huge amount of waste; "many conflicting studies" cited.
Both (1/19)	No relevant comments.
Neither (1/19)	Contradictory/hypocritical: finds the amount of environmental "junk mail" a "hypocrisy."
Uncom-mitted (4/19)	Creates apathy: after listening to or reading environmental messages, "I always get the feeling that nothing can be done...that it's really too late to do anything." Emotionally manipulating: audiences of environmental messages are "manipulated" through "guilt." Exaggeration: "apocalyptic"; environmental messages are "all made extremely drastic in order to impress you more, I think." Low credibility: media has "another motivation" behind environmental messages.

were meant as societal strategies for environmental protection, such as protection through government leadership, monetary fines, and the manner in which children are raised and educated.

In the interest of clarity, all of the environmental communication strategies were displayed together in a single table. As with Tables 4 and 5, the strategies have been aligned to the right of their 'Stated Preference' group of origin (see Table 6). To fit a convenient display area, all of the strategies have

TABLE 6

STRATEGIES FOR ENV. COMMUNICATION

STATED PREF.	
#1 without I D (3/19)	Connect w/ local community: publicizing a "community" or "neighborhood plan "can accomplish a lot through "the social, cultural inclusion." Inter-relate issues: messages re. "how everything is inter-related" Responsibility: "giving a responsibility can do wonders." Directives: address "what little contribution I can make"; provide realistic "suggestion or guidance...what we can effectively do"; "give people ideas"; "a plan." Emotional appeals: "disturbing facts" and strong alarming words grab attention. Visuals: visuals can be "moving." Economic: corporations not interested "unless you can convince them it's gonna improve their profitability."
#2 with I D (10/19)	Connect w/ self: important focus should be "what's in it for me?"; "more people will listen" if they are affected. Connect w/ family: env. communication relating issues to how they affect your family "really draws you in ." Connect w/ children: by including children, "you involve many more people than you would otherwise." Connect w/ local community: "local issues are the key...making the local issues important" in communication. Connect w/ animals: "Throw an animal in it, then I'm istening;" messages effective because "they're living." Inter-relate issues: show how "everything is tied together"; mesages "looking at the whole picture." Responsibility: should talk "about what your responsibilities are"; "impact on feeling of global responsibility." Directives: address "something people can do in their own life...and see an effect of"; something that is doable "right then and there"; simple, convenient directions. Emotional appeals: "everything works on emotion"; emotional appeals combine well with facts; "brings it into [personal] context"; shocking statements and "a sense of urgency and alarm" grab attention. Visuals: "I can read...but if I see a picture that's done the right way...that is a moving thing." Education: "the more we're educated about...the environment [through communication]...we can pass on to our children." Economic: adults are motivated by "the greed thing"; money is what "people are pretty much interested in."
Both (1/19)	Connect w/ family: relating to families is important because env. protection begins "with our own family." Connect w/ local community: emphasize local issues so env. protection can "start in our own neighborhoods." Inter-relate issues: interest in messages that tie together "our neighborhood, our environment, our families." Emotional appeals: messages need to "catch interest by working on emotions...you have to get involved emotionally first." Visuals: "I have to see something before I'm motivated." Education: "education is a main factor" for effective env. communication—"repetitious education."
Neither (1/19)	Connect w/ local community: messages re. "community working together to achieve a goal" are appealing. Inter-relate issues: interest in "biodiversity idea" and how "what we do here is affecting other places." Directives: directives can be personally compelling such as messages re. convenient alternatives to cars. Emotional appeals: can be "powerful" and cause "impassioned response." Visuals: visuals can be strong messages by "the way the picture was drawn." Economic: messages re. how to save money can be motivating.
Uncom-mitted (4/19)	Connect w/ self: messages conveyed "on an individual level" will "more likely get them to do something." Connect w/ family: messages focusing on families may be effective because "that's where the attitude starts." Connect w/ local community: emphasize slogan "think locally and act locally...to save your local env." Connect w/ animals: messges re. animals can be effective because "an animal to me-it's like a human being." Responsibility: people need to "realize [env. protection] starts with them." Directives: include steps for immediate action; provide directions other than giving $; tell "how I can contribute effectively"; list what "we can do through individual initiative"; something "totally within our personal control." Emotional appeals: emphasizing emotions as "a spark plug that starts the motor running." Visuals: belief that most environmental messages received "are probably visual." Education: books addressing "what happens" when environment is degraded can be effective. Economic: "the only way to send [someone] a message is when you hit them in the pocket."

been pared down to main concepts which are further explained by shortened quotes and paraphrases.

The first strategies included within each cell are pulled from the stated areas of interest noted in Table 4, with the underlying logic being that fashioning an environmental message to fit these areas of interest would be an identification strategy for enhancing its effectiveness. In most cases, the subjects of interest in Table 4 were notable as subjects which would attract an audience, such as illustrated by the comment, "Throw an animal in it, then I'm listening." This statement not only demonstrates a personal interest in animals, but directly points to the strategy of connecting the message to animals. However, in the case of the participant who stated a preference for "Both," if I was to include some of the interests noted in Table 4 as strategies for Table 6, I would have changed the meaning of his statements. Therefore, they were not listed as strategies for improving environmental communication.

While some of these communication strategies are closely tied to identification, such as providing a directive for "something people can do in their own life," an interesting point underlying all of the strategies, communication and societal alike, is that dependent upon how the strategies were implemented, all could be employed in a manner relative to identification. However, as the purpose of this study is to focus on identification in environmental communication, societal strategies have been placed in the Appendix (see Appendix I) as not being directly relevant to this study, yet interesting and useful, nonetheless.

Summary

There is no one right way to approach the analysis of focus group data. In general, the analysis of focus group data is driven by the research question and objective and is directed toward "examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study" (Krueger 1994, 140). Accordingly, the first step is to reflect on the study's intent to provide direction in the necessary rigor. For the purposes of this exploratory baseline study, the questions and answers were relatively straightforward and there was no expectation or appearance of hidden issues, allowing for statements to be accepted and analyzed at face value.

As the second step toward analysis, the following sub-questions were developed for use in establishing relevant analysis categories:

sQ1. How do the participants respond to the stimulus material containing identification?

sQ2. How do the participants respond to the stimulus material not containing identification?

sQ3. What issues or topics do the participants appear to relate to within environmental communication in general?

sQ4. What are the perceived problems with environmental communication in general?

sQ5. What are the suggested strategies for improving the effectiveness of environmental communication in general?

Considering both the research purpose and these relevant sub-questions, data analysis began with the method of tape-based analysis to prepare abridged transcripts and code the relevant data. Next, a cut-and-paste technique was employed to dissect and reorganize the coded transcripts in an effort to discover recurring patterns and themes.

This large set of dissected data was sorted and condensed to provide relevant material for the data displays. The designs of these displays were driven by their function: answering the central research question and relevant sub-questions, as well as addressing the research hypothesis. As such, six tables were constructed, all providing data sets for use as evidence in arguments addressing the central research question and hypothesis.

In laying out the answers to sQ1 and sQ2, the resulting data in Tables 1-3 provided five central variables for further comparison throughout the final tables. These variables were the participants who preferred *Facts #1* (without identification), the participants who preferred *Facts* #2 (with identification), the participant who preferred both, the participant who preferred neither, and the participants who were uncommitted to a preference.

Table 4 revealed six major areas of interest for the participants in answer to sQ3. They were: the Self, the Self's family, Children in general, the Self's local community, Animals, and the Environment as an inter-related whole.

Addressing sQ4, the notable problems within environmental communication were displayed in Table 5. While some were directly related to identification, they all confirmed the existence of perceived problems.

Lastly, the answers to sQ5 were divided into two types: strategies for use in environmental communication and strategies for general societal actions. While some of the strategies were closely tied to identification, an interesting point to all of them was that dependent upon how they were implemented, all could be employed in a manner relative to identification. However, as most relevant to this study, the communication strategies comprise Table 6, while the societal strategies are listed in Appendix I.

CHAPTER FOUR

DISCUSSION AND CONCLUSIONS

As with data analysis, "there are no fixed formats" or "shared canons" for drawing up and presenting the conclusions of qualitative research (Miles and Huberman 1994, 299). However, as with other steps throughout this study, the foundation is determined by the main research purpose (Krueger 1994; Miles and Huberman 1994; Stewart and Shamdasani 1990). Therefore, the five sub-questions and display tables presented in the preceding chapter are used to provide the basis for the following discussion and conclusions as they were developed directly from the central research question and hypothesis. In addition, due to the necessity of condensing quotes and paraphrases to fit the display tables, the relevant transcripts will be employed in the discussion to provide fuller and richer data wherever applicable.

Before moving ahead toward a summary discussion, I feel it prudent to preface this section with a quick restatement of the limitations of this study and research method. In an effort to prevent any possible confusion or misinterpretations, it is important to bear these limitations in mind when reviewing the findings.

By definition, focus groups are not designed to provide hard or generalizable data. The small number of participants are not intended to be, nor can they be, statistically representative of a larger population. However, focus group data does stand on its own as credible research results (Krueger

1994; Morgan 1988; Stewart and Shamdasani 1990). Any insights gained through focus group data can then be used in the development of quantitative studies leading to inferences about a larger population.

Additionally, despite the vast amount of research surrounding the subject of persuasion, there is little known about its governing processes. The accumulated body of knowledge allows only for noting the tendencies of audiences who receive persuasive messages (Woodward and Denton 1992).

Accordingly, the following summary discussion is not intended to be accepted as hard and fast conclusions for all environmental communication. Rather, it is intended to shed light on the possible effects of employing identification within environmental communication in terms of the patterns and themes noted throughout the participants' responses. Whether my conclusions are representative of a larger audience is for further quantitative studies to address.

Discussion of Results

As a relevant opening to my discussion of research results and the answers to sub-questions one through five, I begin with an explanation of a research decision which had a small effect on my data and has possibly already created some questions in the minds of readers. Specifically, I am referring to the group of participants who have no stated preferences noted in Tables 1-3 (pp. 59-61) and who are then defined as "Uncommitted" in Tables 4-6 (pp. 63, 65, and 66) and Appendix I.

When conducting my pilot test on Group One, I noticed that a few participants declined to state which article they preferred, *Species Extinction*

Facts #1 or *Species Extinction Facts #2*. I considered asking them directly, and in fact, did ask one person who responded with, "I prefer them both." After this reply, the possibility that there might be an unstated reason for not disclosing a particular preference became evident, and as such, I chose not to put anyone else on the spot by requiring they make a choice if they had not already openly done so. In my opinion, a forced answer may have yielded misleading information, so I opted to let their additional statements fill in the holes left open by their unstated preferences.

Analysis of sQ1

Moving ahead to discuss the findings as relevant to the central research question and hypothesis, the first question for analysis is sQ1, How do the participants respond to the stimulus material containing identification? The answers to this question merit close scrutiny and consideration as most directly applicable to my central research question asking if the strategy of identification promotes favorable responses in audiences when employed in environmental communication.

A review of Tables 1-3 (pp. 59-61) shows a slim majority of the participants (ten out of nineteen) stated a definite preference for *Species Extinction Facts #2*, which employed the strategy of identification. Some of their statements which appear to illustrate favorable responses in relation to identification include: "It pulls you toward . . . putting yourself in the place to see how bad things really are"; "it references everything to things you can relate to"; "it had all the facts, but it was relating them to how [species extinction] would actually affect you and your family"; "when I was reading this . . . I thought of my family, . . . So it really draws you in"; "[it] brings [species extinction] into the context that it affects . . . my own personal quality of life"; and "it makes you think more about how [species extinction] affects you directly—how it affects others directly." These quotes all illustrate that the manner in which the participants perceived the statements of identification led them to feel directly affected by species extinction. As such, it would appear that the participants are favorably responding in that they appear to be personally identifying in a positive manner to the topic of the communication.

Of the three participants who stated they preferred *Facts #1* (without identification) over *Facts #2*, two appeared to relate identification to "playing on people's fears and feelings." However, it is interesting to note that one of the two described *Facts #2* as being presented in "human terms," but that approach "doesn't work for me." In this example, "human terms" appears to mean *Facts #2* related its message directly to humans. If this is the case, humans would be likely to identify with the message.

Additionally, the third participant who stated a preference for *Facts #1* indirectly addressed the effectiveness of identification when commenting on *Facts #2*. He stated that "number two gets into what the impact is, . . . so number two has a much greater impact on you. . . . it brings it home, you know." In this example, bringing it "home" appears to refer to relating species extinction directly to the reader or causing the reader to identify with the subject, and as such, it "has a much greater impact on you." While this was a positive response to *Facts #2*, he still preferred *Facts #1* because "I just understand numbers and percentages better than words." This response may be indicative of a certain percentage of the human population who are more inclined to favor strict logic as more appealing to their thought processes.

The participant who expressed a preference for both stimuli also indirectly tied *Facts #2* to identification. He stated that while both were "very informative," *Facts #2* "drew my attention to what was being said . . . by working on emotions." In this manner, he believed *Facts #2* helped people "associate" with the issue of species extinction. As previously explained in Chapter One (p. 15), 'association' can be understood as a synonym for 'identification.'

In regard to the participant who expressed a preference for neither stimuli with the statement that she "wouldn't have read either one" if not required to do so, it is impossible to say whether identification led her to concede that *Facts #2* is "a little more accessible" than *Facts #1*. More telling was her denouncement, "I just continue to be amazed at why are they speaking to us? Everyone knows that the huge corporations are the greatest polluters in the world." Holding such an opinion, it may be that any environmental message employing identification which is targeted for the general public will be met in one of two ways: 1) with strong opposition, as she does not believe individuals are linked to the major causes of environmental degradation, or 2) with anger, as she increases her resentment of how "the huge corporations" are harming the "little guys" of the world.

Of the remaining four participants who were uncommitted to any preference of stimuli, only two expressed comments relevant to *Facts #2* and possibly the strategy of identification. The first participant noted that an attempt to "manipulate people with their emotions" is "insulting their intelligence by not presenting the facts." However, his opinion of not presenting the facts is opposed by the comments of other participants who noted *Facts* #2 was directed toward both the facts and how they relate to people. For example, statements such as; "The second one [*Facts* #2] is completely oriented to the consequences of the facts, . . . and as such, its much more compelling," and "number two had all the facts, but it was relating them to how it would actually affect you and your family" allowing you to "use your intellect to argue your point of view," illustrate a common theme as expressed among the group participants.

The second uncommitted participant with relevant comments addressed yet another area which appeared to be a common pattern in relation to *Facts* #2. Appearing to associate identification with emotions, she stated that "getting involved emotionally first" was "like a spark plug that starts the motor running." In light of the fact that identification leads to a feeling of personal involvement, identification was likely the "spark" she referred to, and therefore, it appears positively linked to emotions.

At least four other participants also expressed a positive relationship between *Facts* #2 and "emotional triggers." This tendency to connect identification to emotions may be due to the likelihood that if an individual personally identifies with a subject, they also are likely to have personal feelings or emotions invested in that subject. For example, *Facts* #2 pointed out that the destruction of tropical rainforests affects local birds who migrate south for the winter. It is likely that this statement led to some type of emotional response from the participant who said, "I really like birds and I've been trying to create a backyard that attracts birds." In this manner, the statement about birds in *Facts #2* was an "emotional trigger."

However, there were three participants who related *Facts #2* to emotions in a negative sense. As was previously noted above, two of the participants who preferred *Facts #1* felt that *Facts #2* was an attempt to play "on people's fears and feelings." One also stated, "I felt it was an attempt to manipulate me by appealing to my feelings." Statements such as these support the previously mentioned research warning that a reliance on emotional appeals, especially fear appeals, is unpredictable and can serve to negate a communication effort (see Chapter One, pp. 8-10).

The fact that all three participants who negatively connected *Facts #2* to emotions were in Focus Group One leads me to believe that the mistake I made in moderating Group One may have affected the participants' responses.[1] This belief is supported by a comparison of the data from Group One with the data in Groups Two and Three. In Group One, there is an emphasis on the negative use of emotional appeals to "manipulate" people, which is a word I used in my initial statement to Group One. In contrast, there is a complete absence of the word "manipulate" or any other statements negatively relating *Facts #2* with emotional appeals in Groups Two or Three.

A final intriguing pattern notable within the data regarding *Facts #2* is the use of the word 'affect.' Fashioning a crude content analysis by employing the *Find* command on my computer program to search through the transcripts relative to *Facts #2,* I located seventeen uses of this word, or

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[1] See *Methods* (p. 51) for a review of this moderating error which occurred during the introductory phase of Focus Group One.

variations of it such as 'affects.' A few examples of statements in which 'affect' appears include: "It was relating them to how it would actually affect you and your family"; "I think maybe if they see this, that will affect them"; and "it makes you think more about how it affects you directly—how it affects others directly." In contrast, 'affect' appears only once in relation to *Facts #1*.

What this pattern and statements serve to illustrate is that the use of identification strategies within *Facts #2* 'affected' the participants in a positive manner. By definition, identification connects the audience to the message; therefore, it affects the audience. Or explained in different manner, if something affects an individual, the individual likely feels some type of personal connection or identification with whatever affected her or him. Regardless, the repeated use of 'affect' in relation to *Facts #2* is not to be considered as conclusive evidence of a positive relationship between identification and more effective or 'affecting' communication. However, it is an intriguing relationship, nonetheless.

Analysis of sQ2

Turning the discussion to the second question for analysis—how do the participants respond to the stimulus material not containing identification?—the participants' responses to *Species Extinction Facts #1* will be considered as they are relevant to my research hypothesis proposing that audiences prefer messages employing identification as more personally relevant than messages conveying only the facts. As previously explained, *Species Extinction Facts #1* was selected for this study because it was written in a manner in which it addressed only the hard facts of species extinction, facts appearing as unrelated to the local community.

Most notably, another review of Tables 1-3 (pp. 59-61) shows a majority of the discussion regarding *Facts #1* is centered around "facts," "figures," "statistics," and "numbers." As such, it would appear that *Facts #1* was appropriately chosen as a message focused on facts. However, not all of the participants found the focus unappealing. A small minority of three participants expressed a preference for *Facts #1* with the main reason being they preferred its logic. One explained she would "rather look at facts and figures, then reason it out and justify it," a preference due to "the way we were brought up." The other two noted they preferred straightforward, quantifiable data as being "focused in a very solid, quantified way." And as previously noted, one explained his preference for *Facts #1* as, "I just understand numbers and percentages better than words. . . . So that's much more effective communication to me."

More relevant to my hypothesis, however, was the feeling that the impact of *Facts #1* was lost among all the facts and figures, and in this sense, a participant noted "it lacked communicative power." Those who had expressed a preference for *Facts #2*, described *Facts #1* with statements such as "kind of mind-numbing," "extremely general," and "it loses most people because it is so dry." Interestingly, one participant favoring *Facts #2* stated that she does not believe that "because it's statistics, it's factual" and she prefers statistics combined with a "play to your emotion." Another who preferred *Facts #2* thought *Facts #1* was "interesting and depressing if you have some sense of consequences." Yet, as still another who favored *Facts #2* put it, if someone does not have a sense of the consequences, "it's like, so what?"

An additional statement of disinterest in relation to *Facts #1* was expressed by one of the uncommitted participants. As he explained, "Because it doesn't talk about the effects it has on us, it almost takes us out of the picture as though we didn't do it in the first place." In consideration of my research hypothesis proposing that audiences prefer messages which are more personally relevant over those conveying only the facts, I find this comment one of the most intriguing statements in regard to *Facts #1*. It also causes me to question why this participant did not express a preference for *Facts #2*.

Additional noteworthy statements in relation to *Facts #1* were made by the participants who expressed a preference for neither stimuli and both stimuli. The participant who preferred neither stated that *Facts #1* "is a dog" and "they could have done this in . . . any other format than this; this is weird." This statement follows the tone of her comments regarding *Facts #2*; however, I can not help but wonder that if she thought *Facts #1* "is a dog" and *Facts #2* "is a little more accessible," why did she state a preference for neither?

The participant who stated a preference for both *Facts #1* and *Facts #2* thought that "the numbers and figures [*in Facts #1*] reinforced [*Facts #2*]." While this comment is true to his stated preference, it also points out one of the more notable themes already indirectly addressed in relation to both *Facts #1* and *Facts #2*. As was previously noted, one of the participants stated she liked statistics (or facts) presented with a "play to your emotion." Additional statements previously noted, such as, "[*Facts #2*] is completely oriented to the consequences of the facts, . . . and as such, it's much more compelling," and "number two had all the facts, but it was relating them to how it would actually affect you and your family," illustrate a theme of preference for a combination of facts with statements creating identification.

Even though this study did not include demographic or sociological data, there were also some interesting findings in this area which merit consideration as they relate to the participants' stated preferences for *Facts #1* or *Facts #2*. While it appeared that sex, age, and ethnicity were not factors in which communication model the participants preferred, their level of education may have been. Of those preferring *Facts #1*, two were Caucasian American men with ages appearing to be early-thirties and mid-forties, and the third was a woman of Indian descent appearing to be in her early-thirties. All three either had an advanced college degree or were in the process of pursuing one. Of the ten who preferred *Facts #2*, five were women of ages varying from early-twenties to early-fifties and education appearing to range from high school only to baccalaureate college degrees. Their ethnicity appeared to be mainly Caucasian American, while one was African American. The ages of the five men who preferred *Facts #2* ranged from early-twenties to late-sixties and education again appeared to vary from high school only to bachelor's degrees. Ethnicities included Caucasian American and Asian American. The man who preferred "both" appeared to be in his early-fifties and was a Hispanic or Native American, but his education level was unknown. The Caucasian American woman who stated a preference for neither one appeared to be in her late-thirties and was pursuing a graduate degree. Of the four who did not state any preference, two were women who were approximately in their late-fifties and early-sixties and both appeared to have a college education. One was of German descent and the other was a Caucasian American. The two men who did not state a preference ranged in age from mid-twenties to early-thirties and both were currently pursuing college degrees. Both appeared to be Caucasian American.

In conclusion of the above observations, it appeared that while age, sex, and ethnicity did not relate to the participants' preference of communication model, the participants at the highest educational levels tended to prefer facts only. Nevertheless, there was no demographic or sociological information officially gathered for analysis. The preceding information was either visually conclusive or was mentioned during the course of conversation. Therefore, these observations must be considered as approximations or educated guesses only.

Analysis of sQ3

The next question for discussion, sQ3, asks, What issues or topics do the participants appear to relate to in environmental communication in general? A little less straightforward than the first two sub-questions, Table 4 (p. 63) illustrates all of the areas or subjects which the participants showed a personal interest in, or affinity with, in regard to environmental communication. Pulled directly from the complete set of transcripts, these six areas of interest were delineated as the participants repeatedly referred to them in the course of discussing environmental communication. The underlying assumption was that if the participants repeatedly mentioned a particular area or subject, whether directly or indirectly, they likely were interested in that subject. For example, the direct statements "I want to know how this affects me" and "I just love animals" illustrate interests in one's self and animals. In comparison, the indirect statements "once you bring children into the correlation, you involve many more people than you would otherwise" and "we tend to look at things in an isolated manner instead of looking at the full picture" illustrate interests in children in general and the environment as an inter-related whole.

As Burke (1950) explains the process of identification, the audience identifies with a message if they are persuaded by its content to believe or understand that the message holds interests common to them. Thus, if a message addresses the specific areas the participants expressed an interest in, they will likely identify with the message. Therefore, Table 4 helps to point out what areas or subjects may effectively create identification when included within environmental communication. As such, these areas of interest will be included in an upcoming discussion in relation to sQ5, addressing specific strategies for improving the effectiveness of environmental communication.

However, there was an interesting discrepancy in Table 4 which illustrates the tenuous hold these areas of interest are likely to have on affecting identification. Returning to Table 3 (p. 61), a participant states in relation to *Facts #1*, "Since it only talks mostly about animals and land, it's like, so what?" The discrepancy comes when she makes the statement included in Table 4's data set, "Throw an animal in it, then I'm listening."

Discrepancies aside, Table 4 points out that within the group discussions, those participants who stated a preference for *Facts #1* expressed little interest in few subjects. In comparison, those who preferred *Facts #2* expressed a range of interests. While this difference may simply be due to the different number of participants in each group, resulting in fewer interests for the group with fewer individuals, it may also reflect the tendencies of the types of individuals within each group. In other words, those individuals with a broad range of interests may possibly be of the personality type which is more receptive to the strategy of identification. Seemingly backing up this possibility are the participants who expressed preferences for both stimuli and neither stimuli. Following almost the same pattern of tendencies as noted above between the participants preferring *Facts #1* and those preferring *Facts #2*, the participant who preferred both stimuli demonstrated a variety of interests while the participant who preferred neither had very few. Falling somewhere in between, the interests of the uncommitted participants appear to more closely resemble those favoring *Facts #2*.

While not surprising, what may be the most unexpected finding within the data set of Table 4 is that all groups show a strong interest in issues relevant to their local community. The strength of this interest is illustrated not only by the amount of times it is referred to, but also by the words used to discuss it. Statements noting that "local issues are the key," local issues need to be made "important," and local issues are "as important as distant issues" repeatedly employ words such as "important" and "key" which illustrate significance. Therefore, they appear to point out a strong interest in local issues among all the participants.

However, this finding could be seen as contradicting my earlier assumption that a majority of people first identify with issues on a basic level centered around themselves. Yet, it may be that all of the participants who expressed an interest in the local community, in the absence of expressing an interest in themselves, have already past the initial level of identification.

Also noteworthy as an interesting finding is that all of the groups but one, show an interest in viewing the world around them as inter-connected, thereby identifying with the environment as an inter-related whole. Words such as "biodiversity," "balance," and "inter-related" were used to describe the participants' understanding that "what we do here is affecting other places." This finding is somewhat surprising as, within my own frame of reference, I had previously reserved this area of interest specifically for those individuals aligning themselves within the environmental field. Now I must realign my reference frame or face cognitive imbalance.

A final observation of the data in Table 4 reveals what may have been the most predictable finding in relation to the stated preferences of stimuli. The participants who preferred *Facts #1* (without identification) do not demonstrate any interest in communication relating to themselves. In comparison, those who preferred *Facts #2* (with identification) show the most interest in communication centered around themselves. As identification's most basic result is to establish a link between the communication and one's self, it follows that those participants who showed a preference for environmental communication employing identification would likely be the same ones who expressed an interest in messages relating to themselves. As one participant summed it up, "It all boils down to . . . what's in it for me."

<u>Analysis of sQ4</u>

The fourth sub-question, sQ4, addresses the research problem that much of today's environmental communication is not effective. In an effort to discover if the participants even believe there are problems with the methods of environmental communication, and if so, what they may be, sQ4 asks, What are the perceived problems with environmental communication in general?

As if to prove that environmental communication does indeed require some rethinking, Table 5 (p. 65) displays a variety of problems which the participants repeatedly tied to environmental communication in general, throughout the course of the interviews. While there were none which all of the participants agreed on, the views that environmental communication creates apathy, emotionally manipulates, has low credibility, and exaggerates were repeated with regularity. Mentioned almost as often was the belief that environmental communication is contradictory and hypocritical in its content and method of delivery.

However, returning to the main purpose behind this study, the first two views—that environmental communication creates apathy and is emotionally manipulating—will be focused on as directly relevant to the strategy of identification. While appearing to contradict each other, both are related in the same manner to identification.

The relationship between environmental communication creating apathy and the strategy of identification is best addressed by first considering that apathy is defined as a "lack of emotion" or "indifference" (Guralnik 1984, 27). This lack of emotion is translated through participants' statements such as: "I just don't feel that I can have a big impact," "most of the time you feel so helpless," "I always get the feeling . . . that it's really too late to do anything," and "it's like, so what?" Yet, as was discussed in connection to sQ1, the strategy of identification is often associated with emotions and possibly, rightly so, for it appears that if an individual identifies with a subject, she or he must also have some emotions tied to that subject. Therefore, employing the strategy of identification may ensure the involvement of emotions in a positive manner by promoting a sense of personal involvement with the subject of the communication.

Still, this same arousal of emotions may be described by other individuals as emotional manipulation. Such different reactions to the same strategy provide an example of the previous warning that persuasion is highly dependent on the individual, and with the range of individual differences so broad, it is impossible to predict the response to motivational appeals such as the strategy of identification (Bettinghaus 1973). However, not all of the statements relating environmental communication to emotional manipulation were in reference to the stimulus *Facts #2*, which employed the strategy of identification. Instead, some participants note the use of "guilt tactics" within environmental communication in general with statements such as, "I get a lot of those mailings where they play guilt on you" and "I watch a lot of wildlife shows and I'm used to the bombardment with . . . guilt tactics." These comments support my earlier premise that environmental communication often relies heavily on emotional appeals such as guilt, which can serve to have an overall negative effect.

Analysis of sQ5

To throw a further dilemma into the discussion, this stated problem of emotional manipulation is in direct contrast to one of the more prevalent suggestions in relation to the last research sub-question, sQ5, asking, What are the suggested strategies for improving the effectiveness of environmental communication in general? The data set of Table 6 (p. 66) illustrates that emotional appeals were suggested by all five categories of respondents (categories of stated preferences) as a strategy for enhancing environmental communication. However, this discrepancy between environmental communication being emotionally manipulating and the suggestion of using emotional appeals to enhance its effectiveness may be explained by the fact that some emotional appeals are viewed in a different and more positive manner than emotional manipulation. And once again, while not intended as such, the strategy of identification may be understood by some individuals as a type of emotional appeal with its ability to tap into personal emotions. In support of my belief that the line between identification and emotional appeals is blurred are the participants' statements that emotional appeals bring messages "into the [personal] context" and they are like "a spark plug that starts the motor running." Both of these statements could double as explanations for identification.

Related to emotional appeals, as well as the strategy of identification, the use of appealing visual material is also emphasized among all five categories of participants. Statements such as "I can read, but if I see one picture that's done the right way . . . that is a moving thing"and "I have to see something before I'm motivated" illustrate the possibility that visuals can also be used in environmental communication to effectively establish identification.

Another compelling finding in the data set of Table 6, relevant to identification, is the participants' emphasis on directives telling them what they can do "right then and there." Four out of the five categories of participants expressed a desire for communication to include specific directives for environmental preservation. The participants' statements included pleas for communication to address "what little contribution I can make," "something people can do in their own life . . . and see an effect of," and "how I can contribute effectively," as well as requests to "give people ideas" or "plans" for simple, convenient, immediate actions that they "can do through individual initiative."

As all these statements focus on personal directives, the connection to identification is clear. Essentially, a directive is an identification strategy if it is something which an individual can personally take part in or has an interest in. In other words, if an individual is personally related to the directive in some way, she or he likely identifies with it. Additionally, as was noted above, the stress for directives was on personal immediacy, as well as ease and convenience, meaning, as one participant put it, "Something that could work its way [quickly] into my general life easy enough."

Such an emphasis on directives may likely grow from the repeatedly stated problematic feelings of helplessness and apathy (or possibly a lack of identification?), as noted in Table 5 (p. 65). This may also explain the desire to instill a sense of personal responsibility into environmental communication, for as one participant explained, "Giving a responsibility can do wonders." And of course, if an individual is responsible for something, she or he almost certainly identifies with it.

Yet another interesting observation in relation to Table 6 is the fact that there was not much emphasis placed on education as a strategy for improving the effectiveness of environmental communication even though it was noted that "education is a main factor" and "the more we're educated about . . . the environment . . . [the more] we can pass on to our children." This minimal interest in education furthers another underlying premise of this study proposing that while environmental education is important, the methods of delivery might require some rethinking.

An additional strategy which had minimal play within the data set of Table 6, but was present nonetheless, is the tactic of employing economic incentives within environmental communication. Considering that reward appeals were previously cited as one of the more effective techniques of persuasion, monetary incentives can be used to produce effective identification. Regardless, the lack of emphasis on this strategy may be due to it appearing as somewhat tasteless. This possibility is supported by the statements that adults are motivated mainly by "the greed thing" and "the only way to send someone a message is when you hit them in the pocket." Both comments appear to have negative undertones which equate monetary incentives with greed, and therefore, may be responsible for quieting other participants' expressions of desire for monetary benefits.

Moving toward a conclusion of the discussion regarding Table 6 and the illustrated data, it would be remiss not to address the strategies of connecting environmental messages to the specific areas of interest previously noted in relation to sQ3 and Table 4 (p. 63). In the interest of limiting redundancy in an already lengthy discussion, I will not repeat the specifics behind these six areas of interest except to describe them as including: the self, the self's family, children in general, the self's local community, animals, and interest in the environment as an inter-related whole. As these subjects are noted as areas of personal interest, it is likely they would promote identification if included within environmental communication. However, contemplating the discussion surrounding Table 6, what may be most noteworthy is the fact that every listed strategy could be employed in some manner to help promote identification within environmental communication.

A final pattern which must be noted, even though it was not dissected or analyzed in any relevant table, was the tendency of almost every participant to discuss personal experiences in relation to the group discussions. In addition, quite a few displayed a propensity for launching off on tangents leading to more personal agendas, such as how much better everything was run in their country or state of origin. While I deleted the most obviously unrelated statements during the course of taped-based analysis, I was still left with many to sift through in search of relevant data.

This habit of relating personal experiences was not reported in the data displays as it was unrelated to my sub-questions, but it does appear to have a relevance to identification. As Applbaum and Anatol (1974) note, a specific strategy of identification is to refer to personal experiences. In this manner, the participants were setting up their own identification with the topics of discussion by referencing them to their own experiences. For example, in my attempt to uncover strategies for enhancing environmental communication, a participant responded with, "It's a human touch . . . I'm just going to give you an example, but it's something you can apply to the environment sort of thing. This is something which happened in Singapore where they organize neighborhood watches to cut down on crime . . ." I'm not quite sure the example related to written environmental messages, but I believe the participant identified her experience with effective communication in some manner, such as through the "human touch."

Another interesting example is the participant who, in response to my question asking what was the last environmental message she remembered receiving, answered, ". . . I'm from Oregon where all this stuff has been done, taken care of, it's instituted, there is no issue, and I'm continually amazed at Californians as they go out to do like their little plastic bottles, how it's a different behavior, because in Oregon, it's the law." It appears that she does not identify with California or Californian messages, and as such, felt a need to establish her own identification through familiar views and experiences.

As a final example of the participants' tendencies to relate personal experiences to the topic of discussion, a direct identification with the topic is illustrated by the statement, "Personally, I love going hiking and getting lost in the beauty of the forests or the high deserts or the beach areas." Stated in response to my question asking why he was most interested in messages about parklands, it is clear how and why this participant identifies with the communication topic.

To sum up this discussion, all these examples serve to illustrate how the strategy of identification appears in many forms and creates a variety of responses. While it is often related to emotions, identification is defined as a type of motivational appeal and, as a true strategy of persuasion, it is impossible to accurately predict how an audience will respond to its use. However, I have noted some probable tendencies regarding its ability to increase the effectiveness of environmental communication.

Conclusions and Recommendations

Moving on from a discussion of the research findings to the resultant conclusions, I return again for initial grounding to my main research purpose. Accordingly, the problem behind this study is that much of today's environmental communication does not appear to be effective to the point of changing destructive behaviors. Focusing on identification as a persuasive strategy to improve the communication's effectiveness, this study addresses a central research question asking whether the strategy of identification could be employed to promote favorable responses in audiences of environmental communication. Believing it may, I propose the hypothesis that the receivers of environmental communication will prefer messages which employ the strategy of identification as they will understand them to be more personally relevant than communication focusing strictly on facts.

In consideration of the above research problem, the data leads to the conclusion that there are, in fact, a variety of problems presently plaguing environmental communication which negatively impact on its effectiveness. While not a surprising finding in itself, defining the problems provides some initial direction in an attempt to enhance the communication's effectiveness. As such, the problems I have defined through statements made by the focus group participants are: environmental communication creates apathy; it is emotionally manipulating; it has a tendency to exaggerate in regard to related issues and problems; it has low credibility; and it is seen as being contradictory and hypocritical in its presentation and delivery of messages. While these problems are all roadblocks to effective communication efforts, understanding them allows a communicator to address them and, one can hope, work through them.

Relative to this study of identification, the research results lead to the conclusion that the apathy created by environmental communication may be effectively addressed through the calculated use of the persuasive strategy of identification. As apathy is understood to be a lack of emotions, or a feeling of indifference, identification can be employed to arouse emotions and dispel indifference by creating or promoting a feeling of personal involvement or interest in the subject of the communication.

I can state with certitude that the strategy of identification can lead to personal interest in the topic of communication after considering the answers to the central research question, When employed in environmental communication, does the strategy of identification promote favorable responses in audiences? Tables 1-3 and the corresponding transcripts demonstrate that twelve of the nineteen participants responded with more positive statements in relation to the stimulus employing identification (*Facts #2*), while ten of the nineteen committed themselves to definitely preferring it. In addition, statements in regard to *Facts #2*, such as; "It's much more compelling," "it seems clear, the nature of [*Facts #2*] generates more of an impassioned response," and "it makes you take notice a lot more," all illustrate the interest it generated among the focus group participants. Also demonstrating this interest was the large amount of data created by the discussion centering around *Facts #2*.

In comparison, *Facts #1* (without identification) had a much smaller corresponding volume of data and was met by comments like "It loses most people because it's so dry," "it lacked communicative power," and "it's like, so what?," all pointing to less interest. In addition, of the three who stated a preference for *Facts #1*, one person admitted without hesitation that "*Facts #2* has a much greater impact on you" because it brings "home" what the facts mean. These responses all provide a positive answer to the central research question as they conclusively illustrate that the stimulus material employing the strategy of identification (*Facts* #2) produced favorable responses, regardless of whether the responses stand on their own or in comparison with the responses to the stimulus material without identification.

Moving one step further in my conclusions, these results also provide basic arguments in favor of the hypothesis that environmental communication employing identification is preferable as being more personally relevant than environmental communication which presents only facts. Having already concluded that a majority of the research participants preferred the environmental communication containing identification over the communication focused on facts, I now must locate evidence to substantiate that the participants preferred *Facts #2* because they felt it to be more personally relevant than focusing only on facts.

While there appears to be no support for the hypothesis within the data of Table 1, Tables 2 and 3 yield five specific examples of participants who expressed a preference for *Facts #2* because it was more personally relevant than the facts and figures of *Facts #1*. Within the data of Table 2, one participant notes that *Facts #2* "grabs you more because . . . it references everything to things you relate to." In contrast, *Facts #1* is "just a lot of facts and figures." A second participant notes that *Facts #2* "was relating [species extinction] to how it would actually affect you and your family," while *Facts #1* is "just the facts" and "loses most people because it is so dry." In addition, a third participant states that *Facts #2* "brings you into it faster" by creating a desire "to know how this affects me." In comparison, she agrees that in *Facts #1* "all the numbers hide the impact." Moving to Table 3, the fourth participant to provide evidence in support of my hypothesis notes that *Facts #2* "brings [species extinction] into the context that it affects . . . my own personal quality of life," whereas *Facts #1* presents just the facts. Lastly, the fifth participant notes that *Facts #2* "makes you think more about how [species extinction] affects you directly," while *Facts #1* is just "real basic." While not a majority, these five participants all provide strong evidence in support of my research hypothesis.

In final conclusion of the above results, I return a last time to the research objective to reflect upon 'what it all means, anyway.' Employing focus groups as a tool for uncovering some basic knowledge of how general audiences may respond to the persuasive strategy of identification in environmental communication, I have shown that yes, environmental communication has some inherent problems which are negatively impacting on its ability to effectively convey messages. In addition, the environmental communication model employing identification did, in fact, elicit favorable responses from the research participants. Among these participants, a preference for the communication model containing identification was noted because it was felt to convey its message in a more personally relevant manner than the model conveying only facts. While I can not state that these results conclusively prove identification leads to more effective environmental communication, they do demonstrate the tendencies of my research participants to respond more positively to the communication containing identification, pointing to the likelihood that it may be more effective communication. In other words, if an audience shows an interest in a particular message, that message is likely to be more effective than one which elicits little or no interest.

As I am unaware of any research previously conducted for the sole purpose of scrutinizing identification as it relates to the effectiveness of environmental communication, the findings of this study bring to the field of environmental communication conclusive results demonstrating the tendency of messages employing the strategy of identification to more favorably affect an audience than messages presenting only facts. With the underlying assumption that favorably affecting an audience is a significant step toward more effective communication, these results provide some basic framework for designing productive communication efforts. Furthermore, this study could be directly applicable for many people involved in the broad field of environmental advocacy, whether as writers, educators, lobbyists, or as workers in other related areas where communication efforts are employed to move audiences in the direction of environmental protection.

However, as the strategy of identification is a motivational appeal, the prospective communicator should proceed with caution as research shows motivational appeals are highly dependent on the individual. While identification by its very nature can provoke emotional reactions, care must be taken not to combine this strategy with appeals to emotions such as guilt and fear, for if used in such a manner, the likelihood of a negative response is great. In an effort to remain on safe ground, it may be wise to present facts which are then supported by identification statements, also based on facts, and avoid any temptation to embellish with questionable statements or dire warnings. As was previously cited, the inclusion of facts with identification statements was found to be an attractive combination by a number of the focus group participants.

For the three participants who stated a preference for facts only, identification statements imparting personal directives and/or a sense of responsibility were viewed as desirable strategies for environmental communication. Appearing to counter their preference for facts, the data of Table 6 also include additional strategies related to identification which these participants expressed an interest in or felt could improve the current efforts of environmental communication. Therefore, the inclusion of identification statements addressing some of these specific areas in a straightforward, factual manner may positively affect even those who may prefer communication which focuses on facts only.

Environmental communicators, aside from creating only one message for a variety of personality types, may also effectively address those people whose proclivities lead them to prefer facts by including an additional, but directly related message tailored to different preferences. This could be accomplished through the creation of a separate message focusing strictly on relative numbers and percentages which is then included in close proximity, but set apart, from the message employing identification. It could take the form of a sidebar graph or table, or an entirely separate message designed to condense the issue into numbers and trends in an effort to "quantitize" (participant B1) the facts for people who understand "numbers and percentages better than words" (participant F3).

As outlined above, environmental messages should not be designed to focus solely on facts or on identification statements. Instead, it appears most judicious to include both, and thereby lead a larger audience to identify with the communication topic or issue.

An important key to an effective identification/communication effort is to know as much as possible about the audience, such as general interests or dislikes, local community issues, and related culture. This allows for the message to be tailored to specifically fit them. But in the absence of knowing the audience, the combination of general facts and identification statements, such as was used in *Species Extinction Facts #2*, may be effectively employed as these research results appear to indicate.

In addition, the effectiveness of the identification effort may be directly enhanced by incorporating some of the specific areas of interest listed as recurring themes throughout the focus group discussions. Most notably, as illustrated by the focus group participants, a connection to the local community may lead many people to identify with a message or topic of communication. Even those societal members who do not identify with the natural world around them are likely to be interested in and identify with the community in which they live. Therefore, linking their community to the natural environment can indirectly lead them to identify with related environmental issues. Furthermore, audiences may also be led to identify with environmental topics by relating the issues to them personally or by connecting issues to their families, children in general, animals, and to the inter-dependency of the entire biosystem.

Utilizing some of the strategies suggested by the focus group participants could also help create more effective environmental communication. Most obvious was the inclusion of directives for personal action as a highly desirable strategy for personal identification. However, these suggestions are presented as the results of this particular study only, and as such, are not intended to be applicable for every audience or communication type.

Nonetheless, there is much to be gained from the employment of identification within environmental communication. As I have come to understand it, if an audience is led to identify with a specific issue or subject, it then becomes integrated into their accepted view of reality and further behaviors or opinions should positively reflect their newly altered reference frame. Furthermore, it appears that there must exist some basis of identification before any personal interest or concern can be felt. Consequently, if environmental communicators want their audiences to be concerned about particular issues or subjects, they must strive to illustrate the commonalties or threads which bind their audiences to the issues at hand. If there are no ties, then there are no reasons to be concerned.

Establishing connections between humans and nature could effectively reach beyond environmental protection. As defined by ecopsychologists, to be sane means to be integrated within nature. If their premise is correct, and I believe it is, many of society's ills result from a disassociation or a lack of connection between people and their natural environment. Accordingly, promoting a sense of identification with nature could not only benefit the environment, but also the psychological and physical well-being of humanity.

In conclusion of this study, it is evident that there remains a need for further qualitative studies to examine these original findings as they relate to identification and increasing the effectiveness of environmental communication. Specifically, I would suggest conducting additional focus groups which are designed to explore some of the notable findings revealed during the course of this research. For example, there is a need for more insight into the similarities and distinctions between emotional appeals and identification statements. Answers to questions such as when does one become the other in the minds of the participants and what types of responses do subtle differences generate? would be helpful for designing future communication efforts. Additionally, as it relates to environmental communication, it would be beneficial to define the distinction(s) between positive emotional appeals and negative emotional manipulation as this area can directly affect the success or failure of the communication effort.

Furthermore, I would suggest that future focus groups utilize specific groups of people, defined by demographic and sociological factors such as age, sex, ethnicity, income, and education. In this manner, it may be possible to relate certain tendencies to certain people, such as my preliminary finding of a possible connection between education level and preference of communication model. These groups could also be used to further probe the findings regarding specific areas of identification, as well as the suggested strategies for enhancing environmental communication, in relation to a specific target audience. In this manner, further patterns and tendencies may emerge which could provide more insight into the factors affecting an audience's attention and interest.

Once this exploratory groundwork of qualitative studies has been well-laid and solidified, the foundation for related quantitative studies will be in place. Such studies may then allow for an extrapolation of the findings to a broader public.

No doubt there remains a monumental amount of work yet to be conducted on this subject of identification as it relates to effective environmental communication. However, future researchers of this strategy now have some notable tendencies and patterns as starting points from which to begin. It is for these researchers or environmental communicators who find the thought of identification intriguing that I close this effort with one last relative truth as inspiration: "If a solution is to speak to a people . . . it needs to find roots in their life, language, and thought" (Campbell in Cantrill 1993, 90).

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APPENDIX A
HS-IRB LETTER OF PERMISSION

SJSU SAN JOSE STATE UNIVERSITY

A campus of The California State University

Office of the Academic Vice President • Associate Academic Vice President • Graduate Studies and Research
One Washington Square • San José, California 95192-0025 • 408/924-2480

TO: Lisa Murray Isaacs
19735 Graystone Lane
San Jose, CA 95120

FROM: Serena W. Stanford Serena W. Stanford
AAVP, Graduate Studies & Research

DATE: March 27, 1995

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Identification as a Strategy for Effective Environmental Communication"

This approval is contingent upon the subjects participating in your research project being approriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Serena Stanford immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that each subject needs to be fully informed and aware that their pariticpation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal, will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

APPENDIX B
FOCUS GROUP INTERVIEW GUIDE

Moderator: Lisa Isaacs
Assistant: Kuljeet Rai

*The following statements and main questions will be used on all 3 focus groups with the wording held as constant as possible.**

Introduction

Welcome and thank you for coming. My name is Lisa Isaacs. I am a graduate student here at San Jose State and I will be leading our group discussion today. I would also like to introduce my assistant Kuljeet Rai. If any of you need anything during this meeting, please ask him for assistance. And if we have not yet reimbursed you for parking or Light-Rail expenses, please see him after the discussion so he can pay you back.

All of you were asked here today because you are members of the general public and I need you to share your opinions and ideas regarding the effectiveness of some communication strategies commonly used on general audiences.

More specifically, my research focuses on different styles of environmental communication. By environmental communication, I mean communication, either written or spoken, which covers an environmental topic and is usually intended to change your attitudes or behaviors to help benefit the natural environment.

The questions I will be asking you are not of a deeply personal nature, but simply ask how you feel about and respond to different communication styles. Nevertheless, I will keep your responses anonymous and your names will not be used in any report regarding my research results, so *please* be completely open and honest with your responses. As you can see, I am recording our discussion, but don't worry—the recordings are just to make sure I don't miss any important comments.

Please understand, there are no right or wrong answers to any questions I will ask, but simply different points of view. As such, I want you all to share your comments even if they differ from someone else's. Remember, your own opinions are *very important* to my research and are why I asked you here today.

This whole process will take about 2 hours. Before we get started, I need to have you sign two copies of a consent form which Kuljeet is passing out right now. He also has pens if you need one. Please read the form carefully and then sign both of the copies at the bottom. And please fill in today's date and this group's scheduled time on number 2. When you're finished, Kuljeet will come around and collect one copy only. The other is your's to keep. I'll wait a few moments now for you to read and fill out these forms.

Now, before we get started, does anyone have any questions?

OK, let's get started. Please introduce yourself by first name only and tell us when and where you last read some sort of environmental communication. Let's start to my left and continue around the table.

Questions

Opener:

1. Please introduce yourself by first name only and tell us when and where you last noticed some type of environmental communication.

2. What was it about those messages which made you remember them?

OK, now I would like you to read the two short environmental articles which you were just given [SPECIES EXTINCTION FACTS #1 AND #2]. When you are finished we will continue with the questions.

Continue after the articles are collected—

3. What did you think about both of the articles?

4. Tell me about the differences you noticed between the two articles.

5. Comparing the two, explain why you may prefer one type over the other.

6. What type of environmental messages are you most interested in?

7. Where does this communication usually come from?

8. What, if any, types of environmental messages move you or cause you to change your behavior?

9. Overall, environmental communication does not appear to be tremendously effective because if it were, environmental degradation would be lessening instead of increasing. All things considered, how would you suggest environmental communicators prepare their messages to make them more effective, or in other words, to persuade people to change environmentally destructive behaviors?

OK, now let's summarize the key points of our discussion—*Kuljeet will give a brief summary, outlining the main points discussed in response to the questions.*

10. Have we missed anything you would like to tell us regarding your feelings about environmental communication?

Well, if no one has anything else to add, I would like to draw our discussion to a close. But before we go, I want to reiterate the purpose of my study and why I asked you here today—

Debriefing Statement

Specifically, I am studying the effectiveness of different strategies of persuasion commonly employed in environmental communication. In particular, I am looking at the technique of identification as a method for improving the effectiveness of environmental communication. By identification, I mean communication which personally relates you in some manner to the message.

The answers and opinions you voiced today are very important to my study because, as far as we know, no one has researched this specific topic. As such, you have provided me with a very valuable starting point for understanding the communication process as it relates to environmental messages.

However, before you leave, please understand that you are still free to withdraw from this study without any negative repercussions. If any of you would like to withdraw, please stay and let me know after the group has left.

Now, do any of you have any questions for us?

In closing, I would like to thank you all *very much* for participating in my study. Without you, my research would not be possible and I hope you enjoyed the experience of being part of this discussion.

If any of you are interested in the results of my research, Kuljeet has some cards which you can mail back asking me to send you a copy of the results as soon as the study is finished. Also, if any of you have not yet been reimbursed for your parking or Light-Rail expenses, please let Kuljeet know before you go.

Again, thank you very much for coming today and participating in my study.

* *As with most interviews, probes will be added to the questioning routine when needed, which will lead to some variation between the groups. However, the use of probes will be limited as excessive probing can be very time-consuming and unnecessary. Examples of probes I may likely employ are as follows:*

- *Please explain further.*
- *Please give me an example of what you mean.*
- *Please say more.*
- *Is there anything else?*
- *Please describe what you mean.*
- *I don't understand.*

APPENDIX C

SPECIES EXTINCTION FACTS #1

Extinction is a biological fact of life. The current rate of species extinction is widely believed to be unprecedented in Earth's history, and is expected to accelerate. Following are facts about extinction and estimates of current and future rates:*

Historical Extinction Rates

The rate of extinction of bird and mammal species between 1600 and 1975 is estimated to be between 5 and 50 times higher than it was throughout most of the eons of our evolutionary past. Furthermore, in the last decades of the 20th century, the extinction rate is projected to rise 40 to 400 times "normal."

In one 3,000-year period of the Pleistocene during which huge numbers of organisms perished, North America lost about 50 mammal species and 40 birds — or about 3 species every 100 years. Since the Pilgrims landed at Plymouth Rock in 1620, more than 500 species and subspecies of native animals and plants have become extinct in less than 400 years. The rate of extinction is now about 400 times that recorded through geological records and is accelerating rapidly.

Current Species Estimates and Extinction Rates

There are approximately 30 million species on Earth. Some biologists estimate that 1 to 3 extinctions are now occurring daily and that the rate will increase to 1 every hour by the late 1980's.

Projected Extinction Rates: General

The Global 2000 Report projects a massive loss of species, up to 20% within the next few decades. There have been many recent predictions of a sudden and massive increase in the rate of extinctions. Generally speaking, the assessments agree that 1) the present extinction rate is an average of several species per day; 2) this rate may well accelerate to several species per hour by the year 2000; and 3) we may well lose anywhere from 1/4 to 1/2 of all species, and conceivably a still greater share by the time the extinction spasm slows several centuries from now.

Projected Extinction Rates: Rainforests

If present levels of deforestation continue, we may lose 12% of the 704 bird species in the Amazon basin and 15% of the 92,000 plant species in Central and South America.

If deforestation in Amazonia continues at present rates until the year 2000, but then comes to a complete halt, we could anticipate losing about 15% of the plant species and a similar percentage of animal species.

Tropical forests cover only 7% of Earth's land surface yet are estimated to contain at least 50% of all species. In Brazil alone, 77,000 square miles of Amazon forest — an area 1.5 times the size of New York state — was cut down in 1987, threatening the survival of many known species and countless species yet to be identified.

*In approximately 10 years since this fact sheet was written, the extinction rate has continued to soar and it now appears these estimates may have been low.

Note; the source of this text is the Nature Conservancy, n.d.; however, references were not included in the focus group material.

APPENDIX D

SPECIES EXTINCTION FACTS #2

Just as it is driven by pressures from human populations, species extinction also directly affects human populations.

Biologists estimate that 500 million plant and animal species have inhabited the earth since life began some 3.7 billion years ago. Yet, despite this huge number, 95 to 99 percent of the species have vanished, mostly within the last 100 years. Facing continuing pressure from growing human populations, hunting and poaching, and competition from imported non-native species, biologists estimate the rate of extinction could climb to one species every hour by the end of the 1990's (Owen and Chiras 1990).

Following are more facts about extinction and its resulting effects:

Endangered Local Species

Here at home, 25 animal species and 14 plants are on the brink of extinction within the south Bay Area (Jamison 1992). Just as humans are feeling pressured by an ever-growing population, plants and animals are being pushed into extinction by ever-expanding development, never again to return to the local landscape.

As habitat is lost in warmer southern climates, fewer and fewer songbirds are returning each spring (Hammond 1991), forecasting a future with much less natural music from singing birds.

Direct Effects: General

Many important wild relatives of commercially grown foods are disappearing in the current wave of extinction, including corn and rice. Plant breeders rely on wild varieties as a source of genes for disease resistance and other important traits. For example, corn, beans, and tomatoes have all been improved through crossbreeding with wild varieties (Hammond 1991).

One of the greatest worries of biologists is that the widespread species extinction will eliminate important environmental controls that currently keep many pest species in check (Owen and Chiras 1990).

Many important medicines are derived from wild plants and animals, including one of every two prescription and non-prescription drugs. Included are drugs to aid skin wounds, burns, heart ailments, and high blood control, along with anticancer agents, antibiotics, nasal decongestants, pain killers, and tranquilizers (Miller 1985). Worth over $20 billion a year in the U.S. and an estimated $40 billion in the world market, these drugs reduce human suffering and contribute significantly to our economic welfare (Owen and Chiras 1990). Still, only 1% of the species in the tropics have been examined for possible medical use (Hammond 1991). New antibiotics, contraceptives, and perhaps AIDS treatments may be hidden in the jungle, but all are in danger of extinction as the tropics continue to be cleared.

The Future of Extinction

Once a species becomes extinct, it is gone forever. Children of today and tomorrow will never have the opportunity to experience the diversity that once existed. Instead, they face a future of limited diversity and natural beauty; only having the opportunity to know thousands of today's wild plants and animals through stories, photographs, and movies created before the species were driven extinct forever.

Note; parenthetical references were not included in the focus group material.

APPENDIX E

ORIGINAL FOCUS GROUP QUESTIONS

Opener:

1. Please introduce yourself by first name only and tell us when and where you last noticed some environmental communication.

2. What was it about those messages which made you remember them?

Continue after the articles are read—

3. What did you think about the articles?

4. What were some of the differences between the two articles?

5. In comparison, how did the different information make you feel? Why?

6. In comparison, which style of article did you prefer? Why?

7. What types of environmental messages do you pay most attention to? Why?

8. What, if any, types of environmental messages have been most effective in persuading you to act or alter your behavior?

9. Where does this communication usually come from?

10. Overall, environmental communication does not appear to be tremendously effective because if it were, environmental degradation would be lessening instead of increasing. All things considered, how would you suggest environmental communicators prepare these messages to make them more effective?

11. Have we missed anything you would like to tell us regarding how you feel about environmental communication?

APPENDIX F

ORIGINAL *FACTS #1*

XX — The current rate of species extinction is widely believed to be unprecedented in Earth's history, and is expected to accelerate. Following are facts about extinction and estimates of current and future rates:*

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The rate of extinction of bird and mammal species between 1600 and 1975 is estimated to be between 5 and 50 times higher than it was throughout most of the eons of our evolutionary past. Furthermore, in the last decades of the 20th century, the extinction rate is projected to rise 40 to 400 times "normal."

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Note; for ease in locating the edited portion in this material, the area where a phrase has been inserted is marked with an XX.

APPENDIX G

ORIGINAL *FACTS #2*

<u>Extinction is a biological fact of life.</u> Biologists estimate that 500 million plant and animal species have inhabited the earth since life began some 3.7 billion years ago. Yet, despite this huge number, 95 to 99 percent of the species have vanished, mostly within the last 100 years. Facing continuing pressure from growing human populations, hunting and poaching, and competition from non-native species, biologists estimate the rate of extinction could climb to one species every hour by the end of the 1990's.

Following are more facts about extinction and its resulting effects:

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As habitat is lost in warmer southern climates, fewer and fewer songbirds are returning every spring, forecasting a <u>bleak</u> future with much less natural music from singing birds.

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Many important wild relatives of commercially grown foods are disappearing in the current wave of extinction, including corn and rice. Plant breeders rely on wild varieties as a source of genes for disease resistance and other important traits. For example, corn, beans, and tomatoes have all been improved through crossbreeding with wild varieties.

One of the greatest worries of biologists is that the widespread species extinction will eliminate important environmental controls that currently keep many pest species in check.

Many important medicines are derived from wild plants and animals, including one of every two prescription and non-prescription drugs. Included are drugs to aid skin wounds, burns, heart ailments, and high blood control, along with anticancer agents, antibiotics, nasal decongestants, pain killers, and tranquilizers. Worth over $20 billion a year in the U.S. and an estimated $40 billion in the world market, these drugs reduce human suffering and contribute significantly to our economic welfare. Still, only 1% of the species in the tropics have been examined for possible medical use. New antibiotics, contraceptives, and perhaps AIDS treatments may be hidden in the jungle, but all are in danger of extinction as the tropics continue to be cleared.

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Once a species becomes extinct, it is gone forever. Children of today and tomorrow will never have the opportunity to experience the diversity that once existed. <u>Instead, they face a future with limited diversity and natural beauty only knowing thousands of species through photographs and movies taken before they were driven extinct for all time.</u>

Note; for ease in locating the edited portions in this material, areas which have been altered or deleted are underlined.

APPENDIX H
THEMATIC BREAKDOWN

The following is a list of the discernable themes and patterns noted in the statements of focus group participants:*

Statements re. sQ1 = Species Extinction Facts #2
Statements re. sQ2 = Species Extinction Facts #1
Statements re. sQ3
- Interest in Self
- Interest in Family
- Interest in Children in general
- Interest in Local Community
- Interest in Animals
- Interest in the Env. as Inter-related Whole

Statements re. sQ4
Statements re. sQ5
Personal Experiences
- background/roots
- lifestyle
- travel & holidays
- visual

Upbringing
Education
- for self or adults
- for children

Responsibility
Leadership
Directives
Laws
Economic Incentives
Attention Grabbers
Positive Emotions
- love/like

Negative Emotions
- feeling of manipulation
- hopelessness/apathy
- cynicism
- blame
  - in general
  - corporations and govt.
- distrust
  - in general
  - corporations and media

Contradictory/Hypocritical
Exaggeration/Dramatic
Directionless

*This is a loosely ordered list for the purpose of background information only. Because there are so many combinations and comparisons possible, only the most obvious relations have been drawn upon to help provide some semblance of order.

APPENDIX I

SOCIETAL STRATEGIES FOR ENV. PROTECTION

STATED PREF.	
#1 without I D (3/19)	Upbringing: environmental attititude "depends on your upbringing." Education: educational "training" affects how you view things. Leadership: city's recycling program is successful because "by taking a lead, they brought it to everyone's mind and made it happen"; "getting a celebrity involved" can ensure participation in environmental protection. Laws: people need to be "forced" by laws into env. protection. Threats/consequences: threat of monetary fines noted as deterrent in Singapore—"the fine is so huge, there's no such thing as litter." Economic: monetary fines for environmental violations.
#2 with I D (10/19)	Upbringing: environmental respect depends on "your upbringing"; "I was raised more environmental...to think...and conserve." Education: environmental education emphasis is on children; environmental issues "should be taught in schools...if I had grown up thinking about it then obviously it would become part of my life"; the educational materials children are "exposed to in schools are very effective on affecting the families." Leadership: environmental protection "has to start from leadership—the top—and then it will work it's way down." Laws: "it seems in order for us to do anything...there has to be some rule or some law"; incentives "won't work...That's why you have laws"; policies or mandates to force environmental protection. Threats/consequences: threat of monetary fines noted as deterrent to litter in Oregon. Economic: monetary fines as deterrent; "hit them in the wallet, then they'll listen"; "when it becomes more costly" to pollute "then people start to think about it."
Both (1/19)	Upbringing: environmental protection "starts in our own house...with our own family."
Neither (1/19)	Upbringing: "we raised our kids without cars." Leadership: "the responsibility should roll downhill instead of coming from the little guy on the bottom and going uphill." Laws: environment is protected only because "it's the law"; in Oregon, laws are "instituted" and "totally built into the system." Economic: saving money is an impetus for some environmental protection.
Uncom-mitted (4/19)	Upbringing: environmental values start in "your home" and how you are raised. Education: college professor "made such an impact on the way I look at [environmental issues]. Leadership: we need someone to "make themselves an example and encourage others to follow their example" for environmental protection. Laws: "environmental groups" should "influence lobbyists to do something on the state and federal level." Threats/consequences: threat/consequence of lawsuit can deter destruction of environment. Economic: threat of expensive litigation; boycott offending company's products and "hit them in the pocket."