

FROM THEORY TO PRACTICE: Applying Theories of Communication and Behavior Change to Environmental Communication Outreach

A Literature Review



**A Project of the Utah Division of Wildlife Resources and the University of
Utah Department of Communication**

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EXECUTIVE SUMMARY

This report is the result of an extensive literature review conducted for the Utah Division of Wildlife Resources to inform their communication outreach. The impetus behind this literature review was to introduce behavior change and communication theory into the grounded communication outreach efforts of the Utah Division of Wildlife Resources. The review focuses on five thematic areas derived from a December 2007 meeting between myself and Julia Corbett from the University of Utah and Dana Dolsen and Dean Mitchell of the Utah Division of Wildlife Resources. These areas include: (1) theories of behavior change; (2) message framing; (3) communication channels; (4) social marketing; and (5) organizational image.

Key findings from each section include:

Theories of Behavior Change

- Environmental behavior is a complex phenomenon driven by multiple variables. No one theory of behavior change suffices in effectively predicting pro-environmental behavior. Thus, when trying to influence people's behavioral decisions it is important to remain cognizant of all the various factors that have been found to influence people's pro-environmental behavioral intentions and behaviors. Some of these factors include: attitudes; values, norms, beliefs; motivations (external and internal); environmental knowledge and awareness; perceived behavioral control/self-efficacy/locus of control; habit and routine; institutional constraints; and economic incentives.
- The link between environmental knowledge and pro-environmental behavior is indirect and often weak.
- Attitudes tend to be weak predictors of environmental behavior. When there is a correlation between environmental attitudes it occurs when the attitudes are specific to the particular behavior.
- Values, on the other hand, are generally stronger predictors of pro-environmental behavior. However, given their deep-seeded nature, they are much harder to manipulate or change.
- Altruism, the selfless concern for others, and self-interest should not be viewed as antithetical to one another. While self-enhancement values are traditionally considered an obstacle to be overcome when promoting pro-environmental behaviors, acts of self-interest can lead to pro-environmental outcomes that benefit the self as well as others. Being that most people are inherently self-interested, it is important to find ways to appeal to self-interest when promoting pro-environmental behaviors.

Message Framing

- Message framing refers to the emphasis in the message on the positive or negative consequences of adopting or failing to adopt a particular behavior. Gain framed (positive) messages typically present the benefits one can accrue through adopting the advocated behavior, while loss-framed messages (negative) tend to convey the costs of not adopting the requested behavior.
- Issue involvement is thought impact the persuasive effects of gain- versus loss-framed messages. For an audience that is less involved with an issue, positive framing may be more

effective and vice versa. For an audience that is more involved with an issue, negative framing may be more effective.

- An individual's emotional state can impact their perception of a persuasive appeal. Messages that reinforce the emotional biases within your audience with a similar emotional frame tend to be more persuasive..
- In communicating environmental issues, three facets of the message are thought to influence its persuasive effect. These include how the problem is framed (positively or negatively), how the target is framed (current or future generations), and how the behavior is framed (taking less or doing more).

Communication Channels

- A "channel" is a route along which a message is transmitted from sender to receiver and along which feedback may be obtained. Channels may be *physical* as in voices or bodies, *technical* like a telephone, or *social* such as schools or the media. Channels can be mediated, interpersonal, interactive, or organizational.
- Practitioners tend to use three criteria for channel "effectiveness". These include: reach, specificity, and rate of influence. A channel's reach is the size of the audience exposed to the channel's messages. The specificity of a channel has to do with its ability to target a specific audience successfully. And the rate of influence of a given channel is its impact per exposure.
- Behavior change occurs in stages. Channels are thought to be differentially effective in different stages of behavior change. For example, mass mediated channels might be more effective in the early stage where raising awareness is key. Later on, however, when more interpersonal reinforcement needs to occur, interpersonal channels or more targeted media are likely to be most effective.
- The public uses communication channels as a function of their motivational need for particular information, the availability of the channels, their expectations of the usefulness of the channels, their attention to the channels, their cost, and their credibility. People are also more apt to use repertoires, or groups of overlapping information channels rather than relying on only one.

Social Marketing

- Social marketing is "a program planning process that promotes the voluntary behavior of target audiences by offering benefits they want, reducing barriers they are concerned about, and using persuasion to motivate their participation in program activity" (Kotler and Roberto, 1985).
- Some of the key attributes of a social marketing campaign include: consumer-orientation; emphasis on behavior change; application of marketing principles; mutual exchange; and audience segmentation.
- Due to its reliance on conventional marketing logic, social marketing faces numerous problems and challenges. Some of these include sub par access to adequate secondary knowledge regarding their audience, difficulty in segmenting audiences, difficulty in controlling or manipulating people's perceived costs associated with a behavior, difficulty in promoting what are often complex behaviors, and difficulty in identifying constructs and variables that should be monitored to indicate whether program objectives are achieved.

- In determining what types of interventions to use in a social marketing campaign, a social marketer could benefit from assessing the target's levels of motivation, opportunity, and ability. These variables are thought to determine whether a target is prone, unable, or resistant to behavioral change.

Organizational Image

- An individual's perception of an organization can play an integral part of the overall success of a communication or social marketing campaign. Therefore, it is important to integrate image evaluation into communication outreach efforts.
- Images can be managed. Organizational perception management involves the actions designed and carried out by organizational spokespersons to influence audiences' perceptions of the organization. As an organization, determine what kind of image you want to perpetuate. Then identify what types of actions and tactics will best convey that image to your publics.
- People often identify with organizations. Close physical proximity, compensation, and a long-term association are the most favorable conditions for ensuring that an individual develops a strong identification with an organization and, therefore, a stronger image of the organization.
- Identification also occurs through personal relationships; thus, an organization should view their constituents as partners in the planning and development process.

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CURRENT STATE OF KNOWLEDGE

The following outline is meant to provide you with an assessment of what we think the Utah Division of Wildlife Resources already knows regarding environmental values in the West (and in Utah more specifically) and about attitudes toward specific wildlife management practices. We derive our findings from materials that were provided us in November 2007. Information was gleaned from the following reports:

- *Wildlife Values in the West* (Western Association of Fish and Wildlife Agencies)
- *State Report for Utah/ Wildlife Values in the West* (UDWR)
- *Utah Stakeholder's Attitudes Toward Wildlife-Related Issues* (Tara Teel)
- *Attitudes and Opinions about Wildlife Resource Conditions and Management in Utah* (Krannich and Teel)
- *Wildlife Management and the Utah Public: Managers' Attitudes, Beliefs, and Ideas Within the Utah Division of Wildlife Resources* (Mortenson and Krannich, 2000)
- *Highlights from a Public Opinion Survey: Attitudes and Opinions about Wildlife Resource Conditions and Management in Utah: Results of a 1998 Statewide General Public and License Purchaser Survey* (compiled by Dolsen and Phillips)
- *Strategic Plan 2001-2011*

I. Current State of Knowledge

Below is a list of what we think the UDWR has a firm grasp on to date. Based on these observations we will then suggest areas that we think can and should be addressed in further detail.

A.) The Value Concept

- An understanding of what values are, and how they have been defined in human-dimensions research
- The role values play in cognition, behavioral intentions, and actual behavior
- The utility of the value concept to wildlife resource management planning and practices.

B.) Wildlife Value Orientations

- *Definition of Value Orientation:* "Value orientations are a component of one's hierarchal belief structure. They are an expression of one's values and are revealed through the pattern and direction of basic beliefs held by an individual. Value orientations provide the framework for an individual's attitudes and norms, which in turn guide their behavior
- *Components of a wildlife value orientation:* (1) *Worldview* (an ideal view of what one would want the world to be regarding wildlife); and (2) *Principles for wildlife treatment* (desired modes of conduct toward wildlife)
- *Why value orientations are important to understand:* Wildlife value orientations are believed to be effective in predicting participation in wildlife-related recreation

- *Dimensions of wildlife value orientations:* Utilitarian, Mutualist, Pluralist, Distanced
- *Sociodemographic and lifestyle characteristics that impact direction and strength of value orientations:* gender, age, education, income, urbanization (size of current community, size of childhood community, and length of residency)

C.) Shifts in Wildlife Value Orientation

- The shift in wildlife value orientations (away from traditional/utilitarian values) is part of a broader set of cultural changes in society
- Shift from *materialist* values (food, shelter, security) to *post-materialist* values (higher order psychological needs like self-expression, and quality of life); derives from increased economic and physical security
- Materialist values are understood to be closely tied to a more Utilitarian wildlife value orientation, where post-material values are understood to have fostered the Mutualism wildlife value orientation
- Forces affecting the social value shifts are also driving changes in wildlife value orientations; distribution in wildlife value orientations is tied to distribution of materialist/post-materialist values
- Wildlife value orientation shifts are at the root of declines in hunting participation and conflict over wildlife management issues

D.) Sociodemographic Patterns of Wildlife Participants

- Dominance of society by an older population and the greater representation of minority (non-white) groups in society is thought to have led to lower participation in wildlife-related activities.
- Additionally, it is recognized that people associated with wildlife-related activities are not just hunters and anglers; these people's needs need to be better incorporated into decision-making process
- Those who take part in consumptive wildlife recreation are also likely to take part in non-consumptive activities; concept of "shared interest" is important for managers to understand
- Realize that traditional wildlife management practices will no longer suffice in a society that is undergoing changing value systems and changing wildlife value orientations.

E.) Attitudes and Opinions about Wildlife Conditions and Management (Krannich Report)

Trends include:

- Utahns exhibit high interest in the state's wildlife resources
- Relatively few Utahns are aware of the process that has been put in place by the UDWR to gather public input regarding wildlife management issues (RAC process); even fewer participate in it
- Most Utahns believe the costs of supporting wildlife management should be borne by a wide cross-section of state residents

- Overall, Utahns are relatively satisfied with the way wildlife and fish resources are being managed by UDWR
- Generally speaking, Utahns evaluate DWR efforts as being at least moderately effective in addressing program areas. Utahns are least satisfied with the UDWR's efforts to provide information and education programs to help Utahns understand and support wildlife conservation efforts
- Utahns show high levels of support overall for actions and programs that help to protect and enhance wildlife and wildlife habitat
- Utahns are highly supportive overall of DWR programs involving the acquisition of land and water resources to protect and enhance wildlife habitat and to increase public access for recreational uses
- There is strong support for wildlife protection and for regulation of wildlife-related recreational activities
- Substantial proportions of Utahns engage in non-consumptive activities related to the state's wildlife (feeding, observation, providing habitat)
- Most Utahns believe that DWR should place a moderately high priority on habitat protection and providing informational programs designed to enhance observation opportunities
- Utah hunters are only moderately satisfied with their hunting experience in Utah
- Upland game hunters express only moderate levels of satisfaction with the quality of their hunting experience
- Over 50% of Utah adults indicate that they have purchased a fishing license at some time during the past five years
- Recreational cougar and bear hunting and management efforts to control predator species that prey on game populations are the most contentious issues

F.) Program Areas that need more attention (from the Highlights of the 1998 Krannich Report – compiled by Dolsen and Phillips)

Habitat Protection:

- Acquiring water rights to protect fish populations during dry periods was rated a “very high priority” among both the general public and license buyers
- Acquiring land for riparian and wetland habitat values was a high priority, second to water rights.
- General public placed a fairly high priority on acquiring land areas, which would be closed to hunting or fishing.

Wildlife Management and Protection:

- Attention must be given to highly controversial practices in order to avoid divisive debate that polarizes wildlife interest groups
- In terms of highly controversial management practices... a process should be put in place to help resolve or defuse differences between special interest groups in favor of such practices and the remainder of the public who oppose these practices
- Because wildlife users seem to be most critical of the DWR's practices regarding their area of interest, more needs to be done to target critical audiences with information regarding the diversity of wildlife in the state and the management effort accorded to both hunted and nonhunted species.

- In response to hunters' dissatisfactions with hunting experiences, enhanced efforts to educate hunters in ethical, yet effective hunting strategies are necessary.

Law Enforcement:

- Due to the low (weaker) than expected responses to the importance of enforcing laws that protect endangered species and nongame birds, DWR needs to determine the reasons behind these rankings and adopt strategies to educate the public about endangered and nongame species.

Funding for Wildlife Management:

- Respondents indicated that funding for the conservation and management of wildlife and their habitats should come from a broader base rather than just anglers and hunters. DWR need to explore alternative options for more broad-based funding.

Regional Advisory Councils (RACs):

- The RAC process needs to be strengthened by implementing a broad-based public information campaign to increase awareness of the RACs and their times and locations. RACs should be scheduled at times and places that will encourage wider participation.
- High awareness and participation of RACs by hunters and hunting license purchasers suggests that non-consumptive users and anglers may perceive the process as geared to hunting issues and interests. More effort should be made to involve a broader cross-section of constituencies to make them more aware of what's being done.

G.) Attitudes and Beliefs of Wildlife Managers (Wildlife Management and Utah Public Report, 2000)

Key findings include:

- Approximately 80% wildlife managers adhere to a utilitarian orientation toward wildlife resources as a commodity; 12% adhere to an egalitarian orientation; and 8% adhere to a scientific orientation
- Most managers understand that the Utah public interested in wildlife issues has changed significantly over past two decades (i.e., increased diversity, special interests, increase in non-traditional, non-consumptive constituents)
- Managers feel DWR is moderately successful at considering the diverse range of wildlife interests in Utah, and feel strongly that UDWR should seek to broaden support from all wildlife interests (primarily to increase funding)
- Most managers believe that the Regional Advisory Councils (RAC) and Wildlife Board processes provide useful guidance to wildlife management, but strongly believe that neither approach is adequately or equitably represents Utah's wildlife interests
- Most managers feel that authority in wildlife management decisions is shared equally between professionals and the public, and that more authority should be granted wildlife professionals in all types of management decisions
- As a whole, managers feel that Utah political figures have a moderate to high level of influence over wildlife management issues and that such influence should be decreased
- As a whole, managers strongly support incorporating the human-dimension of wildlife management into their work by soliciting more information from the public

- DWR managers are moderately satisfied with their job at UDWR, however they feel that DWR is only slightly effective at rewarding its employees, maintaining high morale, and promoting internal communication and teamwork

H.) Inter-Agency Recognition of Barriers to Constituency Goals (Strategic Plan 2007-2011)

Barriers to Objective 1: Increasing awareness of wildlife as a quality of life issue in order to expand support base and achieve stable funding

- Limited diversity of non-consumptive wildlife recreation programs and opportunities
- Limited money for funding non-consumptive programs and opportunities
- Some publics perceives DWR badly or not at all

Barriers to Objective 2: Improve coordination with organizations, public officials, private landowners, industry, and government agencies to obtain support for Division programs.

- The tradition of the UDWR is to not share control over wildlife management decisions
- Other's ethnocentricity (i.e., others want to control the decisions)
- Coordination takes more time and effort than available

Barriers to Objective 3: Expand programs to recruit and retain hunters, anglers, and wildlife watchers

- Lack of attaining a positive wildlife recreation experience
- Lack of wildlife recreation opportunity
- Cost of participation, lack of time, and/or competition with other activities

II. Focus Areas for Literature Review

The issue areas listed above are themes that we believe the UDWR already has a firm grasp on, or they warrant mention because they will help define the directions that we take in our research. Having said that, based on our assessment of what you already know about your constituencies, we believe the following, primarily communication-based issues should be the focus of our literature review.

A.) Theories of Behavior Change

There is a wealth of social-psychology research, much of specifically pertaining to environmental perceptions and actions, that need to be tapped into in order to better understand the links between knowledge, values, attitudes, and behavioral intention. Understanding these links should assist the UDWR in predicting and influencing constituency behaviors.

B.) Social Marketing

Social marketing is the use of marketing strategies and tools to advance a social cause, idea, or behavior, aiming to affect change in attitudes and behaviors and increase the acceptability of a particular social idea.

C.) Message Framing

When communicating with the public and designing media messages, you want to be sure to frame your message. This means that you want to select particular aspects of a perceived reality and make them more important in the communication context so that it promotes a particular problem definition, moral evaluation, and/or treatment recommendation. In other words, framing is the subjective act of selecting and ordering objective facts.

D.) Communication Channels

Various media are theorized to have certain proclivities and capabilities that influences how messages are produced, disseminated, and received. Understanding what one can expect from different particular media channel (i.e., print newsletters, radio, or the Internet) will help you design more effective messages.

E.) Organizational Image

Given that you have a fairly good idea of what Utahns think about the UDWR as an agency and the work that it does, you need to take that information and work it into a rebranding of the UDWR as being more than just the “Hunting and Fishing Guys”. Research on organizational identity and imaging can help with this.

THEORIES OF BEHAVIOR CHANGE

Much of persuasive environmental communication aims to change people's behaviors. However, before one attempts to do this, it is important to familiarize oneself with some of the more prominent theories and models of behavior change as well as the common variables thought to influence environmental concern, behavior and behavioral intention. In this section I will first provide a brief overview of environmental psychology and delineate types of pro-environmental or environmentally significant behaviors. Following this section I will then describe three common theoretical frameworks for studying behavior change and review some of the more popular theories and models that fall within these frameworks. Finally, I will draw out the variables across the various models and theories that most agree have some impact (positive or negative) on behavior change.

Overview of Environmental Psychology

Developed in the US in the 1960s, environmental psychology looks at the wide range of complex interactions between humans and the environment (Kollmus and Agyeman, 2002). One branch of environmental psychology, the one in which this particular literature review is concerned with, examines the connections between environmental attitudes and pro-environmental behaviors. In this tradition, we seek to better understand why people act pro-environmentally and determine what are the barriers to pro-environmental behaviors.

According to Kollmuss and Agyeman (2002: 240), pro-environmental behavior is "behavior that consciously seeks to minimize the negative impact of one's actions on the natural and built world." As Stern (2000) points out, a definition of pro-environmental behavior, or

what he calls, environmentally significant behavior (ESB), can be defined by its impact or its intent. An impact-oriented definition emphasizes the extent to which ESBs change the availability of resources or alters the structure or dynamics of ecosystems, while an intent-oriented definition stresses the environmental intent as an individual cause of behavior. Both types of definitions are important for behavior change research but for different reasons. An impact-oriented definition helps identify which target behaviors make the greatest impact, and an intent-oriented definition focuses on people's beliefs, motives, attitudes, etc. in order to understand and change the target behaviors (Stern, 2000: 408).

There are many types of environmentally significant behavior. Stern (2000) classifies ESBs into four groups: environmentalism, non-activist behaviors in the public sphere, private-sphere environmentalism, and the interpersonal influence of affecting other people's environmental behaviors. Despite these distinctions, however, generally speaking environmentalism can be defined behaviorally as "the propensity to take actions with pro-environmental intent" (Stern, 2000: 411).

Over the years, there has been a steady increase in the public's awareness and concern regarding environmental issues. However, as Pelletier et al. (1999) points out, despite this trend in environmental awareness and interest, opinion polls indicate that a large proportion of people remain inactive with respect to environmental protective behaviors (p. 2481). For example, in a review of previous survey research regarding recycling behavior, Oskamp (1995) found that despite low participation in drop-off recycling programs, most of the respondents had high levels of knowledge regarding the requirements of a recycling program. Much of environmental psychology, then, seeks to explain this gap between environmental knowledge and awareness and environmental behaviors.

Models of Behavior Change

Kollmuss and Agyeman (2002) identify three common theoretical frameworks under which many of the more popular and widely cited theoretical models of behavior change fit. These frameworks include early US linear progression models; models of altruism, empathy and pro-social behavior; and sociological models.

Linear Models

The oldest and earliest models of pro-environmental behavior were based on a linear progression of environmental behavior change. These traditional hierarchy models posit a learning model of behavior change whereby knowledge precedes attitude formation, which in turn influences behavior. However, Valente et al. (1998) and Kollmus and Agyeman (2002) agree that many of these linear models have been proven incorrect, too simplistic, or overly confident, for behaviors are entirely too complex to be considered the product of information gain alone. Thus, a central theoretical problem of behavior change research is exploring the gap between knowledge and behavior to better understand the behavior change process (Valente et al., 1998: 367).

A problem of ordering knowledge, attitude, and practice variables. Some like Valente et al. (1998) contend that the assumption that knowledge must be the catalyst and behavior the outcome is why the gap between knowledge and behavior is considered a problem in the first place. Thus, they examine the ordering of knowledge (K), attitude (A), and practice (P) variables in models of behavior change in order to determine how behavior change works in various situations. They outline six possible orderings of these variables. *Learning models* posit a cognitive progression through the stages (K-A-P). In affinity models, liking (attitude) leads to

purposive information seeking (knowledge) before adoption of the behavior (practice). *Rational models* argue that individuals learn about an innovation and adopt it, regardless of their attitudes, feelings, or dispositions; thus such models see knowledge preceding practice, with attitude change as the final stage (K-P-A). Models of what Valente et al. (1998) call *grudging acceptance*, posit that individuals engage in practices prior to adequate knowledge or positive attitudes (P-K-A). Authority-decision behaviors that are forced on an individual represent this type of behavior change. Unlike the first four models, both *dissonance* and *emotional models* consider knowledge to be the ultimate outcome. Dissonance occurs when individuals engage in a behavior, form a positive attitude toward it, then learn about how it works or why it's important (P-A-K). And finally, emotional behavior change occurs when someone forms a positive attitude toward a behavior, begins practicing it, and then learns how it works (A-P-K). While different behavior change situations warrant different models, Valente et al. (1998) conclude that the learning model is still ideal. They argue that deviation from the learning model (K-A-P) creates uninformed publics, which in turn does not ensure sustained behavior change (Valente et al., 1998: 380).

A problem of measurement. Another factor contributing to the perceived gap between knowledge and behavior has to do with the way attitudes and behaviors are measured in these linear models. In particular, the measured attitudes in these models are often much broader in scope than the measured actions (Kollmus and Agyeman, 2000: 242). Ajzen and Fishbein address these discrepancies in their *Theory of Reasoned Action* (TRA) and *Theory of Planned Behavior* (TPB). In both of these models the attitude that is measured is an attitude toward the particular pro-environmental behavior of interest. In the theory of reasoned action, Ajzen and Fishbein posit that attitudes do not directly determine behavior but rather do so indirectly by

influencing behavioral intentions, which they build into their models as the direct antecedent to behavior itself. They also purport that intentions are influenced by more than just a person's attitudes toward the behavior. They find that behavioral intention is influenced by social (normative) pressure as well.

Like the theory of reasoned action, the theory of planned behavior (TPB) conceptualizes human behavior as being guided by behavioral beliefs (attitudes) and normative beliefs, but adds control beliefs to the equation. Combined together, attitude toward behavior, subjective norms, and the perception of behavioral control lead to the formation of behavioral intention, which, as previously discussed, is assumed to be the immediate antecedent of actual behavior (Ajzen, 2002: 665). Perceived behavioral control (PCB) was introduced into the TPB in order to accommodate the non-volitional elements inherent in most behaviors.

The notion of perceived behavioral control owes much to Bandura's (1977) work on self-efficacy. Perceived self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given levels of attainments" (Ajzen, 2002: 667). As one can see, perceived self-efficacy and PBC have much in common in that they both are concerned with one's perceived ability to perform a behavior. That said, however, Ajzen clarifies that PBC is not a unitary conception. It should be viewed as comprised of two things: *perceived self-efficacy*, which is the ease or difficulty of performing a behavior and *controllability*, which has more to do with beliefs about the extent to which performing the behavior is up to the actor (Ajzen, 2002: 671-672). Controllability introduces the possibility that while behaviors can be performed there may exist external barriers that stand in the way to action.

Effort as a Moderator

One problem with linear models that conceptualize a direct relationship between attitudes and behaviors is that they fail to consider important variables that could serve as moderators between the two. For example, according to Schultz and Oskamp (1996) a crucial absent variable in Fishbein and Ajzen's theory of reasoned action is the role of effort as a moderator between attitudes and behavior.

Some contend that the successor to the theory of reasoned action, the theory of planned behavior, in part addresses the role that effort plays in predicting behavioral intentions. As previously discussed, perceived behavioral control (PBC) is an individual's perception regarding the relative ease or difficulty of carrying out a behavior. As Schultz and Oskamp (1996) explain, the notion of perceived control implies that more difficult behaviors, those that are less under one's control, will be performed more commonly by those with strong favorable attitudes, while behaviors that are easier to perform will be more common for those with moderate or weak favorable attitudes.

Taking this reasoning one step further, Bagozzi et al. (1990) suggest that the level of effort required to perform a behavior is one aspect of perceived behavioral control. Specifically, when the amount of effort required to perform a behavior is high, intentions to act will strongly mediate the relationship between attitudes and behavior; when the required effort is low, attitudes will predict behavior directly (Schultz and Oskamp, 1996: 376).

Schultz and Oskamp (1996) propose that effort can directly moderate the relationship between attitudes and behavior, regardless of behavioral intentions. Specifically, they contend that the amount of effort required for a behavior functions as an impediment to action (a behavioral barrier) and that overcoming such barriers requires stronger attitudes. Therefore, a strong attitude is needed if a behavior requiring high effort is to occur. However, a weak attitude

will suffice for a behavior that requires low effort (p. 376). Furthermore, they found that when a financial incentive is introduced into the equation, the amount of effort an individual with low concern is willing to exert increases (p. 380).

Models of Altruism, Empathy and Pro-Social Behavior

Absent from many of the aforementioned linear, cognitive models of behavior change like the theory of reasoned action and the theory of planned behavior are moral considerations, which are thought to play a significant role in many types of conservation behaviors. Kaiser et al. (2005) explain that a situation is considered to be morally relevant when one's self-interest and the interest of others are at odds with one another (p. 2152). Clearly, conservation, the act of withholding from consuming as much as one wants in the name of using less and conserving for others, falls into this category.

While the linear models are criticized for their neglect of moral considerations, another framework for analyzing pro-environmental behaviors, what Kollmuss and Agyeman (2002) call models of altruism, empathy and pro-social behavior, view morals and other altruistic considerations as key to understanding conservation behaviors. Defined by Eisenberg and Miller (1987), pro-social behavior is "voluntary intentional behavior that results in benefits for another" (quoted in Kollmuss and Agyeman, 2002: 244). In that empathy is the ability to understand and share the concerns of another and altruism is the belief or practice of selfless concern for others, both should be considered a subset of pro-social behavior.

Schwartz's (1977) theory of altruism called the *Norm Activation Theory* (NAT) assumes that altruistic behavior (like many pro-environmental behaviors) increases when one's altruistic norms are activated, which occurs when a person becomes aware of other people's suffering

(awareness of consequences) and at the same time feels a responsibility of alleviating this suffering (ascription of responsibility).

Stern et al. (1993) expand on Schwartz's model in their *Value-Belief-Norm model* (VBN) of environmental concern. The VBN model postulates that personal moral norms - a person's sense of obligation – are the ultimate predictor of conservation behavior. These norms are seen as a function of a chain of three beliefs including one's awareness of the consequences of a behavior for the valued object, one's self-ascribed responsibility, and one's ecological worldview as measured by Dunlap et al.'s New Environmental (or ecological) Paradigm, which in turn is determined by environmentally-relevant values (Kaiser et a., 2005: 2153). These values include Schwartz's altruistic value orientation, which Stern et al. call "social altruism", an "egoistic" orientation and a "biospheric" value orientation. Every person has all three orientations but in different strengths; thus, Stern et al. propose that environmental concern is caused by a combination of these three value orientations. As one can guess, the egoistic orientation is typically the strongest, followed by social and then biospheric concern (Stern, 1993; Kollmuss and Agyeman, 2002: 245). However, as Kollmus and Agyeman (2002) point out, the egoistic orientation can only be a "good" motivator for pro-environmental behavior when the action serves the persons needs and wants. It is counterproductive when the desired behavior negates a person's self-interest.

In an effort to evaluate how a linear model like the TPB and a model altruism like the VBN model hold up against one in another in predicting behavior, Kaiser et al. (2005) found that for the theory of planned behavior (TPB), the original determinants (attitude, subjective norms, and perceived behavioral control) account for 76% of respondents intention to engage in conservation behaviors, which in turn explain 95% of the variance in self-reports of actual

conservation behavior. For the value-belief-norm (VBN) framework, the authors found that 30% of personal norms account for and explain 64% of behavior variance. While the authors contend that each has remarkable explanatory power, they conclude that the TPB identifies both the behavior and its most proximal determinant (intention) more fully than the VBN model.

Sociological Models

The third common theoretical framework that has contributed to behavior change research is one that integrates the psychological with the sociological. One particular model called the A-B-C Model has played an important role in conceptualizing this type of integrated approach to behavior change research. The ABC Model of behavior follows the truism that behavior is a function of the individual and its environment (Stern, 2000: 415). Thus, the model posits that actions or behaviors (B) are derivative of the interaction between an individual's attitudes (A) and the external conditions or context (C) within which the individual operates and the subsequent behavior is performed.

In this model, attitudes (A) are a part of what Stern (1999) calls the personal domain. In addition to attitudes, this domain is comprised of an individual's values, beliefs, moral norms, and various other cognitions, motives, and feelings. Theories like Stern et al.'s *Values-Beliefs-Norms Model* and Ajzen and Fishbein's *Theory of Reasoned Action* and *Theory of Planned Behavior* are representative of the efforts to capture the influences of personal factors on environmental behavior.

The external conditions (C) that influence our decisions to engage in pro-environmental behaviors comprise what Stern (1999) calls the contextual domain of behavior. The contextual or structural influences on environmentally-significant behavior are highly diverse and include attributes that individuals carry from birth (cultural background, religion, social class, etc.),

acquired capabilities (education, skills, etc.), the individual's immediate situation (residence, status as homeowner or renter, local climatic circumstances, etc.), constraints and opportunities coming from public policy (regulations, taxes, etc.), economic variables (income, prices, financing, etc.), and many more factors.

As Stern (1999) explains, “the likelihood of a behavior occurring depends on the forces – both personal (A) and contextual (C) – that impinge on an individual in the context of the choice of whether to engage in a particular behavior at a particular time, making environmental behavior highly situational (p. 464). In the case when capabilities and constraints (C) strongly predispose for or against action, attitudes and other personal-domain variables matter little in the short run. The weaker the contextual forces, the more personal domain variables are likely to matter (Stern, 1999: 466).

Stern (1999) illustrates the interactive effects of the personal and contextual domains on behavior by examining the effects of information and incentive intervention strategies for promoting pro-environmental behavior. Information is a personal-level intervention that is meant to enhance one's environmental knowledge and awareness, attitudes, etc. Information alone, however, has little effect on behavior change when there are significant barriers external to the individual, such as financial cost or inconvenience (Stern, 1999: 468). According to Stern (1999), incentives can overcome these external barriers and have proven successful in inducing changes in some types of behaviors. For example, when money is a problem, financial inducements can be a solution. As Corbett (2002) discovered in her survey of rural landowners, the weight of financial burdens can pose a significant obstacle for participation in environmental programs. The prospect of having some of those financial costs alleviated is often enticing to people considering whether or not they should or can participate.

Also using an integrated approach to behavior change research, Fietkau and Kessel (1981) view pro-environmental behavior as derivative of a combination of psychological as well as sociological factors. They posit that behavior is such behavior is influenced by attitudes and values; external, infrastructural, and economic factors that enable or hinder people to act ecologically; behavioral incentives like social desirability, quality of life, and monetary savings; perceived feedback about ecological behavior; and knowledge. However, unlike the A-B-C Model, which holds that the effect of the personal and the contextual domains on behavior depends on the values of attitudes (A) and context (C) relative to each other rather than the value of either by itself (Guagnano et al., 1995: 702), the variables in Fietkau and Kessel's model are independent from one another and can be influenced and changed (Kollmuss and Agyeman, 2002: 246).

Rather than creating a model around what enhances pro-environmental behavior decisions, Blake (1999) prefers talking about the knowledge-behavior gap from the perspective of the individual, social, and institutional constraints, which *limit* pro-environmental behavior. Blake identifies three barriers to action: individuality, responsibility, and practicality. Individual barriers are those that lie within the person, having to do with attitude and temperament. According to Blake, these are especially strong for those who do not have a strong environmental ethic. Responsibility, Blake's second barrier, is particularly close to the psychologist's notion of "locus of control." People who do not act pro-environmentally tend to feel that they cannot influence the situation or should not have to take responsibility for it. And finally, the third barrier, what Blake calls practicality, has to do with the social and institutional constraints that prevent people from acting responsibly toward the environment regardless of their attitudes or intentions (Kollmuss and Agyeman, 2002: 246-247).

Common Factors Thought to Influence Environmental Behavior

As is evidenced by the plethora of models attempting to make better sense of the root causes of pro-environmental behavior, the question of what shapes such behavior is a complex one that simply cannot be visualized in one single framework or model. However, it is worth discussing some of the factors that have been established as having some influence (positive or negative) on models of pro-environmental behavior. Specifically, I will discuss various variables that fall under three categories: demographic factors, external factors, and internal factors. As will be demonstrated, most of the research has fallen around the internal variables that influence pro-environmental behavior.

Demographic Factors

Cleveland, Kalamas and Laroche (2005) write that initial efforts to study correlates of pro-environmental behavior focused on traditional demographic segmentation variables, such as gender, age, income, marital status, social class, and education. However, most studies examining these links largely report equivocal (Schwartz and Miller, 1991; Schwepker and Cornwall, 1991; Straughan and Roberts, 1999) or non-significant (e.g. Shrum et al., 1995) findings.

In their review of demographic variables influencing recycling behavior, Schultz et al. (1995) found that those with the highest level of environmental concern tend to be young (Buttel and Flinn, 1976; Mohai and Twight, 1987), female (McStay and Dunlap, 1983; Stern et al., 1993), better educated (Arbuthnot, 1974), higher earners (VanLiere and Dunlap, 1980), urban dwellers (Buttel and Flinn, 1976), and ideologically liberal (Dunlap, 1975; Schultz and Stone, 1994). The authors note that although these demographic variables have all been correlated with

environmental concern, their relationship with pro-environmental behavior has been less consistent (Schultz et al, 1995: 108).

According to Kollmuss and Agyeman (2002), two demographic factors that have been found to influence environmental attitudes and behaviors are gender and years of education. In terms of gender, while women have been found to have less extensive knowledge than men, they are typically more emotionally engaged, demonstrate more concern about environmental devastation, believe less in technological solutions, and are more willing to change (Fliegenschnee and Schelakovsky, 1998; Lehmann, 1999). And in terms of education, it is assumed that the longer the education the more extensive one's knowledge about environmental problems. Yet, as the authors point out, more education does not necessarily translate into an increase in pro-environmental behavior.

External Factors

External factors are the characteristics of an individual's environment, the contextual factors that influence a person's environmental behavior decisions. Schultz et al. (1995) refer to external factors as situational variables, which are more easily manipulable than personal, internal variables. As the A-B-C Model suggests, in order to best understand what drives pro-environmental behavior, one must look at both the personal-level factors as well as contextual-level factors. In this section I will discuss the following external variables: institutional factors, economic factors, and social and cultural norms.

Institutional factors. Many pro-environmental behaviors cannot take place unless the appropriate infrastructure is in place. For example, the lack of a convenient drop-off location or curbside pickup often serves as impediments to recycling. Or the lack of an efficient public transportation system, or any public transportation system at all, stands in the way of people

utilizing these services. Kollmuss and Agyeman (2002) insist that these types of barriers can be overcome through people's actions as citizens, which constitute indirect environmental action.

Economic factors. Economic factors have a strong influence on people's decisions and behaviors, however the economic factors that play into our decisions are very complex and are often only poorly understood (Kollmuss and Agyeman, 2002: 249). Rational-actor models of behavior change assume that people make decisions based on their assessment of the different outcomes that will follow from the possible choices under consideration (Dietz 2005: 12.7). Thus, this model posits that differences in environmental attitudes and behaviors can be predicted by, and will likely reflect, one's material self-interests as they relate to the environment.

While the assumption that people act in an economically rational fashion is often not true, there is ample evidence that people can be influenced by economic incentives to act in a pro-environmental way. For example, the Massachusetts Bottle Bill, which includes a financial incentive, is responsible for the over 80% recycling rate in that state (Kollmuss and Agyeman, 2002: 249). Also, in her survey of rural landowners in Utah, Corbett (2002) found that the most likely participant in a government sponsored riparian restoration program would be someone who is highly interested in financial motivations, like cost-sharing. However, one must be wary because the opposite is also true, for sometimes the economic incentive lies in the environmentally malignant behavior.

Social and cultural factors. In addition to institutional and economic factors, social and cultural norms also play an integral part in influencing one's environmental decisions and behaviors. Boehmer-Christiansen and Skea (1991) examined the history of policy reactions to acid rain in Germany and the United Kingdom. With its high cultural value of forests, along

with its geographic position and need for security and stability, Germany had a drastically different approach to the problem. Schultz and Zelezny (1995) likewise note the importance of taking cultural values, like American values of self-enhancement, into consideration when trying to influence or predict people's environmental behaviors. Additionally, the social norms of a community are thought to influence environmental behaviors. For example, Schultz and Oskamp (1995) found that in a recycling program, block leaders play an important role, for they have the ability to activate community-based social norms within individuals through interpersonal contact.

Internal Factors

Internal factors are the characteristics of an individual that are associated with pro-environmental behavior. In this section I will discuss the following internal, personal variables: worldview, values, attitudes, motivation, environmental knowledge and awareness, emotional involvement, locus of control, and habit and routine.

Worldview. Some theorists treat environmentalism (i.e. the proclivity to act in a pro-environmental way) as a matter of worldview. According to Stern (2000), the most prominent example of this perspective in social psychology is the idea that an environmental worldview flows out of the adoption of a New Environmental (or Ecological) Paradigm, "within which human activity and a fragile biosphere are seen as inextricably interconnected" (Stern, 2000: 411; Dunlap, Van Liere, Mertig & Jones, 2000).

Values. A significant amount of research has been conducted around the role values play in determining pro-environmental behavior. According to the New Shorter Oxford Dictionary, values are (a) the worth, usefulness, or importance of something; (b) opinion of, regard or liking for, a person or thing; or (c) the principles or moral standards of a person or social group (Dietz,

Fitzgerald and Shwom 2005: 12.5). No matter whether values are based on utility, opinions or morals, they are presumed to “influence our thinking about and behavior toward the environment by indicating which preferences are to be given priority” (Dietz 2005: 12.22). Thus, as researchers work towards conceptualizing environmental concern and behavior they often look at the role of values. Such research has looked to values ranging from post-materialist values, to self-transcendence or altruism, to biospheric values, to self-enhancement or egoistic values as the basis of environmentalism.

Inglehart (1995) identifies the roots of environmental attitudes and pro-environmental behavior in a culture’s materialist/post-materialist values. Stemming from Maslow’s Hierarchy of Needs, Inglehart’s hypothesis is that “given individuals pursue various goals in hierarchal order – giving maximum attention to the things they sense to be the most important unsatisfied needs at a given time” (Inglehart 1971: 991; Dietz 2005: 12.20). And, in terms of whole countries he writes, “Cultures or nations with post-materialist values – emphasizing self-expression and quality of life -- are more apt to give high priority to protecting the environment (and are much more likely to be active members of environmental groups), than those with materialist values – emphasizing economic and physical security above all” (Inglehart, 1995). In many ways, Inglehart’s findings supplement the notion that environmentalism is elitist, a privilege, or fancy, of those people and countries whose basic needs are already met, and in many ways his observations are correct. Underdeveloped regions with unmet needs, such as steady employment, may not consider environmental issues, like wildlife protection, to be of primary concern. However, in light of the outrage and activism spawned by the unfair distribution of environmental pollution in communities of color and working-class whites, Inglehart’s approach loses some of its credibility.

Perhaps the most significant effort that has been put forward in values-based behavior has revolved around the impact that self-transcendent (altruistic) and self-enhancement (egoistic, self-interested) values have on environmentally significant behavior. In their review of the literature on environmental values, Dietz et al. (2005) find that both self-interest and altruism (social and biospheric) are believed to play fundamental roles in determining environmental behaviors. The self-interest basis for environmental concern derives from the notion that people care about the environment because it influences them. This is similar to the rational actor model whereby environmental decisions are made by assessing how particular outcomes from choices will affect individual preferences. On the other hand, a decision to act in an environmentally friendly way that is guided by social altruism would have a scope of concern that expands beyond the self, taking into consideration what's best for the whole community or all humanity. Another form of altruism, biospheric altruism, views the environment as having value in and of itself regardless of its use or value to humans.

As previously mentioned, self-enhancement (egoistic) values are typically cast as problematic for promoting pro-environmental behaviors, which often require selfless acts. Because of this incompatibility, research tends to polarize altruism and self-interest as inherent opposites; thus, advocating an altruistic-centered approach to behavior change (Schwartz, 1973; Dietz et al., 1998). Schwartz's (1973) norm-activation theory (NAT) is an example of this approach. It is posited in this theory that altruistic behavior (which includes pro-environmental behavior) occurs in response to personal moral norms that are activated in individuals who believe that particular conditions pose a threat to others (awareness of consequences) and who believe that they could initiate or avert those consequences (ascription of responsibility). In their study of recycling behavior, Hopper and Nielsen (1991) found supporting evidence for

Schwartz's assertions. Personal norms translated into recycling behavior only when a person's awareness of consequences was high.

However, focusing on altruism over self-interest has its problems. First, not all pro-environmental behaviors are altruistically-based. For example, the consideration to utilize public transportation rather than driving is often a choice of self-interest and cost-saving. De Groot and Steg (2007) found that egoistic concerns were the most strongly related to attitudes toward the use of a transferium being built in Groningen, the Netherlands. Another problem with altruistic-centered approaches, according to Kaplan (2000), is that the assumption that "good" motives will lead to "good" outcomes is not absolute, for helping others for selfless reasons can still cause suffering and make those being helped feel helpless. Likewise, acts derived from selfish motives can create "good" outcomes, such as NIMBY-ism and fighting toxic waste siting. Another problem with altruism, according to Kaplan (2000), is that it runs counter to the human instinct to act with the "self" in mind.

Schultz and Zelezny (2000) agree with Kaplan's later point. They argue that polarizing altruism and self-interest as inherent opposites can create a disconnect between traditional environmental appeals and American values. According to Schwartz's continua of values, which place self-transcendence and self-enhancement at opposite ends of the spectrum, Americans tend to score high on self-enhancement. On the other hand, self-transcendence is most closely related to pro-environmental attitudes and action. While Schultz and Zelezny (2000) admit that there is little to no evidence pointing to a strong egoistic basis for environmental action, they contend that this has, at least in part, to do with the way in which pro-environmental behaviors are typically marketed and framed. The act of protecting the environment is typically framed as requiring sacrifice, simpler living, and altruistic values. To those who endorse the new

environmental paradigm (NEP) and have altruistic values this sort of framing is convincing.

However, to those who have more egoistic concerns, these message frames are not likely to be persuasive.

The authors turn to the work of Stephen Kaplan in order to shed some light on how best to frame appeals to act in environmentally responsible ways for those with more self-enhancing values. Kaplan (2000) posits an alternative to the altruism-centered approach in his model called the *Reasonable Person Model* of environmental behavior, which allows both altruism and self-interest to coincide rather than treating them as antithetical. De Young (2000) asserts that self-interest is about more than attaining personal happiness at the cost or neglect of everyone else's, for personal happiness can be derived from achieving an outcome that we care about. Thus, the Reasonable Person Model does not disregard self-interest, but rather treats it as a cognitive reality that can be used to an environmental advantage. According to the theory, the key to success is to enhance personal control and provide people with multiple desirable options from which to choose so that they can make responsible decisions that do not run counter to self-interest. Therefore, when framing environmental appeals, Kaplan (2000) recommends that you work within the motivational characteristics of the target population; you treat human cognitive capacity as an asset; and you engage motivations other than altruism like competence, being needed, making a difference, and forging a better life, all of which are self-enhancing values that focus on contribution.

Attitudes. Like values, attitudinal factors have received significant attention in behavior change research. Attitudes are defined as “the enduring positive or negative feeling about some person, object, or issue” (Kollmuss and Agyeman, 2002: 252; Newhouse, 1991). As Kollmuss and Agyeman (2002) note, environmental attitudes have been found to have varying and usually

very small direct impact on pro-environmental behaviors. More often than not, environmental attitudes indirectly influence pro-environmental behavior.

In response to this research suggesting a low or non-significant relationship between attitudes and behaviors, Ajzen and Fishbein (1977) reviewed empirical research in the field in order to establish grounds for their contention that attitudes do serve as predictors of overt behavior but only when attitudinal and behavioral entities correspond. According to the authors, these entities consist of 4 elements: the *action*, the *target* at which the action is directed, the *context* in which the action is performed, and the *time* at which it is performed. Focusing only on *action* and *target*, the authors found that a person's attitude will have a consistently strong relation with his/her behavior when it is directed at the same target and when it involves the same action. Thus, they conclude that previous reports of low or inconsistent attitude-behavior relations are attributable to low or partial correspondence between attitudinal and behavioral entities.

In terms of recycling behavior, research into attitudinal predictors has focused on general environmental concern as well as more specific concern regarding a particular issue (p. 106). While results have been weak at best regarding the association between general environmental concern and recycling, Schultz et al. (1995) found that specific attitudes regarding specific aspects of recycling remain significant predictors. (p. 107). This supports Ajzen and Fishbein's assertion that in order for attitudes to predict behaviors a precise correspondence needs to exist between the attitude and behavior being measured.

Others like Diekmann and Preisendoerfer (1992) see the discrepancy between environmental attitudes and pro-environmental behaviors as having to do with the cost of the behavior. They argue that people typically choose the environmental behaviors that demand the

least cost. In their model, cost is not defined strictly in the economic sense but in a broader psychological sense that includes the time and effort to undertake a particular behavior. The authors found that environmental attitude and low-cost behavior like recycling do correlate significantly. However, the higher the cost of the behavior, the less impact an environmental attitude has on that behavior (Kollmuss and Agyeman, 2002: 252).

Motivation. One of the various factors that have been investigated to better understand the antecedents to pro-environmental behaviors is motivation, both external and internal. Kollmuss and Agyeman (2002) define motivation as “the reason for a behavior or a strong internal stimulus around which behavior is organized” (p. 249). External motivations are those that are triggered through behavioral incentives like using reinforcers such as monetary incentives, removing barriers by making the behavior more convenient, and using persuasive communication strategies. While these strategies have proven effective in the short-term, they are inadequate for sustaining long-term change (Pelletier et al., 1995: 2483).

Unlike behavioral incentives, De Young (2000) argues that intrinsic, or internal motivations should be considered a decent long-term predictor of environmental behaviors. Based on his work on recycling behaviors, he contends that intrinsic and self-determined motives like personal satisfaction, being self-sufficient, being frugal, and participating in a program where one’s actions matter were significant incentives for recycling.

Pelletier et al. (1998) have developed the Motivation Toward the Environment Scale (MTES) to measure people’s motivation for environmentally-responsible behaviors. Distinguishing between intrinsic motivation, self-determined extrinsic motivation, non-self-determined extrinsic motivation, and amotivation, Pelletier et al. (1998) suggest that self-determined motivations are the strongest predictors of long-term behavior change, for those who

have integrated the regulation of environmental behaviors act out of personal choice and interest (Pelletier et al, 1999: 2484).

While much attention has been granted to the reasons that foster pro-environmental behavior, little has been given to reasons for not engaging in those same behaviors; thus Pelletier et al. (1999) have developed the Amotivation Toward the Environment Scale (AMTES).

Defined as “a state in which individuals are not able to perceive a contingency between their behavior and the subsequent outcomes of their behavior” (Deci and Ryan, 1985), amotivation is an experience of lack of control that can be compared to learned helplessness (Pelletier et al., 1999: 2484).

In their AMTES model, Pelletier et al. (1999) consider amotivation to be comprised of helplessness beliefs, strategy beliefs, capacity beliefs, and effort beliefs. Helplessness beliefs occur when the individual is overwhelmed and intimidated by the enormity and severity of the environmental situation. Strategy beliefs trigger amotivation when an individual feels that a specific behavior will not be effective in attaining the desired goal. Capacity beliefs regarding one’s self-efficacy or ability to perform the intended behavior and to make a beneficial impact can also induce amotivation. And finally, connected to capacity beliefs are effort beliefs, which are thought to contribute to amotivation when an individual has trouble sustaining enough effort to perform the behavior or have difficulty integrating the behavior into their lifestyles (pp. 2485-2486).

Environmental knowledge and awareness. As mentioned at the onset of this paper, most agree that environmental knowledge and awareness are poor predictors of pro-environmental behavior. For example, Pelletier et al. (1999) points out that despite increases in environmental awareness and interest, opinion polls indicate that a large proportion of people remain inactive

with respect to environmental protective behaviors (p. 2481). In the reverse, Kempton et al. (1995) found lack of knowledge regarding environmental issues to be equally as prevalent among environmentalists as they are non-environmentalists. Thus, environmental knowledge *per se* is not a prerequisite for pro-environmental behavior. However, in the case of recycling, Oskamp et al. (1991) found that the more knowledge one has regarding what materials are recyclable and where recyclables are collected, the more likely that person is to recycle. Therefore, like attitudes, more specific knowledge is the better predictor.

Similar to environmental knowledge, environmental awareness is defined as the “knowing of the impact of human behavior on the environment” (Kollmuss and Agyeman, 2002: 253). Environmental awareness is constrained by several cognitive and emotional limitations. The cognitive limitations on environmental awareness include factors like the non-immediacy of many ecological problems (i.e., nuclear radiation, ozone depletion, global warming); slow and gradual ecological destruction, which impairs our ability to perceive that a problem exists; and the complex and intricate nature of environmental problems, which likewise impedes comprehension (pp. 253-254). In terms of emotional limitations, Kollmuss and Agyeman (2002) cite things like emotional non-investment fueled by a lack of knowledge and awareness as well as our resistance against non-conforming information, and emotional reactions to environmental devastation that often fuel denial, rational distancing, and resignation (pp. 254-255).

Locus of control. Given the low correspondence between environmental concern and pro-environmental behavior, Cleveland et al. (2005) offer “locus of control” as a possible explanatory factor for why some people choose to engage in pro-environmental behaviors and others do not and why certain types of pro-environmental behaviors are chosen over others. Because concern for the environment does not exist in a vacuum, but rather is influenced by

dispositional biases, the authors argue that it should behoove researchers to examine the influence of personality constructs like locus of control.

Similar to self-efficacy, locus of control is “the extent to which people believe that they have the ability to affect outcomes through their own actions” (McCarty and Shrum, 2001: 94). Environmental Locus of Control (ELOC), then, pertains to the extent people believe they can affect pro-environmental outcomes through their behavior. There are two types of LOC, internal and external. Those with internal ELOC believe their actions have some bearing on the outcomes of environmental situations. In an early study, Webster (1975) argued that recyclers are socially conscious consumers with a high level of social responsibility (Scheult et al., 1995: 108). The idea that recyclers believe they can make a difference gains support from the research regarding internal locus of control and pro-environmental behavior. On other hand, those with external ELOC believe they are powerless, with outcomes of situations being beyond their control. These people are more likely to hold other people accountable for environmental problems.

Habit and Routine. Stern (2000) identifies habit or routine as yet another potential casual variable of environmentally significant behavior. One way to conceptualize habit or routine is as a pattern of behavior over time. In some cases habits need to be overcome in order to engage in pro-environmental behavior. In other cases habits are thought to help facilitate pro-environmental behavior. In this sense, the habit of engaging in certain recreational activities can be negatively or positively associated with the pro-environmental behaviors depending on which type of recreational activities one takes part in.

The relationship between one’s level of environmental concern or pro-environmental behavior and participation in different kinds of recreational activities has been a matter of

intellectual interest for the nearly 25 years (Teisl and O'Brien, 2003: 506). Dunlap and Heffernan (1975) identify two general categories of recreation activities: consumptive and appreciative. Consumptive activities are those like hunting and fishing that involve taking from the environment, reflecting a utilitarian orientation toward it, while appreciative activities like camping, hiking, and wildlife watching involve attempts to revel in nature without altering it, making it a more compatible with a preservationist ethic (Teisl and O'Brien, 2003: 507-508). Both are thought to be associated with environmental concern, however the strength of this association is believed to differ across types of outdoor recreation.

In their analysis, Teisl and O'Brien (2003) found that wildlife watching is the activity that has the strongest association with increasing an individual's likelihood to donate money to or belong to an environmental organization and to purchase an environmentally labeled wood product. Snowmobiling, nature photography, wildlife watching, and hunting are the activities that have the strongest association with concern over how forests are managed. In sum, the researchers found that while activities traditionally classified as appreciative have strong, positive effect on environmental concern and behavior, the effect of hunting and other consumptive outdoor recreation activities is not significantly different (Teisl and O'Brien, 2003: 517).

Conclusion

In conclusion, before one can effectively influence a target audience's environmental decisions and behaviors, one must become familiar with the various factors that influence behavior change. Such factors include internal attributes like worldview, attitudes, values, motivations, environmental knowledge and awareness, locus of control, self-efficacy, and habit

and routine; external/contextual variables like institutional constraints, economic incentives, and social and cultural norms; and demographic variables like gender and education. Such a wide array of possible factors suggests that no single model or theory of behavior change will suffice to accurately predict or alter people's environmental behaviors.

Recommendations

- Be cognizant of all the various factors that have been found to influence people's pro-environmental behavioral intentions and behaviors. Some of these factors include: attitudes; values, norms, beliefs; motivations (external and internal); environmental knowledge and awareness; perceived behavioral control/self-efficacy/locus of control; habit and routine; institutional constraints; and economic incentives. Try to assess and measure these variables in preliminary survey and focus group research.
- If you are trying to draw a connection between environmental attitudes and pro-environmental behaviors, be sure that those attitudes are specific to the particular behaviors.
- Being that most people are inherently self-interested, find ways to appeal to self-interest when promoting pro-environmental behaviors.
- Even though the link between environmental knowledge and pro-environmental behavior is indirect and often weak, identifying what people already know and don't know about the issue of interest is an important step in any communication campaign.
- Models like the AMTES could be a useful tool for a government agency like the UDWR in program-evaluation. This echoes Corbett's (2002) recommendation that figuring out why people do not participate can be useful in planning an effective persuasive communication campaign.

MESSAGE FRAMING

Despite growing interest and concern for the environment, these dispositions do not always translate into environmentally responsible behaviors (ERBs), such as conservation, recycling, or green consumerism. Thus, as Davis (1995) notes, the trick is to identify what motivates individuals to act accordingly. Research has found that the framing of communication influences attitudes and behavioral intentions; thus, when planning a public communication campaign that seeks to influence behavior, one should be cognizant of message framing.

In this section, message framing will be discussed in the context of persuasive communication campaigns. First, the theoretical underpinnings of message framing will be introduced. Second, there will be a discussion on the role that variables such as cognitive processing, issue involvement, and phrasing play in the overall effectiveness of positively and negatively framed messages. Third, the impact of emotional framing will be examined. Fourth, the specific influence of message frames on environmental communication will be described. And finally, a brief analysis will be conducted of how an individual's cognitive goal frames ground his/her interpretation of environmental messages.

Theoretical Foundations of Message Framing

In the context of persuasion, message framing typically refers to “the emphasis in the message on the positive or negative consequences of adopting or failing to adopt a particular behavior” (Salovey and Williams-Piehota, 2004: 491). Gain framed (positive) messages typically present the benefits one can accrue through adopting the advocated behavior, while loss-framed messages (negative) tend to convey the costs of not adopting the requested behavior (p. 491).

The theoretical framework for investigating the effect of framed persuasive messages on behaviors is Kahneman and Tversky's Prospect Theory. Developed as an account of choice and decision-making strategies under conditions of risk or uncertainty, prospect theory posits that decision-makers organize information relevant to choice options in terms of potential gains (benefits) or potential losses (costs); thus, factually equivalent material can be presented to the individual such that they encode it as either a gain or a loss. When behavioral choices involve some kind of risk or uncertainty, individuals will be more likely to take the risk or accept the uncertainties if the information presented to them is framed in terms of the relative disadvantages of not adopting the behavior. On the other hand, when choices involve little risk or uncertainty, individuals are more likely to prefer choice options when they are framed more positively in terms of advantages or gains (Tversky and Kahneman, 1981). In another words, preferences shift when outcomes are framed differently.

Research exploring how gain- and loss-framed messages influence people's attitudes and behaviors toward a product or issue has engendered opposing findings. Levin and Gaeth (1988) found that people evaluated beef more favorably when it was described positively as 75% lean than when it was described negatively as 25% fat. Assuming that attitudes are indicative of the persuasiveness of a message, these findings suggest that positive framing may be more persuasive than negative framing (Maheswaran and Meyers-Levy, 1990: 361). However, Meyerowitz and Chaiken (1987) report opposite framing effects. In their analysis of women's compliance with an advocacy for breast self-examinations, the authors found that women were more persuaded by messages that were framed negatively in terms of benefits lost if the behavior was avoided than they were when messages were framed positively in terms of benefits gained with compliance.

Factors Influencing the Persuasiveness of Gain- and Loss-Framed Messages

Cognitive Processing

Seeking a theoretical explanation for such disparate findings, some scholars have turned to cognitive processing as a potential explanatory factor (O’Keefe and Jensen, 2008; Shiv et al., 2004). These scholars argue that the persuasiveness of a gain- or loss-framed message has much to do with the amount of cognitive processing one exerts when evaluating such messages. With that in mind, in a meta-analysis, O’Keefe and Jensen (2008) attempt to determine which frame, a gain-framed or a loss-framed message, has been found to produce more cognitive processing.

Intuitively, they contend, that there are two primary reasons why one would assume that loss-framed messages, those that emphasize the negative consequences of noncompliance, would engender more processing. The first reason has to do with the effects of fear-arousing appeals on message processing. As O’Keefe and Jensen (2008) write, “fear-inducing messages have been found to evoke greater processing as reflected in larger numbers of issue-relevant thoughts and increased differentiation of strong and weak arguments” (p. 52). Also, in that fear appeals tend to emphasize the disadvantages of noncompliance and recommends action designed to avoid fearful consequences, the authors argue that loss-framed messages are conceptually akin to fear-induction; thus, loss-framed messages, like fear appeals, might evoke greater message engagement. The second reason pertains to what people refer to as the negativity bias, which holds that because people are generally more sensitive to losses than to otherwise equivalent gains, negative information is thought to have greater impact on our processing (p. 53).

In spite of their intuitive hunches, O’Keefe and Jensen (2008), in their survey of prior empirical studies pertaining to this very issue, found exactly the opposite of what they assumed. Gain-framed appeals were found to be statistically significantly more engaging than loss-framed

appeals. They conjecture two possible reasons for this conundrum. First, loss-framed messages might be more likely to evoke reactance. And second, gain-framed messages might seem more optimistic or more infused with positive affect than loss-framed appeals. Consequently, recipients might be more inclined to engage such messages more closely (p. 62).

Issue Involvement

In the previous discussion regarding cognitive processing, it was suggested that issue involvement plays an integral role in determining how motivated one is to process information carefully. Defined as a personal connection or bridging experience for an individual, involvement is often conceptualized as personal relevance. Personal relevance, according to Antil (1984), is the level of perceived personal importance and/or interest evoked by a stimulus within a specific situation and is based on inherent needs, values, and interests (Grau and Folse, 2007: 20). With this in mind, some scholars like Maheswaran and Meyers-Levy (1990) turn to issue involvement as another potential explanatory factor regarding the potential persuasiveness of gain- versus loss-framed messages.

The authors point to dual-process theories of persuasion like the Elaboration Likelihood Model (ELM) and the Heuristic-Systematic Model (HSM), which hold that people who are highly involved with an issue are likely to process relevant messages in detail, giving careful scrutiny to message content. In this process, information is integrated into a unitary attitude and greater weight tends to be given to negative information. As Maheswaran and Meyers-Levy (1990) note, the implication of such findings is that when issue involvement is high, messages relevant to the issue should not only be processed in more detail but should also be more persuasive when they are negatively rather than positively framed (p. 362). Conversely, the persuasion literature suggests that when issue involvement is low, people are unlikely to

scrutinize message arguments carefully and integrate their thoughts into an overall attitude. Instead they form attitudes on the basis of simple inferences derived from peripheral cues (Chaiken, 1980; Petty and Caccioppo, 1983). During this process, positively framed messages should be more persuasive (Maheswaran and Meyers-Levy, 1990: 362-363). Thus, Maheswaran and Meyers-Levy see message framing and issue involvement as jointly influencing people's attitudes toward a cause or issue, their intent to participate, and overall message effectiveness.

Grau and Folse (2007) tested and confirmed Maheswaran and Meyer-Levy's hypothesis in the context of cause-related marketing (CRM). They found that positive framing affects the image or perceived value of a campaign to less-involved consumers, however it was less influential in altering their actual behaviors (p. 29). The practitioner-side implications for Maheswaran and Meyers-Levy's argument is that planners should be advised to employ negatively framed messages when an audience's involvement with the issue is high. However, when an audience has only casual interest in the issue, positive framing might be more advisable (1990: 366).

Phrasing of End-State Desirability

In addition to cognitive processing and issue involvement, the phrasing or operationalization of gain- and loss-framed messages is also thought to influence the persuasive effectiveness of such messages. In particular, gain- and loss-framed messages can be operationalized in two distinct ways – in terms of desirable end-states or in terms of undesirable end-states. For example, a gain-framed message will focus on the desirable end-state achieved through compliance, and a loss-framed message will describe the desirable end-state foregone with noncompliance. In terms of undesirable end-states, a gain-framed message will highlight to

undesirable end-state avoided through compliance, while a loss-framed message stresses the undesirable end-state suffered through noncompliance (Nan, 2007: 509-510).

Nan (2007) argues that the desirability of end-states has a systematic impact on the relative persuasiveness of gain- versus loss-framed messages and that the nature of such impact is further dependent upon an individual's issue involvement. To test this hypothesis, Nan performs two experimental studies. In the first experimental study, when the end-state was undesirable, the gain-framed message led to greater intention to perform the advocated behavior than the loss-framed version. However, when the end-state was desirable, neither frame had a differential persuasive effect (p. 516).

In the second experiment, whereby issue involvement was introduced, Nan found that under low involvement conditions, exposure to a gain-framed message led to greater intent to perform behavior, but only when the end-state was undesirable. Conversely, when the involvement condition was high, loss-framed messages were deemed more persuasive, but again, only when the end-state was undesirable (Nan, 2007: 519). Thus, one consistent finding across both experiments was the absence of reliable framing effects when a desirable end-state anchored the message. As Nan suggests, avoiding or suffering an undesirable outcome seems to have greater psychological impact than achieving or foregoing a desirable outcome (p. 520).

Emotion-Induced Framing

Outside the rubric of gain- and loss-framed message appeals, emotion-induced framing has also been found to impact the persuasiveness of communication (DeSteno et al., 2004). Emotions have long had a place in classical rhetoric where manipulations of emotions, such as anger, despair, hope, etc., were thought to effectively sway opinion in the favor of the orator (DeSteno et al., 2004: 43). De Steno et al. (2004) argue that because individuals use emotions as

informational sources about their environment, which in turn can shape their expectancies about the likelihoods of specific events mentioned in a persuasive message, emotions should be capable of influencing the impact of message arguments (p. 44).

Previous work has demonstrated that distinct emotions inflate estimates for events possessing emotional overtones that match the perceiver's feeling states (DeSteno, 2000). For example, in prior research, DeSteno (2000) found that the experience of anger led people to increase the perceived likelihoods they attached to angering events like discrimination or traffic jams. DeSteno et al. (2004) take this one step further and hypothesize that emotion-induced bias in perceived likelihoods could create emotion-specific biases in message effectiveness. For example, if particular arguments for the merits of a certain issue possess emotional consequences that match the current emotional state of a message recipient, expectancies regarding the likelihoods attached to these consequences should become inflated. Therefore, matches between the emotional state of the recipient and the emotional framing of a message should result in a greater persuasive impact of messages relative to mismatching cases (p. 45). It is important to note, however, that emotion-biased likelihood estimates regarding the central arguments of a message will only exert an influence to the extent that individuals carefully consider the details of a persuasive message (DeSteno et al., 2004: 47).

Framing Influences on Environmental Communication

Specifically in the context of environmental communication, prior research has identified three components of persuasive communication that framing is believed to influence: the problem definition, the target definition, and the types of behavioral action. First, a central tenet of any environmental communication is a clearly stated problem definition. However, as already

discussed, frames can significantly influence how a problem is perceived and how alternative decisions are evaluated (Kahneman and Tversky, 1984).

Another component of environmental communication that framing is thought to influence is the target definition. As Svenson and Karlsson (1989) suggest, time frame can influence how a target individual conceptualizes a problem and reacts to it. One way that time frames exert this influence is by indicating who is at risk. As Davis points out, problem definition framing typically sees the audience as those at risk, however environmental problems can also impact future generations. Thus, frames can influence who we see as most at risk – current or future generations. There is, however, little consensus on whether short-term or long-term framing exerts greater influence (Davis, 1995: 287). And finally, frames can also influence how environmental behavioral recommendations are described. Specifically, behavior can be framed as “taking less” as in the case of conservation or “doing more” as in recycling.

In his effort to better understand what motivates environmentally responsible behaviors, Davis (1995) examines the role these three factors play in determinations of persuasiveness and intent to behave. He found that framing does indeed effect response to environmental communication and subsequent intention to act and that framing manipulations of outcome (gains vs. losses) and target definition (current vs. future generations) exert influence interactively rather than independently. Specifically, individuals were found to be most favorable to communication that emphasized the negative consequences of their own inaction on themselves and their own generation. Activity framing exerted no influence on an individual’s response to the message or their behavioral intention.

The Influence of Cognitive Goal Frames on Environmental Decision-Making

Up to this point frames have been discussed as rhetorical devices that can help facilitate certain interpretations and effects. However, frames also operate on an individual cognitive level, working as interpretive structures through which individuals organize and make sense of information and the world. Thus, individuals employ frames when evaluating information and making decisions (Goffman, 1974).

With this in mind, Lindenberg and Steg (2007) examine the way goal frames are employed by individuals when making environmental decisions. According to goal framing theory “goals govern or ‘frame’ what people attend to, what knowledge and attitudes become cognitively most accessible, how people evaluate various aspects of the situation, and what alternatives are being considered” (p. 119). Lindenberg and Steg(2007) identify three primary goals that manifest as frames when making environmental considerations. The *hedonic* goal frame activates goals that promise to improve the way one feels in a particular situation. A *gain* goal frame will make people sensitive to changes in their personal resources; thus, the criterion for goal realization is the improvement of one’s resources or efficiency of resource use. And finally, a *normative* goal frame activates goals associated with appropriateness. People guided by normative goals are thought to be more sensitive to the “oughts” of self and others (p. 120).

The authors suggest under which conditions each of the three goal frames may dominate in influencing environmental behavior. In terms of the hedonic goal frame, they contend that affect has been linked to environmental behavior in numerous ways. Pelletier et al. (1998) found that people are more likely to engage in pro-environmental behavior when they feel pleasure from doing so, which supports DeYoung’s (2000: 515) hypothesis that environmental behaviors are worth engaging in due to the personal, internal contentment that doing so provides. Also,

emotional reactions to environmental degradation have been found to influence decisions to act in pro-environmental ways.

The gain goal frame, when governing environmental decision-making, motivates one to act according to self-interest; thus people with this frame of mind are more likely to engage in pro-environmental behavior if they think that it has positive consequences for themselves.

Unfortunately, more often than not, such cost-benefit analysis tends to encourage environmentally-irresponsible behaviors (Lindenberg and Steg, 2007: 124).

As Lindenberg and Steg argue, of the three goal frames, the normative goal frame is probably most important, for the hedonic goal frame is too fickle, making behavior dependent on mood, and the gain frame makes pro-environmental behavior too dependent on cost minimization. Considering that much of pro-environmental behavior is seemingly guided by personal norms and an impetus to “do what’s right,” neither hedonism nor self-interest can be expected to reliably and consistently invoke pro-environmental behavior. Normative goals, on the other hand, can more flexibly react to changing circumstances and remain reliably pro-environmental so long as the norms are related to the environment.

Communication practitioners have an invested interest in knowing what these goals are, how they are thought to influence environmental considerations, and how they can be incorporated into their messages. Being that the normative frame is most important, the authors argue that two things must happen in order to achieve the prominence of the normative frame and the functioning of normative behavior. First, highly abstract norms (like “do not harm others”) must be linked to lower-level norms about pro-environmental behavior (like “act pro-environmentally”). And second, the lower-level norm must be linked to a specific behavior.

This requires information dissemination on possible links between environmentally unfriendly behavior and hurting others (Lindenberg and Steg, 2007: 129).

Conclusion

In conclusion, message framing plays an important part in any public communication campaign, especially in terms of influencing attitudes and behaviors. As interpretive structures, frames organize information in a way that promotes a particular evaluation of the issue at hand, which make frames a necessary component to persuasion. However, in order to employ frames effectively, one must be cognizant of the conditions under which certain frames work best, how an audience's interest and emotional connection to an issue impacts the persuasive appeal of a particular frame, and how audiences use their own cognitive frames to interpret information.

Recommendations

- Given the impact that issue involvement has on the effectiveness of gain- and loss-framed messages, it is important to determine how involved your target audience is with an issue (i.e., how relevant it is for them). For an audience that is less involved with an issue, positive framing may be more effective and vice versa.
- Try to reinforce the emotional biases within your audience with a similar emotional frame within your message.
- In communicating environmental issues, be cognizant of how you are framing the problem (positively or negatively), the target (current or future generations), and the behavior (taking less or doing more). All can impact the effectiveness of a persuasive appeal.
- Try to frame your messages so that they reflect the goal frames of your audience. While an individual's hedonist and gain goal frames can lead to pro-environmental decisions, they tend to make pro-environmental behavior dependent on mood and cost-minimization. Normative goal frames, on the other hand, are more flexible and are likely to lead to longer-term change. Therefore, try to tap into your audience's normative goal frame when framing your messages to them.

COMMUNICATION CHANNELS

Communication channels are an integral component of the input variables that must be considered when constructing a communication campaign. In this section, I will review what channels are, how they have been conceptualized in the public communication campaign literature, considerations that practitioners should make when choosing information channels for their campaign, and considerations that audiences make when choosing channels from which to seek information. Following this review, a series of recommendations will be set forth that the UDWR should be cognizant of as they plan the next stages of their community outreach plan.

Conceptualizing a Channel

A “channel” is a route along which a message is transmitted from sender to receiver and along which feedback may be obtained. Channels may be *physical* as in voices or bodies, *technical* like a telephone, or *social* such as schools or the media (Trumbo, 1998: 192).

Traditionally, communication scholarship has stratified channels into either mass or interpersonal categories. Although as Chaffee and Mutz (1988) point out the duality of mass vs. interpersonal channels can be whittled down even further, for within mass communication channels comparisons are often made between print and broadcast, and within the interpersonal realm a distinction can be drawn between formal and informal channels (p. 20).

Several theoretical models have been produced to depict the relationship between mass and interpersonal channels. Perhaps the earliest and most popular model is one of competitive, or contrasting influences. In this model interpersonal relationships are thought to intervene in the flow of mass communication, thwarting the potential effects of information deriving from

mass media channels. This model views interpersonal communication channels as the more “influential” source (Chaffee and Mutz, 1988: 21). In contrast, another model considers each realm as having complimentary, or convergent influences. For example, in the diffusion of innovation literature, interpersonal influence is viewed as critical in the decision-making stages of adoption, whereas the mass media are understood to play a greater role in the earlier stages of an individual’s awareness. And yet another model views each as reinforcing, in that the mass media can serve as grist for the conversation mill, stimulating further interpersonal discussion that might not otherwise take place (Chafee and Mutz, 1988: 21).

The problem with setting up this dichotomy between mass and interpersonal channels, according to Trumbo (1998), is that the emphasis on mass *versus* interpersonal communication channels overshadows other important distinctions, and ignores the possibility that a given channel could demonstrate qualities of both. Furthermore, he argues that the mass/interpersonal dichotomy is not so much that it is false, but that it is an awkward and unnatural fit, for communication in society occurs simultaneously at all levels (p. 193).

One such channel that does not fit neatly into either the mass or interpersonal categories is the Internet. Cassell et al. (1988) posit that the Internet represents a possible hybrid channel that has attributes of both mass and interpersonal communication, making it particularly attractive for those looking to influence behaviors in a public communication campaign (p. 72). Many scholars have focused only on the Internet’s scope and storage capacity, which treats the medium like any other mass communication medium. This perspective completely overlooks important interpersonal characteristics. In the end, Cassell et al. argue that the Internet, with its hybrid capabilities, can provide much of what is needed to induce the behavior change that many public communication campaigns seek. It can provide individuals with knowledge, it can help

model necessary skills, it can target limiting expectancies, and it can increase self-efficacy through appropriate reinforcement and support (1988: 76).

The Internet, as a hybrid, is part of a larger category of channels called interactive media. While mass media sends one-way messages to audiences, interactive media teach via participation and by individualized responses to each user's input. Considering that no two people are likely to experience a campaign in the same manner or with the same results, interactive media can provide for user preferences and tailor messages accordingly (Lieberman, 2001: 373). As Lieberman (2001) argues, interactive media can be especially useful when targeting children and adolescents. As Lieberman points out, those born in the 1990s are habituated to digital media and expect the media they come into contact with to be interactive.

Another information channel that cannot be discussed in terms of mass or interpersonal are organizations. Stephens, Rimal, and Flora (2004) see social networks like organizations as channels of information that can serve both instrumental and affinity functions in a communication campaign. Organizations serve an instrumental function for communication campaigns by providing infrastructure and resources to the campaign, by serving as points of access to target audiences, and by providing both geographic and electronic space to meet and discuss issues (p. 99).

On the other hand, the affinity function is concerned more with the social processes that occur among members in a social context. Organizations can serve in this capacity in that they provide trust and credibility, common objectives, social support, and organizational norms to the campaign. First, community organizations can enhance the credibility of a campaign, as members are more likely to trust information coming from an organization that they support. Second, an organization's common objectives provide social context and stability for its

constituents, thus making organizations a reliable channel for information dissemination. Third, out of common objectives comes social support, which the authors argue can help diffuse uncertainty and enhance control over behavior change. And fourth, organizational norms can serve connectivity and legitimating functions over time. Information that can penetrate these norms can capitalize on this connectivity and legitimating function (Stephens et al., 2004: 99). Thus, using organizations as channels for information dissemination in public communication campaigns can help planners reach a targeted audience, tailor interventions to a specific context, influence organizational structure in ways that will influence individual level change, and influence other organizations to become models of ideal behavior (Flora et al., 1989).

Selecting Information Channels: Practitioner Considerations

Effectiveness

In the process of choosing information channels to use in a communication campaign, planners must consider a channel's communication and persuasion "effectiveness". Chaffee and Mutz (1988) point to three criteria for effectiveness: reach, specificity, and rate of influence. A channel's reach is the size of the audience exposed to the channel's messages. The specificity of a channel has to do with its ability to target a specific audience successfully. And the rate of influence of a given channel is its impact per exposure. The authors note that the latter type of effectiveness is typically reserved for interpersonal communication due to the homophilous nature of most interpersonal contacts. Chaffee and Mutz explain that the implicit assumption is that interpersonal contacts are generally more like ourselves; thus, we deem them more credible. But as the authors rightly point out, credibility is not a singular construct comprised only of trust.

Credibility also pertains to “expertise,” which is typically more characteristic of mediated sources.

Also, credibility judgments depend in large part on the involvement of the respondent with the issue at hand. When the receiver has little involvement, they are more likely to consider something credible by the peripheral cues associated with a given channel. Both interpersonal and television provide more peripheral cues -- such as facial expressions and tone of voice -- than do print channels. On the other hand, when there is greater involvement with an issue, the respondent is likely to react to the actual content. Here print and interpersonal provide more opportunities to interact with the content, for example stopping to reread or clarify content (Chaffee and Mutz, 1988: 31).

As part of the Stanford University Five-City, Multifactor Risk Reduction Project, Schooler et al. (1998) applied these criteria of effectiveness in their comparison of five different types of media materials, including TV Public Service Announcements (PSA), TV special programs, booklets, tip sheets, and newspaper coverage. Despite hypothesizing that TV PSAs would have higher reach than other messages, the authors found that more respondents recognized a higher proportion of print messages than TV messages. Also, despite hypothesizing that newspaper messages would have higher reach than other print media, respondents actually remembered having seen tip sheets more frequently. When it came to specificity, the authors hypothesized that both booklets and TV special programs would have higher specificity than other media. This they were able to confirm. And finally, In terms of impact, newspaper messages were found to have the most impact on final knowledge, followed by booklets, TV PSAs, tip sheets, and TV programs.

In the case that a communication campaign is attempting to alter people's behaviors, mass media campaigns often prove ineffective despite their broad reach. Interpersonal channels, on the other hand, have little reach, however they have proven to be far more effective in influencing attitudes and motivation (Cassell et al., 1998: 71). Thus, according to Cassell, Jackson, and Cheuvrant (1998), a channel's persuasive effectiveness is constitutive of it being transactional and response dependent. Communication is transactional when it allows for a give and take between persuader and persuadee and allows both parties to bring something to the exchange (Smith, 1972). Persuasive communication must also be response dependent in that the success of persuasion depends on the receiver paying attention to, adopting, and elaborating on a specific message; thus, persuasion is receiver-driven.

From this perspective, Cassell et al. (1998) contend that given that persuasive communication must be transactional and response dependent, it is no wonder that research has found that traditional mass media channels are poorly suited for persuasive interventions, for if it provides any feedback at all it tends to be extremely delayed. On the other hand, interpersonal communication channels provide more rapid and continuous feedback. The persuader and persuadee can interact, ask questions, and adjust their strategies "in the moment" (p. 74).

Intuition tells us that different channels are likely to exert varying degrees of effectiveness; thus, Schooler et al. (1998) argue that communication campaigns that use multiple channels to deliver messages are more effective in changing attitudes and behavior (p. 410). When comparing the effectiveness of channels, Flora et al. (1997) conceives of two dimensions along which channels are thought to differ. The first dimension is reach-specificity. High reach media serve large, heterogeneous audiences, while high specificity media serve small, homogenous audiences. The second dimension is arousal-involvement. A medium like

television is a high arousal, low involvement channel, whereas booklets may be less arousing but far more involving (Schooler et al., 1998: 411-412).

As Schooler et al. (1998) argue, this framework could be used to determine when in a campaign's life span certain media channels should be employed. For example, in the beginning of a campaign high reach, arousing formats are probably most appropriate, for such media can raise awareness. Later in the campaign, however, high specificity, high involvement formats are more appropriate, for they can help foster self-efficacy enhancement and assist with overcoming limiting barriers to behavior change.

Audience Organization

Another consideration that practitioners should consider when choosing channels of communication for a public campaign is audience organization. As Flora, Maibach, and Maccoby (1989) contend, the type of influence played by mass or targeted media channels depends on the way the audience is organized. They conceive audiences being arranged at the individual level, network level, organizational level, or community/societal level.

According to the authors, at the *individual level* media can influence awareness, knowledge, attitudes, self-efficacy, and skills for behavior change. First, the mass media has the potential to influence awareness levels, although the authors are keen to point out that an individual must be exposed to the information, attend to it, and remember it in order for it to be persuasive. Second, the mass media can pass on simple information in large numbers, thus increasing knowledge. But perhaps more importantly, the mass media can be used to stimulate further information-seeking on the part of the individual. Third, the media can also be effective in changing attitudes, especially when supplemented with interpersonal communication. Lastly,

the media can enhance self-efficacy by modeling behaviors of interest and teaching skills that are required for behavior change (Flora et al., 1989: 186-189).

In terms of *networks*, social ties are thought to influence behavior. Given this, the authors contend that both mass and targeted media can influence the flow of information and communication within a network. For example, as the two-step theory of media effects holds, mediated messages can influence opinion leaders who will then spread the information interpersonally (Flora et al., 1989: 191). At the *organizational level*, communicative interventions typically utilize low cost, simply produced print channels supplemented with face-to-face interactions, for in this setting these channels are the most influential (p. 192).

Societal influence is seen as the final constraint on behavior. At *social level*, normative behavior, laws and policies, and the physical and information environments play an integral role in shaping the attitudes and behaviors at the other levels of audience organization. The mass media plays an important role at this stage because of its part in creating and sustaining these societal factors (Flora et al., 1989: 196-197).

Stages of Change

Being that many public communication campaigns seek to impact behavior, it is important for campaign planners to recognize that behavior change is a process, going through multiple stages of development (Slater, 1999: 336). Because multiple stages are involved, each stage warrants different considerations regarding which channels to use for communication purposes. The stages-of-change approach (Prochaska, DiClemente, & Norcross, 1992) proposes five major stages in the change process. The *pre-contemplation* stage describes people who have no intention to change and often lack awareness that a problem exists in the first place. Next, in the *contemplation* stage, people have recognized that a problem exists and are considering taking

action however no commitment has yet been made to alter behavior. The third stage called *preparation* is a transitional stage where people are experimenting with taking action but have not yet modified behavior. Preparation leads to *action*, which is the fourth stage of this model. As the name suggests, people in this stage have successfully changed their behavior. What remains is a period of *maintenance* whereby people learn to sustain the behavior change over time (Slater, 1999: 337).

In terms of choosing information channels, each stage demands different communication strategies. Slater (1999) notes that movement between the *pre-contemplation* and *contemplation* stages is a process of attention and awareness. As one can imagine, this is where the mass media can play a big role. As an agenda-setter, media coverage of a problem should increase issue salience and availability in the minds of the audience. Also, the media can fuel interpersonal discussion that is likely to influence perceived social norms and help organizational mobilization around the issue.

Slater views movement between the *contemplation* and *preparation* stages to be governed by the theory of reasoned action, which posits that people's beliefs about the outcomes of a behavior in combination with their perceptions about the expectations of others in their life about their behavior will predict behavioral intention. Thus, whether or not a person starts experimenting with action depends on their beliefs regarding the costs and benefits of adopting that behavior. By identifying conflicting beliefs regarding the behavior, communication practitioners interested in facilitating the transition between *contemplation* and *preparation* can use more targeted media channels, like booklets, tip sheets, newsletters, etc. to speak more effectively to their circumstances (pp. 340-341).

But experimenting with action and actually committing oneself to taking that action in order to change behavior are two different things. Guiding the process between *preparation* and *action* is social cognitive theory, which holds that behavior change can occur through modeling behavior that others perform. By modeling that behavior, and the skills required to perform that behavior, one's self-efficacy also improves, which is a key element of behavioral intent. Slater contends that the media can serve as an effective model for behavior change, but only when social norms are not readily ascertainable (Slater, 1999: 343), for when they are, individuals are more likely to tune out media messages to the contrary.

Social Capital

For others like Shah, McLeod, and Loon (2001), choosing which mediated channels to use in a public communication campaign should involve consideration of how a particular medium can contribute to social capital. Defined as “the resources of information, norms, and social relations embedded in communities that enable people to coordinate collective action and to achieve common goals” (p. 467), social capital is an important concept to consider when attempting to get people involved.

Guided by this concern, Shah et al. (2001) explore the influence of mass media use on civic engagement, which is an outcome of social capital. Critiques of the mass media's impact on social trust, real-world ties, and community involvement are abundant (Moy, Scheufele, and Holbert, 1999; Putnam, 1995; Gerbner, Gross, Morgan, and Signorielli, 1980; Hawkins and Pingree, 1981). The problem with these critiques, according to Shah et al. (2001), is that they are too simplistic, based on intuition rather than hard data. At the core of such critiques is the assumption that there is one mass communication experience (rather than multiple motive and uses) and one audience (rather than different types of users).

However, people are likely to have different motivations for using various media. Therefore, these use patterns must be considered when assessing the impact of the media on civic engagement and social capital. In their analysis, Shah et al. distinguish between information/surveillance uses, which are understood to have pro-social consequences, and uses for entertainment/diversion, which are generally thought to have more deleterious effects on social capital and civic engagement (Shah et al., 2001: 466).

For the purposes of their study, Shah et al. (2001) conceive civic engagement as an aggregate of both interpersonal trust and civic participation. Analyzing secondary data from the DDB Life study survey, the authors found that Internet use patterns more strongly influence trust and participation than do uses of traditional media, particularly among the youngest adult Americans. Print media continued to have positive effects on both aspects of civic engagement even for the youngest generation. And finally, the analysis showed mixed results for broadcast media, with hard news having no effect, dramas having a positive association with participation, and sitcoms having a positive association with interpersonal trust and negative association with participation (p. 491).

Selecting Information Channels: Audience Considerations

When planning a public communication campaign, practitioners must also be cognizant of considerations that individuals make when selecting channels for their information needs. Chaffee (1986) argues that individuals use a given channel based on two factors: access and utility. In this cost-utility model, exposure to a given channel is based on the access (conceived as cost) an individual has to the particular channel as well as its perceived utility. In terms of cost, some channels cost an individual more in time and effort to use. Trumbo (1998) found that

more costly channels are evaluated as being more useful. Likewise, having a positive expectation of the utility of a given channel is associated with having found that channel useful in the specific context (p. 199).

O'Keefe et al. (2002) argue that the public uses communication channels as a function of their motivational need for particular information content, the availability of the channels, their expectations of the usefulness of the channels, their attention to the channels, their cost, and their credibility. Furthermore, the authors hold that people are more apt to use repertoires, or groups of overlapping information channels rather than relying on only one (p. 393). To test their theory, O'Keefe et al. (2002) evaluated information-seeking habits related to conservation and water pollution of three publics -- rural farmers, rural non-farmers, and urbanites. They hypothesized that the environmental information channel preferences of the three publics would form statistically significant clusters of channels, or repertoires, which would vary among the publics as well as by demographic and communication characteristics within each public.

In their study, factor analysis yielded three interpretable repertoires across all three groups. These repertoires were *agency channels* (comprised of materials from government agencies and county extension programs), *general channels* (comprised of general sources like newspapers, local radio, local television, magazines, and friends and family), and *commercial channels* (comprised of materials from commercial dealers). Overall, the most used channels were newspapers, magazines, and family and friends. Urbanites used radio significantly more than the other two groups, while farmers used magazines significantly more than the others. Farmers also were the heaviest consumers of environmental information produced by government agencies and commercial dealers. One explanation for these trends is that the more general and diverse urban public was found to be more attuned to more general channels,

particularly those representing the mass media, whereas the rural population, especially farmers, relied more heavily on specific and detailed channels. While previous research had found that demographic factors (i.e., income, education, gender and age and psychographic attributes (i.e., environmental awareness and concern) influenced channel preferences, O’Keefe et al. determined that these factors did not predict repertoires as well or as consistently as they had expected them to (O’Keefe et al., 2002: 404).

What this study demonstrates is that different groups are likely to demonstrate different information-seeking patterns and are likely to find various forms of communication to be more credible than others. Thus, understanding information seeking patterns of different publics is crucial to the success of an environmental information campaign where multiple, diverse audiences are likely to be targeted.

Conclusion

In conclusion, communication campaigns are an integral component of a persuasive communication campaign. Channels can be mediated, interpersonal, interactive, or organizational. Each carries with it its own unique capabilities, of which a program planner should bear in mind as he or she contemplates which channels to utilize during which stages of the program. Given that people are likely to receive information from a repertoire of sources, campaigns that use multiple channels are likely to be the most effective and persuasive.

Recommendations

- In order to gauge your public's channel use patterns, ask focus group or survey respondents where they get their information regarding wildlife (newspapers, magazines, radio, television, the Internet, government agencies, commercial dealers, etc.). You could also have them rate various channels in terms of utility and ease of use.
- To get a sense for the effectiveness of communication channels that the UDWR has routinely used, you might want to ask focus group or survey respondents whether they recall being exposed to past materials (i.e., tipsheets, brochures, flyers, radio or television PSA, etc.). This will get at the criteria of *reach*. To measure *impact*, you would need to ask what pieces of information each respondent remembered from these materials.
- If you are trying to encourage a certain type of behavior, you will need to get a feel for the stages of behavior change that each of your publics are in. Recognizing what stage your audience is in will assist you in determining what channels to use.
- Also, be cognizant of how your audience is organized. Are you speaking to individuals, a community, an organization, etc. Your choice of information channel will depend on the type of audience you seek to address.

SOCIAL MARKETING

Thus far, I have discussed the relevance of theories of behavior change, message framing, and communication channels to the type of public communication outreach that the Utah Division of Wildlife Resources hopes to achieve. While the discussion of each of these elements at times may have seemed disparate, all three of these components converge in a method of public communication called social marketing. In this section I will introduce social marketing, elaborate on its roots in conventional commercial marketing logic, discuss the primary components of social marketing, address some of the problems and challenges that social marketers face, and discuss a few of the ways social marketing has been extended and applied.

Introduction to Marketing and Social Marketing

“Why can’t you sell brotherhood like you sell soap?” In 1952, G.D. Wiebe raised this very question as he observed the general effectiveness experienced by sellers of commodities and the general ineffectiveness of sellers of social causes. To answer his own pondering mind, he evaluated four social campaigns to determine what conditions or attributes accounted for their success or failure. He found that of the campaigns that most closely mirrored product-oriented marketing, the more successful the social campaign (Kotler and Zaltman, 1971: 3).

This suggests that the art of selling a product may have some bearing on the art of selling social causes. This belief has given birth to the field of social marketing, whereby commercial marketing tactics and strategies are applied to social issues. Writing in 1971, Kotler and Zaltman argued that “social marketing is a promising framework for planning and implementing social change...The application of the logic of marketing to social goals is a natural development and on the whole a promising one” (p. 3)

What is Marketing?

If you were to ask three individual marketers what each thought marketing was, you'd likely receive three different answers. At one time or another it has been described as a group of related business activities; as a trade phenomenon; as a coordinative, integrative, function in policy making; as an economic process; as a process of exchanging or transferring ownership of products; and many other things. While there is no universally agreed upon definition, marketing has as its core the *exchange process*. In other words, "marketing does not occur unless there are two or more parties, each with something to exchange, and both able to carry out communications and distribution" (Kotler and Zaltman, 1971: 4).

Given its focus on the exchange process, another concept integral to marketing is that of marketing management. Kotler and Zaltman (1971) define this as: "the analysis, planning, implementation, and control of programs designed to bring about desired exchanges with target audiences for the purpose of personal or mutual gain. It relies heavily on the adaptation and coordination of product, price, promotion, and place [the 4 Ps] for achieving effective response" (p. 4).

Unlike selling, marketing is more consumer-oriented. Thus, marketing management is geared around assessing the wants, attitudes, and behavior of potential customers, which informs the design process of products and the merchandising, promotion, and distribution processes as well. Rather than create products without consulting the audience, marketing demands that goods and services be created for audiences that reflect their needs (Kotler and Zaltman, 1971: 5).

What is Social Marketing?

As previously noted, non-commercial entities have begun to examine the logic of marketing as a means to furthering social goals. Like marketing, the method of social marketing has numerous definitions. Kotler and Roberto (1989) define it as “a program planning process that promotes the voluntary behavior of target audiences by offering benefits they want, reducing barriers they are concerned about, and using persuasion to motivate their participation in program activity” (quoted in Maibach, 2002). Andreasen (1995) considers it “the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of their society (quoted in Maibach, 2002). And finally, Rothschild (1999) contends that, “social marketing consists of voluntary exchange between two or more parties, in which each is trying to further its own perceived self-interest while recognizing the need to accommodate the perceived self-interest of the other to achieve its ends” (quoted in Maibach, 2002).

As Maibach (2002) notes, all three definitions converge on two key characteristics of social marketing. First, the goal of social marketing is to influence the behavior of target audience members; programs that do not aim to do this are not technically social marketing campaigns. And second, the behavior change sought from target audience members must be voluntary (p. 8).

Kotler and Roberto’s definition introduces another important attribute of social marketing. The social marketer attempts to influence behavior by offering a package of benefits and reducing barriers to that behavior. This is a product of following what is called the marketing mix, or the 4 Ps of marketing (product, promotion, place, and price) (Maibach, 2002: 9).

Rothschild's definition captures two other key elements of social marketing – exchange and mutual fulfillment of self-interests. According to Maibach (2002), both parties – the marketing organization and the target audience – interact primarily to meet their own interests. Effective marketers will assess the needs of their audience in order to advance their own interests. This process occurs through an exchange of resources, whereby social marketers exchange their goods and services for behavior change on the part of the target audience, and customers in turn exchange their time, effort, money, etc. for the goods and services offered them (p. 9). And finally, Andreasen's definition offers another critical point. The primary beneficiaries of social marketing are the target audience members themselves, or society at large, not the organization or person who initiated the marketing program (Maibach, 2002: 9).

In what follows I will discuss these components of social marketing, as well as some others, in more detail.

Components of Social Marketing

The Marketing Mix

Marketers view the key challenge of marketing as “developing the right *product* backed by the right *promotion* and put in the right *place* at the right *price*” (Kotler and Zaltman, 1971: 7). The key variables in this marketing mix are called the 4 Ps.

Product. Product, according to Maibach (2002), can be thought of as “the bundle of benefits being offered to members of the target market” (p. 11). In order to best assess which benefits matter most to the audience, a social marketer must first study the target audience, determine the most important benefits sought and tailor the product accordingly. Because the aim is to market a social idea or cause, the product need not necessarily be a physical object,

although it certainly can be, such as in the case of condom distribution to promote safer sex. The product can also be a behavior that bestows the bundle of benefits (Maibach, 2002: 11). For example, the product in a social marketing campaign aimed to reduce greenhouse gas emissions, can be riding a bicycle or taking public transportation.

Promotion. Promotion is the persuasive techniques and strategies employed by a social marketer that ultimately make the product familiar, acceptable, and even desirable to the audience (Kotler and Zaltman, 1971: 7). And as Maibach notes, it is a process of informing and persuading members of the target market about the costs, benefits, and availability of the product (p. 11). Promotional elements include advertising, public relations, point-of-purchase materials, direct mail, and web-based tools (Maibach, 2002: 11). As Maibach (2002) points out, promotion is often mistaken for all of social marketing. While promotional elements are certainly the most visible in a social marketing program, such tactics cannot stand on their own. They must be a part of an integrated effort combining all four facets of the marketing mix (p. 11).

Place. Place is akin to a distribution channel through which the product is made available to members of the target market at the time and place when it will be of most value to them (Maibach, 2002: 11). Kotler and Zaltman (1971) argue that the poor result of many social marketing campaigns is in part attributable to their failure to suggest clear and convenient action outlets for those motivated to acquire the product. “Thus, place means arranging for accessible outlets, which permit the translation of motivations into actions” (p. 9).

Price. Price represents the costs that someone must accept in order to obtain the product. In the social marketing context, price includes money costs, opportunity costs, energy costs, and psychic costs (Kotler and Zaltman, 1971: 9). The social marketers approach to pricing the product is based on the assumption that people will perform a cost-benefit analysis when

considering their investment in an issue. Thus, the social marketer should try to increase the benefits of adopting the practice relative to the costs or reduce the costs relative to the benefits (Kotler and Zaltman, 1971: 10).

Consumer Orientation

Social marketing programs must begin with the audience, not with a product or marketing strategy. This makes it a consumer-oriented process. Maibach (1993) defines consumer-orientation as “the audience’s interest in, and sensibilities regarding the campaign topic” (p. 210). If a campaign is to effectively reach this audience, it must reflect the audience’s orientation.

In order to determine what that audience-orientation is, social marketers usually perform two types of research. First, consumer research is used to generate insight into the members of the audience with regard to the behavior of interest, specifically focusing on identifying compelling benefits and significant barriers to action. Second, what Maibach (2002) calls competitive or environmental analysis is used to get a better understanding of the environment in which consumers are making behavior decisions (p. 11).

Furthermore, a process of formative research is also needed to assess how an audience will respond to ideas, messages and methods. Maibach (1993) identifies three types of formative research that contribute to the consumer-orientation of social marketing campaigns. The earliest phase of formative research is concept development. During this phase, social marketers try to get a sense for how the target audience relates to the objectives established for the campaign. This helps marketers to narrow down from many possible topics and strategies. Once concepts have been selected, formative research turns to message development. Social marketers during this phase work on gathering practical information from the audience, such as specific

terminology they use to talk about the campaign topic and the channels of information they will use and trust to receive information regarding the topic. And finally, before a campaign is given the “green flag”, messages need to be tested with members of the audience to assure their viability and potential for impact (p. 216).

Exchange Theory

As previously mentioned, a central component of both commercial marketing and social marketing is the exchange process. At the heart of exchange theory is the assumption that we are “need-directed beings with a natural inclination to improve our own lot” (Hastings and Saren, 2003: 309). Therefore, in order to increase an audience member’s readiness to change, a social marketer must offer them something beneficial in exchange. In order for exchange to take place, Kotler (2000) suggests five prerequisites are required: (1) there are at least two parties; (2) each party has something that might be of value to the other; (3) each party is capable of communication and delivery; (4) each party acts voluntarily and is free to accept or reject the offer; and (5) each party believes it is desirable or appropriate to deal with the other.

Central to these assumptions is the notion that the exchange must be mutually beneficial (Hastings and Saren, 2003). For example, environmental outreach agencies, such as the UDWR, are interested in selling new environmental management concepts or practices, and consumers are generally interested in buying products or ideas that improve their quality of life. If the agency can show that the perceived benefits of the innovation outweigh the perceived costs of its adoption, voluntary adoption by the consumer is more likely (Maibach, 1993: 211). In the environmental context, costs often include time, money, effort, social contacts, and changes in lifestyle. Benefits, on the hand, can include improved health, enhanced long-term security,

sustainability of lifestyle, contribution to the common good, personal satisfaction, and self-empowerment (Maibach, 1993: 212).

Audience Segmentation

The principles of exchange and consumer-orientation depend on being able to tailor communication efforts to the needs, interests, willingness to pay and sensibilities of the target audience. However, there is rarely ever a homogenous target audience; thus, audience segmentation is an important facet of any social marketing campaign. Audience segmentation is a strategy whereby a large heterogeneous target population is segmented into smaller and more homogenous audiences.

Kotler and Roberto (1989) specify three benefits of audience segmentation. First, it enables social marketers to target their efforts to those groups of adopter in most need of a product or who can be best served by a product. Second, it gives social marketers the ability to tailor a product to the target adopters' needs. And third, audience segmentation enables social marketers to tailor communications and distribution more effectively (Maibach, 1993: 212).

Audience segmentation can occur along any number of lines. Some of the more widely used methods of segmentation include geographic segmentation, demographic segmentation, psychographic segmentation, and behavioral segmentation.

Combined, these various components are integrated into an administrative process framework, whereby continuous information is collected from the *environment* by the *change agency*. *Plans and messages* are created and sent through *channels* to *audiences*, and the results are monitored by the *change agency* (Kotler and Zaltman, 1971: 10). The change agency organizes both a research and planning unit. The research unit is charged with monitoring the environment of economic, political, technological, cultural, and competitive influences for

important developments affecting its social policies and goals. The planning unit then takes this information and uses it to formulate appropriate short- and long-range social marketing plans.

Problems and Challenges in Social Marketing

Despite the seeming conduciveness of commercial marketing logic to the promotion of social change, there exist many problems and challenges in applying conventional marketing approaches in social programs. Bloom and Novelli (1981) identify many of these problems in seven decision-making areas: market analysis, market segmentation, product strategy development, pricing strategy, channel strategy development, communications strategy development, and evaluation.

Market Analysis Problems

As already discussed, a basic tenet of social marketing is consumer-centered research that aims to gather information on the wants, needs, perceptions, attitudes, habits, and satisfaction levels of the target audience. However, there are several data gathering problems facing the social marketer. First, social marketers tend to have sub par, secondary data available about their consumers. Unlike most commercial entities that have ready access to past consumer behavior and plenty of marketing research, small budgets, poor sampling, and simplistic analysis procedures often limit social marketers.

Second, it is harder for social marketers to obtain valid, reliable measures of relevant variables. In doing primary research data collection, social marketers must ask people questions regarding topics that often touch people's deepest fears, anxieties, and values. While people are generally willing to discuss these issues, Bloom and Novelli (1981) argue that they are more likely to give inaccurate, self-serving, or socially-desirable answers to such questions (p. 80).

Another challenge for social marketers is assessing the relative influence of identified determinants of what are often very complex behaviors. Social behaviors are often extremely complex and hinge on multiple variables, making them incredibly difficult to predict or understand (p. 80).

Market Segmentation Problems

The process of dividing the public up into homogenous segments can also pose challenges to the social marketer. Two particular challenges could be relevant to the UDWR. First, social marketers often do not have accurate behavioral data to use in identifying segments. The data collection problems alluded to earlier tend to impede segmentation attempts, making it difficult to separate users from nonusers. This further is further complicated when you have different types of users (i.e., hunters, fishers, wildlife watchers, hikers, etc.) that need to be segment. However, as already noted, behavior is not the only type of segmentation method. Audiences can also be segmented via geography, demographics, or psychographics (Bloom and Novelli, 1981: 81).

Second, a social marketer's target segment must often consist of those who are the most negatively predisposed to their offerings, making them more resistant to changing their views. For example, in trying to reach out to urban dwellers who may know little about the UDWR or who view the UDWR as advocates for consumptive uses of the environment rather than appreciative uses, the UDWR may face an oppositional audience (Bloom and Novelli, 1981: 82).

Product Strategy Problems

Once the social marketer has analyzed the market and determined target segments, he or she is then ready to develop an offering that conforms to the desires of the target audience. However, two things obfuscate this process. First, Bloom and Novelli (1981) point out that

social marketers tend to be less flexible in shaping their products or offerings given that they are marketing social behaviors that often cannot be modified or changed. On the other hand, social marketers may be able to promote several ways to perform the behavior, which can broaden their options (p. 82). Second, given that the product that social marketers are trying to sell is most often a complex behavior, formulating a simple, yet meaningful product concept can be difficult.

Pricing Strategy Problems

Commercial marketers find that the development of a pricing strategy typically involves determining an appropriate monetary price. Social marketers, on the other hand, face challenges with pricing. First, social marketers do not price their offerings to maximize their profit but instead price in order to minimize barriers that stand in people's way of performing the behavior; thus, a pricing strategy typically involves trying to reduce the monetary, psychic, energy, and time costs incurred by customers when engaging in a desired social behavior.

Furthermore, the process of measuring prices is made difficult because social marketers tend to have less control over consumer costs. Unlike commercial marketers who can readily adjust change consumer costs by adjusting monetary costs, social marketers can do little to change the time, psychic, or energy costs of their target audience. Often the only thing they can do is make sure that perceived costs are accurate and not inflated in the minds of their target audience (Bloom and Novelli, 1981: 83).

Channels Strategy Problems

The process of developing a channels strategy involves selecting appropriate intermediaries through which to distribute its products or offerings and formulating ways to control these intermediaries to ensure that they behave in a supportive manner. Unfortunately, social marketers tend to have more difficulty utilizing and controlling desired intermediaries.

Specifically, they have difficulty offering incentives to intermediaries like commercial marketers could easily do and generally cannot afford to build their own distribution channels (Bloom and Novelli, 1981: 84).

Communications Strategy Problems

Social marketers sometimes find that their communication options are limited. For example, they usually find paid advertising impossible to use due to high cost. Without advertising as an option, social marketers are restricted to the use of public service announcements. Since competition for PSA time and space tends to be high, social marketers find they cannot control the reach and frequency of their message among their target segments (Bloom and Novelli, 1981: 84).

Another communication challenge occurs in trying to communicate relatively large amounts of information in messages. The need to communicate large amounts of information makes it imperative that social marketers look beyond using public service announcements toward the use of non-advertising channels of communication (Bloom and Novelli, 1981: 85). Finally, social marketers tend to have difficulty conducting meaningful pretests of messages due to lack of funding, time, and appropriate standards or norms against which newly tested messages can be compared (Bloom and Novelli, 1981: 85).

Evaluation Problems

In the end, evaluating the effectiveness of a marketing campaign is difficult for all marketers. As Bloom and Novelli (1981) point out, “one must determine measures of effectiveness and then develop a research design capable of isolating the role the marketing program has had on shifting those effectiveness measures” (p. 87). In terms of effectiveness measures, social marketers often have difficulty determining whether a program is designed to

increase awareness, change behavior, or something else. Or that find it hard to identify relevant constructs and variables that should be monitored to indicate whether program objectives are achieved (Bloom and Novelli, 1981: 87).

Social marketers also face a challenge in estimating the contribution their program has made toward the achievement of certain objectives. Much of the evaluation that takes place for social marketing campaigns takes the form of after only or before and after with no control group studies. According to Bloom and Novelli (1981), while these types of studies can help to identify ineffective programs and can provide an indication that a program might be working, they cannot show an unambiguous cause and effect relationship (p. 87).

In light of the aforementioned problems and challenges that derive from the application of conventional commercial marketing logic to the promotion of social change, Peattie and Peattie (2003) contend that rather than a more rigorous application of said principles, we need a more thoughtful and selective application that emphasizes the important differences between commercial and social marketing (p. 367).

The implications of recasting commercial marketing concepts in the pursuit of social change are four-fold. First, it has taken a number of literal and concrete concepts, like buyers, sellers, exchanges, products, and prices, and translated them into metaphors, making it a very “market-free” kind of marketing. As Peattie and Peattie (2003) explain, the dangers that occur once words are used as metaphors are that one person may use a word metaphorically while another uses it literally, two people might understand the metaphor differently, and metaphors can bring with them associations that are not intended (p. 378).

The second implication of relying on conventional marketing principles to sell social ideas is that marketing brings with it a negative connotation and the concern that it will

contribute to the “commodification of culture” (Peattie and Peattie, 2003: 379). And finally, there exists an ethical dilemma in using marketing tactics to change behavior. Peattie and Peattie (2003) explain that deliberating setting out to change individuals’ behavior in a democratic society raises a number of questions and concerns relating to who decides what behaviors need to change; on what basis; what means they use; and of the accountability of their actions. There is a non-controversial tone to saying that social interventions are designed to “meet the needs of the target market”, as many social marketers do. Unfortunately this substitutes a marketing rationale for a relevant moral rationale called for by the social problem (p. 379-380). Therefore, social marketers must be wary of how they justify their actions.

Extensions and Adaptations of Social Marketing

Community-Based Social Marketing

Community-based social marketing (CBSM) is an extension of social marketing that focuses on fostering sustainable behaviors within local communities. According to McKenzie-Mohr (2000), many programs aimed at fostering sustainable behavior fail in their attempts because they rely too heavily on models of behavior change that psychological research has found to be limited. For example, many programs tend to be information-intensive and assume that knowledge will lead to behavior change. As previously discussed in a prior section, such simplified, linear models of behavior change have proven ineffective in predicting what are typically complex behaviors.

Community-based social marketing is an alternative approach to the information-intensive program that attempts to make visible and relevant the knowledge of environmental psychology to program planners; thus, it merges important knowledge from psychology with the

expertise from social marketing (McKenzie-Mohr, 2000: 546). Community-based social marketing is composed of four steps: uncovering barriers to behaviors and then selecting which behaviors to promote; designing a program to overcome the barriers to the selected behavior; piloting the program; and then evaluating the program once it has been implemented. (For more details regarding community-based social marketing and examples of CBSM in action visit www.cbsm.com or www.toolsofchange.com).

The MOA Framework

In any social marketing situation, a target may be prone, resistant, or unable to comply with the social marketer's intentions. Rothschild (1999) contends that this has to do with the target's levels (high or low) of three variables: motivation, opportunity, and ability. *Motivation* can best be understood as a target's desire or readiness to process information about a product during the reception of information or promotion regarding that product (MacInnis et al., 1991). Rothschild (1999) postulates that self-interest is a strong component of motivation. *Opportunity* is defined as the extent to which the target can process the information without any environmental restrictions (McInnis et al., 1991). As Binney et al. (2003) point out, "in a social marketing context, opportunity occurs when the target is not limited in their desire to act by factors in their external environment such as time, money and outside controls (p. 391). And, *ability* refers to a target's skill or proficiency at solving problems or their knowledge of how to act (p. 391).

Implicit in Rothschild's (1999) MOA framework is that motivation, opportunity, and ability all influence individuals to behave. When a target has high levels of all three variables, he or she is prone to adopt the behavior at the heart of the social marketing campaign. However, a target will be resistant or unable to accommodate the goals of the campaign if one of the MOA

factors is missing or present only at a low level (Binney et al., 2003: 391). In light of this, Rothschild (1999) argues that the MOA framework provides a basis for segmenting the audience and deciding on appropriate intervention strategies.

According to what combination of levels of the MOA factors a target demonstrates, combinations of education, marketing, and law can be used to obtain the appropriate behavior change in the target (Binney et al., 2003: 391). *Education* refers to the use of information to persuade a target to alter behavior without any direct incentive or reward. *Marketing*, on the other hand, relies on reinforcing incentives and/or consequences in an environment that invites a voluntary response. When behavior isn't expected to voluntarily change, the force of *law* can be used to coerce people to alter behavior (p. 391).

In the context of a social marketing campaign, when all three MOA factors are high the target will be receptive to change. In this state, the use of ongoing education will be sufficient to reinforce appropriate behavior. When the target has motivation and ability but lacks opportunity, Rothschild suggests that marketing may be sufficient by offering a product or service into the environment that enable the target to act. As one can guess, when the target has opportunity and ability but lacks motivation it may be necessary to use the force of law. In cases where the target has ability but lacks motivation and opportunity Rothschild recommends trying marketing before resorting to the law. When ability is missing but opportunity and motivation are present education or marketing should be enough to teach the target how to act. And, similarly, if motivation exists on its own education and marketing should be enough to teach the target how to act and to achieve their motivational goals.

Stakeholder-based Policy Process

Traditionally social marketing is used in long-term behavior change interventions in areas like health and the environment. However, Altman and Petkus (1994) propose that social marketing has broader applications to the policy process as well. They contend that a gap exists between the development of environmental policy by Congress and other lawmakers and the receptiveness of those non-governmental stakeholders (e.g., citizens, environmental interest groups, and industry) for whom such policy is designed to provide benefits or impose constraints (p. 37). Applying social marketing principles to the policy-making process could help facilitate the efforts of policy-makers and stakeholders to articulate their policy desires and to encourage the adoption and acceptance of policy goals (p. 38).

The traditional policy process involves stages of problem definition, policy formulation, policy adoption, and policy evaluation. According to Altman and Petkus (1994), this approach fails to adequately address the role of non-governmental stakeholders at each stage of development. Thus, they present an alternative stakeholder-based approach to public policy development, which includes eight stages. These include: (1) problem definition and agenda setting; (2) consult, involve, accommodate; (3) formulate and evaluate alternatives; (4) public hearings; (5) decide, communicate, lead; (6) policy implementation; (7) monitor and adjust; and (8) policy redesign. Fused throughout the stages of their approach are principles of social marketing, which enhance the likelihood of successful development and implementation (p. 39).

In the first and second stages social marketing principles are applied to conduct consumer research and segment audiences according to their needs and desires. In the third stage, the process of formulating and evaluating alternatives draws from the process of determining 'product' attributes in the social marketing context. Once the policy specifications have been decided on, the policy must be communicated in a clear, direct way. This involves promoting

the 'product' using what Altman and Petkus refer to as "informational-advertising." Just as community-based social marketing advocates a limited piloting of the program before it is launched on a full scale, the stakeholder-based approach to policy development includes an implementation stage, whereby outcomes and acceptance of the policy are monitored and evaluated on a test market. And finally, following implementation more market research should occur to determine whether the policy is working effectively or needs to be redesigned (Altman and Petkus, 1994: 41-48).

Conclusion

In conclusion, promoting social change and persuading people to adjust or alter their behaviors can be a daunting and complicated task. One method that shows promise is social marketing. Founded on the logic of conventional marketing logic, social marketing attempts to promote social ideas using the principles of marketing. This entails taking a consumer-oriented approach to research and product development, developing a product that meets the needs and desires of the target audience, providing adequate channels of distribution through which the product is made available, and removing barriers and reducing costs associated with the behavior while increasing the perceived benefits. While social marketing has its problems and challenges, which stem primarily from its reliance on commercial marketing principles, it is noteworthy for its ability to promote social change in areas like public health and the environment.

Recommendations

- A social marketing campaign must remain consumer-oriented. So, always remain focused on your target audience's needs, interests, desires, etc. This should be done by conducting consumer research in order to generate insight into the members of the audience with regard to the behavior of interest, specifically focusing on identifying compelling benefits and significant barriers to action. Also competitive or environmental analysis should be conducted in order to get a better understanding of the environment in which consumers are making behavior decisions (p. 11).
- If possible, conduct formative research in order to assess how an audience will respond to ideas, messages and methods. Formative research includes three phases: concept development, message development, and pre-testing of messages.
- Be sure to segment your audience into homogenous groups. Segmentation can occur via geography, demographics, psychographics, or behavior. For example, in designing a social marketing campaign meant to change Utah's environmental behaviors, the UDWR could segment its audiences into groups that represent the four value orientations.
- Make sure that you provide clear and convenient action outlets for those motivated to acquire the product. This will permit the translation of motivations into actions.
- Draw from the theories and concepts germane to behavior change that were discussed in section 1. These should inform your social marketing campaign at every phase of planning, development, and implementation.
- Have a clear idea of what your campaign is supposed to achieve and identify relevant constructs and variables that should be monitored to indicate whether program objectives are achieved. Doing so will enable you to conduct a much more effective evaluation process.

A FEW THOUGHTS ON ORGANIZATIONAL IMAGE

One factor of a public communication campaign that gets little attention in the literature but has the potential to make a serious impact on the effectiveness of persuasive appeals is organizational image. In other words, the perception or image an individual has of an organization can determine whether or not they find the organization's appeals persuasive. This then means that organizations have interests in understanding how individuals identify with organizations, developing a method to evaluate the public's perceptions regarding its work, and managing audiences' perceptions of them. In what follows, I will discuss some facets of the organizational image and identification processes, as well as methods of evaluating and managing organizational images.

Organizational Image and Identification

One of the biggest concerns an organizational communication manager has is the perception or image that different audiences have of that organization. According to Schuler (2004), the image of an organization corresponds to the mental model that individuals create to represent that organization in their minds. Formed through the cognitive, affective, and sensorial information they receive about the organization, images are akin to concepts or descriptions (p. 37). However, the information on which images are based comes from a wide array of sources, few of which are controlled by the organization itself (p. 38). Therefore, an organization must pay close attention to where and how audiences get its information regarding the organization.

Comparing the process of developing an organizational image in one's mind to a cognitive mapping exercise, Schuler (2004) contends that the image formed by individuals about an organization depends on the following things: (1) the information one has about the

organization; (2) the way the individual acquires the information; (3) the personalized way one categorizes information; (4) the perception of the connection between those pieces of information and others already stored in memory; (5) the perception of the connection between those items of information themselves; and (6) the personal way of assessing the information and retrieving the data that constitute the mental models, in order to talk about them. Furthermore, the image one has about an organization also depends on the type of contact they have with the organization (i.e., whether it is by means of direct sensorial contact or by representation of the organization via a logo, advertisement, or word of mouth) (p. 39).

The later point, that one's perception of an organization depends on the type of interaction they have with the organization suggests that identification or affiliation can also play a pertinent role in influencing an image of an organization. Cardador and Pratt (2006) argue that three affiliation dimensions impact an individual's level of affiliation with an organization: (1) physical proximity, (2) reward-based control, and (3) temporal contact. Physical proximity refers to the degree of physical closeness one has to an organization and relates to whether an interaction with the organization is physically centered around the organization itself or is proximally distant (p. 179). Obviously, the closer the contact between the individual and the organization, the more salient the organization will be to the individual's identity. The second dimension pertains to whether an individual is paid by the organization or not. Because pay can be a behavioral reinforcer, the authors refer to this affiliation dimension as reward-based control, arguing that when reward-based control is low (e.g. one working with volunteers or other non-paid constituents) individuals are less likely to identify with an organization. Finally, temporal contact refers to the duration of association and degree of commitment an individual has with an

organization. When temporal contact is low, individuals are less likely to identify with an organization (p. 181).

Thus, what this implies is that close physical proximity, compensation, and a long-term association are the most favorable conditions for ensuring that an individual develops a strong identification with an organization and, therefore, a stronger image of the organization.

However, Carador and Pratt (2006: 182) note that their list of affiliation dimensions is not exhaustive. For example, they point to work by Rock and Pratt (2002) that suggests one's social context plays an important part in understanding one's identification. Specifically, they contend that whom one spends time with (i.e., members or nonmembers) will influence identification with an organization. And, more broadly, one's social network may influence identification as well.

Evaluating Organizational Image

Before an organization can begin to contemplate influencing a public's image or perception of it, it must identify which image each public already has (Schuler, 2004: 42). In order to do this, Schuler (2004) puts forth what she calls the Organizational Image Configuration Method, which involves five primary stages: (1) identifying the various organizational publics; (2) selecting the target public; (3) selecting a representative sample for the qualitative phase of the research; (4) conducting the qualitative phase of research, which involves identifying the image's attributes for the target public; and (5) carrying out the quantitative phase of the research, which involves the measurement of the importance and satisfaction of each of the image's attributes and grouping the attributes into factors.

During the qualitative phase of the research the interviewer chooses an element or attribute (called the inductor term) connected to the organization (e.g. its name or logo) and uses this element as a stimulus for the interviewees. From this central element, the interviewer encourages the interviewees to reveal the ideas that the inductor term suggests to them. During this phase, the interviewer poses a sequence of six propositions for the interviewee, five of which are applicable to the context of a government agency. These are:

- When I say (inductor term), what is the first idea that comes to mind?
- Which other ideas come to your mind when you hear (inductor term)?
- What do you like about (inductor term)?
- What do you dislike about (inductor term)?
- Where do you receive information about (inductor term)?

Once the data is collected from this phase, two levels of analysis take place. The first stage involves content analysis, whereby the ideas mentioned by the interviewees are categorized. And during the second level of analysis the frequency and order of appearance are observed (pp. 43-44).

The quantitative phase of the Organizational Image Configuration Model consists of the measurement of the importance and satisfaction perceived in the image attributes collected in the qualitative phase. The importance factors help the organization realize meaning networks created in the mental model of the studied group, whereas the satisfaction factors help the organization better understand attribute networks, which interconnect to generate public satisfaction with the organization (p. 46). The importance and satisfaction factors are collected via a questionnaire whereby questions are asked that follow the pattern of “when you think of (inductor term), how important do you consider these attributes/how satisfied are you with these attributes?” The interviewee responds using a 5-point likert scale of “not important” to “very important” and “not satisfied” to “very satisfied.” And finally, in the second stage of the

quantitative analysis, an exploratory factor analysis is conducted. This reveals the strongest relationships between the attributes of the image (p. 47).

In the end, evaluating organizational image allows organizations to get a clear of how target publics think and feel about the organization, as well as provides the organization with important feedback that can help facilitate more effective image management.

Managing Organizational Perception

With a more accurate picture of the organizational image, an organization can then begin to think about managing that image. Elsbach (2003) defines organizational perception management as the “actions designed and carried out by organizational spokespersons to influence audiences’ perceptions of the organization” (p. 289). Within Elsbach’s conception of organizational perception management are four key components, which include (1) perceptions of the organization; (2) actions or “tactics”; (3) organizational spokespersons; and (4) organizational audiences (p. 300).

Perceptions

The perceptions of an organization as an entity include organizational images and organizational reputations. Organizational images are “relatively current, and temporary perceptions of an organization regarding an organization’s fit with particular distinctiveness categories,” such as organizational legitimacy, organizational correctness and consistency, and organizational trustworthiness (Elsbach, 2003: 300). The most common type of organizational image studied is organizational *legitimacy*, which is a general perception that an organization’s actions are desirable, proper, or appropriate within a system of socially constructed norms, values, or beliefs (Suchman, 1995: 574). Another form of organizational image is organizational

correctness and consistency. Research in this area has found that consistency in manager's decisions can lead audiences to view the organization as more stable as well as more correct in its past actions (Elsbach, 2003: 302). Finally, a third type of organizational image has to do with its *trustworthiness*. According to Mayer et al. (1995), the image of organizational trustworthiness is the perception that an organization demonstrates competence, benevolence, and integrity in its behaviors and beliefs. External audiences tend to gauge the trustworthiness of an organization by evaluating its culture and control systems.

The second type of perception is organizational reputation. Defined as an external audience's enduring perception of how an organization's performance compares to another, reputation involves enduring status categorization of an organization (relative to another organization) as perceived by external audiences and stakeholders (p. 304).

Symbolic Actions

A second part of organizational perception management is symbolic action. Elsbach (2003) defines symbolic action as "the activities by organizational spokespersons that are used, at least in part, to affect audience perceptions of the organization" (p. 306). There are three types of symbolic action: (1) verbal accounts; (2) distinctiveness and status-oriented categorizations and comparisons; and (3) symbolic behaviors. Verbal accounts are explanations that are designed to influence perceptions of an organization's responsibility for an event or for the valence of an event (p. 307). Another form of symbolic action that one can take to influence audience perception is to provide organizational categories or comparisons in order to define who you are and who you are not (p. 311).

Unlike verbal accounts, whereby the organizational actions are seen as transmissions of objective information meant to explain or promote particular goals (Russ, 1991: 221), symbolic

behaviors, a third type of action, focuses on the “emerging or unfolding nature of organizational activity. In this sense, symbolic behavior attempts to enact the organizational environment in which events and decisions are made, creating a shared understanding of that environment. This has proven to be an effective way to manage people’s perceptions because it literally shows the organization “living” its image, identity, and reputation. To be most effective, however, symbolic behaviors should be coupled with verbal accounts or communications that explain them (Elsbach, 2003: 313).

Organizational Spokespersons and Audiences

A third component of organizational perception management is the organizational spokesperson. Organizational spokespersons convey or explain symbolic actions to organizational audiences. Spokespersons include anyone who is perceived by audience members as representing the organization (Elsbach, 2003: 318).

The fourth and final component of organizational perception management is the audience, or target of the perception management efforts. Audiences can be external (i.e., members of other organization, public interest groups, and the general public) or internal (i.e., employees, dues-paying members, volunteers, etc.) (Elsbach, 2003: 320).

Conclusion

In conclusion, the image of an organization that resonates in the minds of its audiences can play an important role in the overall effectiveness of a persuasive communication campaign designed to influence attitudes and behaviors. The favorable the image or perception an organization garners, the more effective their persuasive appeals. Likewise, a close affiliation with an organization can breed similar allegiance and a willingness to participate and support its

endeavors. Therefore, before an organization plans and implements a persuasive campaign meant to influence attitudes and behaviors, it would be prudent to systematically evaluate its target audience's organizational image in order to identify the key attributes associated with the organization and the perceived importance and satisfaction associated with each attribute. Having this information provides the organization with an opportunity to better manage their image and reputation by reinforcing or changing those attributes that comprise the nucleus of its image. However, organizational perception management involves more than just identifying perceptions. It involves symbolic actions that support the image an organization wants to create, having a spokesperson that can speak appropriately for the organization, and knowing and understanding your audience.

Recommendations

- Evaluate your target audience's perceptions of the UDWR using a systematic method, such as The Organizational Image Configuration Method put forth by Schuler (2004).
- Implement image-oriented questions into your survey or discuss organizational when conducting focus groups.
- Determine what kind of image you want to perpetuate. Then identify what types of actions and tactics will best convey that image to your publics.
- One way that identification occurs is through personal relationships; thus, the UDWR should view their constituents as partners in the planning and development process.

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