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## Nautical Knowledge: An Experimental Analysis of the Influence of Public Relations Strategies in Safe Boating Communication

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Nautical Knowledge:  
An Experimental Analysis of the Influence of Public Relations Strategies in  
Safe Boating Communication

by

Emily N. Guilfoil

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

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publics, theory of reasoned action, organizational activism

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## Dedication

I dedicate this thesis in loving memory of a friend lost at sea. One who grew up on the water, was educated in boater safety, and determined to spend all of his time helping friends and relatives do what they love.

During my first discussions regarding the implementation of this thesis, I knew that you would be the driving force to achieve this substantial and distinctive task. This is for you, not because you did something wrong that day, but as a reminder of your courage, compassion, leadership, and strength in your time of strife. Each day I am reminded of these characteristics that cannot escape you or your name. So, I thank you.

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## Table of Contents

List of Tables	iii
List of Figures	v
Abstract	vi
Chapter One: Introduction	1
Background	2
Theoretical Basis	4
Purpose	6
Outline	8
Chapter Two: Literature Review	10
Public Relations Strategies	15
Informative Strategy	21
Facilitative Strategy	22
Persuasive Strategy	22
Promise and Reward Strategy	23
Threat and Punishment Strategy	23
Bargaining Strategy	24
Cooperative Problem Solving Strategy	24
Theory of Reasoned Action	25
Situational Theory of Publics	29
Hypotheses	34
Chapter Three: Methodology	36
Design of Study	38
Data Collection for Experiment	39
Instrumentation	40
Manipulation Check for Strategy Type	47
Experiment Pretest	50
Instrumentation	50
Results	51
Data Analysis Procedure	51
Chapter Four: Results	53
Preliminary Data Analysis	54
Hypotheses Related to the Theory of Reasoned Action	58
Hypothesis 1	60

Hypothesis 2	62
Proposition 2.1	63
Proposition 2.2	64
Hypotheses Related to the Situational Theory of Publics	68
Hypothesis 3	70
Hypothesis 4	71
Proposition 4.1	72
Proposition 4.2	73
Chapter Five: Discussion	76
Chapter Six: Conclusions	87
Areas for Further Research	89
Limitations of the Study	90
References	93
Appendices	
Appendix A: Experiment Script	98
Appendix B: Manipulation Check Instrument	102
Appendix C: Informative Treatment	104
Appendix D: Facilitative Treatment	106
Appendix E: Persuasive Treatment	108
Appendix F: Promise and Reward Treatment	110
Appendix G: Threat and Punishment Treatment	112
Appendix H: Cooperative Problem Solving Treatment	114
Appendix I: Strategy Type Control Treatment	116
Appendix J: Instrument	118

## List of Tables

Table 1	Shared Text for Treatments	41
Table 2	Text for Message Strategy Type Control Treatment	42
Table 3	Operationalization of Message Treatments	42
Table 4	Correct Responses for Manipulation Check Across Treatments	48
Table 5	Message Frequency and Valid Percent	54
Table 6	Cronbach's Alpha for Multiple-Item Indexes	55
Table 7	Correlations Between Independent and Dependent Variables of the Theory of Reasoned Action	59
Table 8	Beliefs Predicting Attitude Variables	60
Table 9	Regression Model for Beliefs Predicting Attitude Toward Message	61
Table 10	Regression Model for Beliefs Predicting Attitude Toward Organization	61
Table 11	Regression Model for Beliefs Predicting Attitude Toward Issue	61
Table 12	Beliefs Predicting Subjective Norm Variables	61
Table 13	Regression Model for Beliefs on Subjective Norm Item 1	62
Table 14	Regression Model for Beliefs on Subjective Norm Item 2	62
Table 15	Regression Model for Subjective Norms and Attitudes Predicting Information Seeking Behavior	62
Table 16	Regression Model for Subjective Norms Predicting Behavioral Intent	63



Table 17	Means and Standard Deviations for Attitudes Across Promise and Reward and Threat and Punishment Messages	64
Table 18	Means and Standard Deviations for Message Type Across Attitude Toward Message	65
Table 19	ANOVA for Message Type Across Attitude Toward Message	65
Table 20	Means and Standard Deviations for Message Type Across Attitude Toward Issue	66
Table 21	ANOVA for Message Type Across Attitude Toward Issue	66
Table 22	Means and Standard Deviations for Message Type Across Attitude Toward Organization	67
Table 23	ANOVA for Message Type Across Attitude Toward Organization	67
Table 24	Correlations Between Independent and Dependent Variables of the Situational Theory of Publics	69
Table 25	Independent Variables Predicting Information Seeking Behavior	70
Table 26	Regression Model for Situational Theory of Publics Variables	71
Table 27	Means and Standard Deviations for Problem Recognition Item One Across Treatments	72
Table 28	Means and Standard Deviations for Information Seeking Behavior Across Treatments	73
Table 29	Means and Standard Deviations for Problem Recognition Measures Across Treatments	74

## List of Figures

Figure 1	Public Relations Process Model	18
Figure 2	Matrix for the Analysis of Public Relations Symbols	20
Figure 3	Theory of Reasoned Action	26

## Abstract

This study explored the effect of public relations message strategies on beliefs, attitudes, and behavioral intentions of individuals regarding boater safety. An experiment was conducted using seven safety messages. Specifically, Fishbein and Ajzen's (1975) theory of reasoned action and J.E. Grunig's (1997) situational theory of publics were used to examine the communication effects of message strategies proposed by Hazleton and Long's (1988) public relations process model.

The findings of this study support the predictions of the theory of reasoned action—that salient beliefs predict attitude toward behavior and attitude toward behavior and subjective norm predict behavioral intent. Of the three attitude items measured—attitude toward message, attitude toward issue, and attitude toward organization—salient beliefs had the greatest effect on the attitude toward issue measure. Subjective norm was shown to be the stronger predictor of the three attitude items.

In addition, support was found for the predictions of the situational theory of publics. The independent variables—problem recognition, constraint recognition, and level of involvement—were found to predict information seeking behaviors. However, the use of public relations message strategies in boater safety communication produced minimal effects on the same variables. It was determined that the power strategies, threat and punishment and promise and reward, would be most effective when communicating to a passive public such as the sample tested in this study.

This study is significant to public relations literature because it examined how active boaters and non-boaters perceive safety messages. There appeared to be no research on the use of safe boating messages. Thus, there was no research on how public relations messages about boater safety affect boaters' attitudes, awareness, and behavioral intentions prior to the implementation of this study. Determining effective boater safety messages will help to reduce boater accidents, injuries, and fatalities in years to come (U.S. Coast Guard, 2009), making this study both necessary and original.

## Chapter One

### Introduction

According to a U.S. Coast Guard report, deaths from boating accidents are becoming more common in the United States. Specifically, 4,730 accidents occurred in 2009, resulting in 3,358 injuries and 736 boating fatalities. In addition, recreational boaters caused more than \$36 million in property damage.

Precautionary measures can reduce accident statistics. Since 86 percent of boating deaths occurred on boats where the operator had not received boating safety instruction, boating accident attorney Joseph Maus (2009) insists that states should offer boating safety courses and educational material at little or no cost. The U.S. Coast Guard (2009) argues, however, that few boaters take advantage of the resources available to them.

Boater safety has become an increasingly salient topic. States and safety advocacy organizations disseminate boater safety information in a continual effort to increase awareness and reduce boating accidents. These organizations aim to identify useful communication strategies that may help create or enhance positive attitudes about boating safety among boat owners and operators.

Research in public relations is limited on the subject of boater safety messages, yet there is a wealth of scholarly literature that supports the notion that different message strategies produce different effects on receivers of those messages. The purpose of this study is to replicate and extend the current understanding of public relations message strategy effects by examining the role of message strategies on dependent variables

affecting individuals' behaviors. This study asks whether public relations message strategies will influence problem recognition, constraint recognition, and level of involvement. In addition, it seeks to determine the effectiveness of each strategy in producing positive beliefs, attitudes, and behavioral intentions.

### *Background*

Creating awareness and transforming behaviors related to boater safety has become so vital that organizations have been created specifically to promote boater safety and increase support for this issue. The National Safe Boating Council (NSBC) and the U.S. Coast Guard are prominent national safety organizations that produce safety-related messages directed at boaters.

The National Safe Boating Council was organized in 1958 to increase the safety of recreational boating through education and outreach. It produces an annual safe boating awareness campaign and provides safe boating materials, resources, and tools to recreational boaters and the general public.

The NSBC has grown in the United States and Canada, and currently has a membership of over 330 organizations, 65 percent of which are nonprofit organizations. Organizations are required to pay membership fees ranging from \$50 to over \$1,000, which allow the NSBC to continually develop and produce its safe boating initiatives (NSBC, 2010).

In May 2010, the NSBC launched its "Wear It" life jacket campaign to spread awareness that nearly 90 percent of boating accident victims will drown if not wearing a life jacket. It also introduced the belt pack life jacket that can be conveniently worn around an individual's waist.

In its 2010-2014 strategic plan, the NSBC's goals focus on increasing boating safety education resources and training programs. Its primary objective is to expand and enhance effective safe boating outreach. The NSBC has a vision "to grow into the premier coalition to increase boating safety on our nation's waterways" (NSBC, 2010).

The Florida Fish and Wildlife Commission (FWC), a member of the NSBC, was created in July 1999 as the result of a constitutional amendment approved in the 1998 General Election. The Florida Legislature combined the staff and commissioners of the former Marine Fisheries Commission, and the employees and commissioners of the former Game and Fresh Water Fish Commission. Within five years of the amendment's passage, the FWC established an internal structure emphasizing recreational boating as a component of its other state-mandated initiatives. It seeks to give the general public decision-making capabilities and works with volunteers, landowners, anglers, hunters, wildlife viewers, boaters, scientists, and other government agencies to spread awareness about safety-related topics (FWC, 2010).

As a result of these efforts, the FWC is able to gather and evaluate statewide boating accident statistics in an effort to identify problem areas and trends (FWC, 2010). This data become the basis for the development of projects to improve boater awareness, minimize accidents, and help make waterways safe.

The United States Coast Guard, a military maritime service within the Department of the Homeland Security, has a similar mission to foster awareness regarding the well-being of individuals and the environment. Developed in 1789 and originally called the United States Lighthouse Service, the U.S. Coast Guard's core role is to "protect the

public, the environment, and United States economic and security interests in any maritime region in which those interests may be at risk” (U.S. Coast Guard, 2010).

The U.S. Coast Guard provides military, humanitarian, and civilian law-enforcement benefits to the American public. The Coast Guard’s message strategies are driven by its fundamental goal to “eliminate deaths, injuries, and property damage associated with maritime transportation, fishing, and recreational boating” (U.S. Coast Guard, 2010).

All the organizations discussed have taken on an increasingly activist role in their attempts to create positive attitudes about boater safety, which in turn might reduce the number of boating fatalities each year. Organizations create communication strategies based on their specific objectives. They attempt to determine which techniques will reach their target audiences and which messages will produce positive behavioral change. Creating effective messages to reach strategically important audiences is a critical function of public relations (Hallahan, 2000), and few public relations studies have examined safe boating communication.

#### *Theoretical Basis*

“Theoretical models are, by definition, abstractions of reality. However, models facilitate organization of seemingly unrelated events while stimulating the transfer of theory to practice” (Hazleton, Cupach, & Canary, 1987, p. 5). The application of theoretical perspectives has led to the identification of cause-effect relationships, which has contributed to the practical and relevant theoretical foundation of public relations scholarship. Thus, this study brings together several theoretical perspectives in an attempt to better understand boater safety messaging.



First, Hazleton and Long's (1988) public relations process model, a theoretical framework for analyzing public relations messages, will be used to define public relations as goal-oriented, strategic communications. "Public relations goals are a consequence of organizational goals and provide the impetus for organizational goal achievement through communications" (Werder, 2005, p. 220). Goals are translated into message strategies, which organizations use to reach intended audiences. The more vital an environment is to an organization, the more the organization's strategic goals will reflect the environment (Hazleton, 1993).

Next, Fishbein and Ajzen's (1975) theory of reasoned action will explain individuals' beliefs, attitudes, and behaviors regarding public relations message strategies. Because humans are rational beings that systematically process information provided to them, the theory assumes that attitude and behavior are related. Moreover, behavioral intentions are the single best predictor of one's behavior and can be determined by assessing an individual's subjective norm (Petty & Cacioppo, 1996). This theoretical framework concludes that, in most cases, individuals will perform behaviors they find popular with others and will refrain from behaviors they regard as unpopular or unfavorable with others (Petty & Cacioppo, 1996). Individuals' attitudes and beliefs about intended behaviors, which have been found to be associated with message exposure and message content, have been found to predict actual behavior.

Last, J. E. Grunig's (1997) situational theory of publics attempts to explain how, why, and when individuals communicate with organizations. Communication behaviors of targeted audiences are examined by measuring how members of publics perceive situations in which they are affected by organizational consequences (J.E. Grunig &

Hunt, 1984). Attributes of publics that predict whether a public will actively or passively engage in communication behaviors include problem recognition, constraint recognition, and level of involvement. These attributes act as dependent variables necessary in determining effective strategies used in public relations.

### *Purpose*

This study seeks to contribute to theory-driven research in public relations by examining the influence of message strategies on individuals' beliefs, attitudes, and behavioral intentions regarding boater safety. Though there is little scholarly literature on boater safety communication in any form—including content found on the Internet—there is a rich collection of scholarship relating to how and why individuals communicate, and what motivating factors contribute to organizational effectiveness through communication. Specifically, Hazleton and Long's (1988) public relations process model, Fishbein and Ajzen's (1975) theory of reasoned action, and J.E. Grunig's (1997) situational theory of publics, are used in this study to assess how receiver variables are affected by boater safety messages.

First, Hazleton and Long's (1988) public relations process model articulates a taxonomy of strategies organizations use to communicate with publics. The model proposes seven strategies: informative, persuasive, facilitative, promise and reward, threat and punishment, cooperative problem solving, and bargaining. This study will focus on six of Hazleton and Long's (1988) public relations message strategies to determine which strategic frame is most effective in producing positive behavioral intentions in the context of boating safety messages.

Next, this study seeks to emphasize how communication affects people at an individual level in terms of their beliefs, attitudes, and behavioral intent. Fishbein and Ajzen's (1975) theory of reasoned action will be used as the theoretical framework to examine these effects in the specific context of boater safety messaging.

Third, this study attempts to add to the robust body of knowledge on J.E. Grunig's (1997) situational theory of publics, contributing to literature regarding the importance of problem recognition, level of involvement, and constraint recognition in the information seeking and information processing behavior of publics.

Werder (2003) studied the influence of the public relations message strategies on individuals' beliefs, attitudes, and behavioral intentions regarding an organization's response to activism. Werder (2006) also studied the influence of Hazleton and Long's (1988) message strategies on attributes of publics, including problem recognition, level of involvement, constraint recognition, and goal compatibility, when used by an organization responding to activism. Schuch (2007) replicated and extended Werder's (2003, 2006) studies by testing the influence of the seven public relations message strategies, reframed as activist message strategies, on receiver variables.

This study attempts to replicate and extend Werder (2003, 2006) and Schuch's (2007) studies, while deepening understanding of Hazleton's (1988) message strategies. It seeks to analyze which strategy is more likely to positively influence the beliefs, attitudes, and behavioral intentions of individuals regarding boater safety. As such, this study tests the following hypotheses:

H1: Salient beliefs predict attitude toward behavior.

H2: Attitude toward behavior and subjective norm regarding behavior

predict behavioral intention.

P2.1 Promise and reward strategies will produce more positive attitudes than threat and punishment strategies

P2.2 Message strategies will have a greater influence on attitude toward message than on attitude toward issue or attitude toward organization.

H3: Problem recognition, constraint recognition, and level of involvement influence information seeking behavior in publics.

H4: The use of message strategies in boater safety communication will influence problem recognition, constraint recognition, and level of involvement.

P4.1: Threat and punishment strategies will have the strongest effect on information seeking behavior.

P4.2: Facilitative and cooperative problem solving strategies will have the greatest influence on problem recognition.

### *Outline*

Chapter two provides a more thorough examination of literature on organizations' public relations approaches to message strategies. This study takes a theory-driven approach, analyzing Hazleton and Long's (1988) public relations process model, Fishbein and Ajzen's (1975) theory of reasoned action, and J.E. Grunig's (1997) situational theory of publics. This study focuses on six of the seven public relations message strategies (Hazleton & Long, 1988), omitting bargaining due to the inability of the study to provide feedback from participants. By definition, the bargaining strategy is most appropriate for an interpersonal communication context. Chapter four explains this study's methodology and describes the procedures used to collect and analyze data.

An experiment was conducted using undergraduate students at a large Southeastern university as its sample. Chapter five presents the results of participants' responses to public relations message strategies. Chapter six provides an in-depth analysis of the results. Last, chapter seven determines implications for public relations practice relating to theoretical approaches analyzed. Study limitations, and areas of focus for future research will also be discussed.

## Chapter Two

### Literature Review

The National Safe Boating Council (NSBC) and the United States Coast Guard are two prominent organizations that distribute safe boating communication. They have taken an increasingly activist role in creating positive attitudes about boater safety, which in turn might reduce the number of boating injuries and fatalities each year. First, Holtzhausen (2000) argues that a function of public relations includes taking on the role of activist within an organization. Since organizations such as the NSBC and the U.S. Coast Guard attempt to disseminate safety information in a continual effort to create awareness, activism and the role of an organizational activist will be defined. Second, a discussion regarding the shift from traditional print to online media will determine which mediums are effective for distributing strategic boater safety material.

Next, a discussion regarding content will be explained—the most popular content in boater safety communication being ‘how-to guides to boating,’ and ‘boating equipment use.’ Last, in an attempt to better understand boater safety messaging, three theoretical perspectives will be discussed. Specifically, Hazleton and Long’s (1988) public relations process model, Fishbein and Ajzen’s (1975) theory of reasoned action and J. E. Grunig’s (1997) situational theory of publics will frame hypotheses regarding both active boaters and non-boaters’ attitudes, beliefs, and behavioral intentions about safe boating.

Holtzhausen (2000) insists that public relations practitioners should increase participation in activism because it is advantageous for the public relations profession as

well as beneficial to the organization and its publics. Her postmodern view suggests that public relations practitioners will act as organizational activists to facilitate social change (Holtzhausen & Voto, 2002). For example, government agencies along with safety advocacy groups (as discussed in chapter one) were developed to implement social programs for the general public. These safety-focused organizations are highly involved, credible communicators. From Holtzhausen and Voto's perspective (2002), these groups may be viewed as activist organizations due to their ongoing mission of issue advocacy and social revision.

Practitioners display organizational activism through situational ethical decision-making and a desire for change (Holtzhausen & Voto, 2002). According to the postmodern view, society is shaped through unseen power networks that control an individual through social institutions, discourses, and practices (J.E. Grunig et al., 2007). "Public relations practitioners, as part of for- and non-profit institutions, not only form part of these unseen power networks but actively help sustain them" (Holtzhausen, 2000; Holtzhausen & Voto, 2002; J.E. Grunig et al., 2007, p. 365). Holtzhausen (2000) argues that the best way to avoid becoming part of the power grid that promotes power elites is to act as a social and organizational activist. Public relations practitioners have the opportunity to fulfill leadership responsibilities in social change movements, becoming social activists themselves (J.E. Grunig et al., 2007).

Activists join small groups based on their motivation and dedication towards a topic of interest (Holtzhausen & Voto, 2002). An activist public represents two or more individuals who organize to influence another public or publics through action—that may include education, compromise, persuasion, pressure tactics, and force—to reach goals

for its political, social, or economic cause (J.E. Grunig, 1992; L.A. Grunig, J.E. Grunig, & Dozier, 2002). These groups are uniquely comprised and offer a hearty wealth of knowledge on a respective topic. More important, activist groups are loyal to a cause rather than to a particular organization (Holtzhausen & Voto, 2002).

Activist groups have two primary functions: to rectify conditions recognized by the group and to maintain the organized group establishment (Werder, 2005). Activists' goals are achieved through strategic communication, including communicating a desired position on a topic, facilitating further discussion, and soliciting others to become active in the intended cause (Werder, 2006). Moreover, the practitioner as organizational activist will serve as a conscience in the organization by resisting dominant power structures and making beneficial decisions in a particular situation (Holtzhausen & Voto, 2002).

In her (2006) study, Werder examined the relationship between message variables and receiver variables and developed message strategies identified by Hazleton and Long's (1988) public relations process model. Werder (2006) tested the seven public relations strategies derived from the process model to examine their influence on the attributes of publics regarding an organization responding to activism.

Public relations literature on activism often focuses on how organizations should respond when targeted by activist groups rather than how audiences may respond when targeted by activist groups (Werder, 2003, 2006). As a result, there is minimal research in public relations concerning message effects on the receiver of strategic messages. However, Schuch's (2007) examination of message strategy influence on variables related to the receiver of activist communication broke ground in this specific area of



study. Findings indicated that activist organizations would be most successful using persuasive and coercive strategies, (later referred to as power strategies). Therefore, activists may use their issue and the outcome of the issue to persuade publics to act in a guided manner (Schuch, 2007).

In regards to boater safety, an organization should attempt to facilitate change by providing boaters with the information, motivation, and skills to practice safety as part of their boating activities. Postmodernists' intent in public relations is to describe and explain a specific type of practitioner behavior; therefore, the role of the organizational activist in this study includes determining effective mediums to distribute boater safety communication, and examining communication material with the intent of designing effective boater safety messaging.

Activist organizations seek to develop strategic communications; however, public relations messages have evolved, shifting with the electronic data wave from print to online media. Print materials including books, newspapers, pamphlets, and brochures are not disseminated as frequently compared to material found by Internet searches (Molyneaux, O'Donnell, & Gibson, 2009). For example, YouTube was established in 2005 and now provides access to approximately 1,490 videos for searches using the key words, "boater safety" (retrieved August 10, 2010). Web sites offer online boater safety courses in place of classroom learning to provide a hassle-free, efficient, and flexible learning experience.

Greenfield (2009) studied the effects of various types of media on intelligence and learning ability and determined that the use of every medium develops some cognitive skills at the sacrifice of others. Internet usage has lead to the "widespread and

sophisticated development of visual spatial skills” (Carr, 2010, p. 5). Carr (2010) argues, however, that the development of visual spatial skills weakens individuals’ capacity for deep processing including knowledge acquisition, inductive analysis, critical thinking, imagination, and reflection. Greenfield’s (2009) argument suggests that there are both strengths and weaknesses associated with the World Wide Web, depending on how it is utilized by its publics and their information seeking habits. “The hallmark of the competent communicator is behavioral flexibility” (Hazleton, et al., 1987, p. 57). Communication is situational; therefore, communicators should adapt messages to audiences to produce intended outcomes (Werder, 2006).

While some criticize Internet usage for teaching boating safety, others recommend Internet use for its accessibility and wealth of knowledge available to anyone. Regardless of media utilized, the most popular material created by organizations producing boater safety material remains ‘how-to guides to boating’ and ‘boating equipment use’ (Guilfoil, 2009).

How-to guides to boating include step-by-step processes demonstrative of some sort of action on the water. Such processes include launching a vessel in water, mooring the vessel to a dock or shoreline, driving the vessel, and learning proactive skills used while boating. Protecting oneself and passengers during dangerous circumstances and caring for the environment are also prominent in how-to guides (U.S. Coast Guard, 2010).

Boating equipment use focuses on physical items required by law inside the vessel. These items include, but are not limited to, life vests, flares, fire extinguisher, flashlights and lights wired in the boat, whistles or bells, boating paddles, ropes and lines,

anchors, and boating registration and licenses. Food and water for passengers is also considered vital elements of boating equipment. Equipment required by law is predominantly used to assist boaters during times of distress. For example, the U.S. Coast Guard directs boaters to use equipment in the following ways: flares are used to gain attention, whistles produce sound for notification of danger or when searching for lost passengers, boating paddles provide adequate rowing power during boat motor failures and can be used as a weapon, and anchors maintain a boat's coordinate position until safe conditions are met.

Research conducted by Forgas (1983), argues that highly competent communicators will be more sensitive than low-competent communicators in their perceptions of situational dimensions of compliance gaining episodes (Hazleton, et al., 1987). In addition, "communication is the ethical and legitimate means for achieving goals which require social cooperation" (Hazleton, 1993, p. 88). Activist organizations maintain a willingness to fulfill a societal duty; therefore, the public's cooperation is vital to reach activists' organizational goals. A central function of public relations is creating effective messages to reach strategically important audiences (Hallahan, 2000).

#### *Public Relations Strategies*

Hazleton and Long (1988) define public relations as a "communication function of management through which organizations adapt to, alter, maintain, or adapt to their environment for the purpose of achieving organizational goals" (p. 88). This definition emphasizes communication, specifically the practice of two-way communication with mutual understanding across the organization. It invokes the idea that not only may a targeted audience change its attitudes and behavioral intentions, but the organization may

also make changes based on the needs of its environment. The primary foci of this public relations definition, based in general systems theory, are communications, goals, and the organization's ability to be multidisciplinary. It is not context specific, and offers several simultaneous relationships among variables (Hazleton, 1992). "The development of theory is largely dependent upon the conceptual development of constructs that adequately reflect the richness and complexity of public relations practice" (Hazleton, 1992, p. 33). The promotion of organizational change within a whole system becomes important in the general systems theory perspective, and in Hazleton and Long's (1988) public relations process model (Hazleton, 1993).

At a macroscopic level—considering the environment as the super system—the public relations model (see Figure 1) invokes a theoretical shift to practice, and is often described as a series of events (Hazleton, 1993). The environment becomes the super system with three subsystems: (1) input of public relations, (2) transformation, and (3) output processes. Specifically, the three subsystems are the organization (input), communication (transformation), and audience (output).

The organizational subsystem creates and gives input from the environment to the system. Input interacts with organizational goals, structure, resources, and management philosophy (Hazleton & Long, 1988). Goals are a prominent concept for public relations because they direct behavior and create limitations in decision processes. Hazleton (1992) argues that it is likely that interdependence between organization and environment may be purposely related to organizational goals. These goals act as references to analyze output. "Public relations goals can be expressed in terms of maintenance or change of the organization or the environment" (Hazleton, 1992, p. 41). Therefore, the more vital an

environment is to an organization, the more organizational goals will involve the environment.

Transformation of inputs occurs during the public relations decision process and includes research and analysis, problem identification, and solution identification (Hazleton et al., 1987). Transformation begins with monitoring the environment and the organization, and comparing each with organizational goals (Hazleton, 1992).

The communication subsystem provides a boundary-spanning function among the environment, organization, and target audience subsystems (Hazleton et al., 1987; Hazleton, 1992). This process is selective in that “organizational goals, perceived interdependence with dimensions of the environment, and ability to process information are likely to influence the selection of inputs” (Hazleton, 1992, p. 40). Messages must take a tangible form before communicated, thus communication outputs are the messages to which audiences are exposed (Hazleton, 1992, p. 43). During this step, communication goals, objectives, and campaigns come to life.

Message output contains physical, psychological, and sociological properties (Hazleton, 1992). Physically, messages are perceived because they are tangible. The receiver of the message places meaning on the message, hence the psychological property. Socially, the most important referents—potential sources including opinion leaders, family, and work groups—influence individual message evaluation processes (Hazleton et al., 1987). There are symbolic and semantic markers that may indicate which public relations strategies are used to reach a targeted audience (Hazleton, 1992). Messages to targeted audiences located in internal and external environments act as the output.

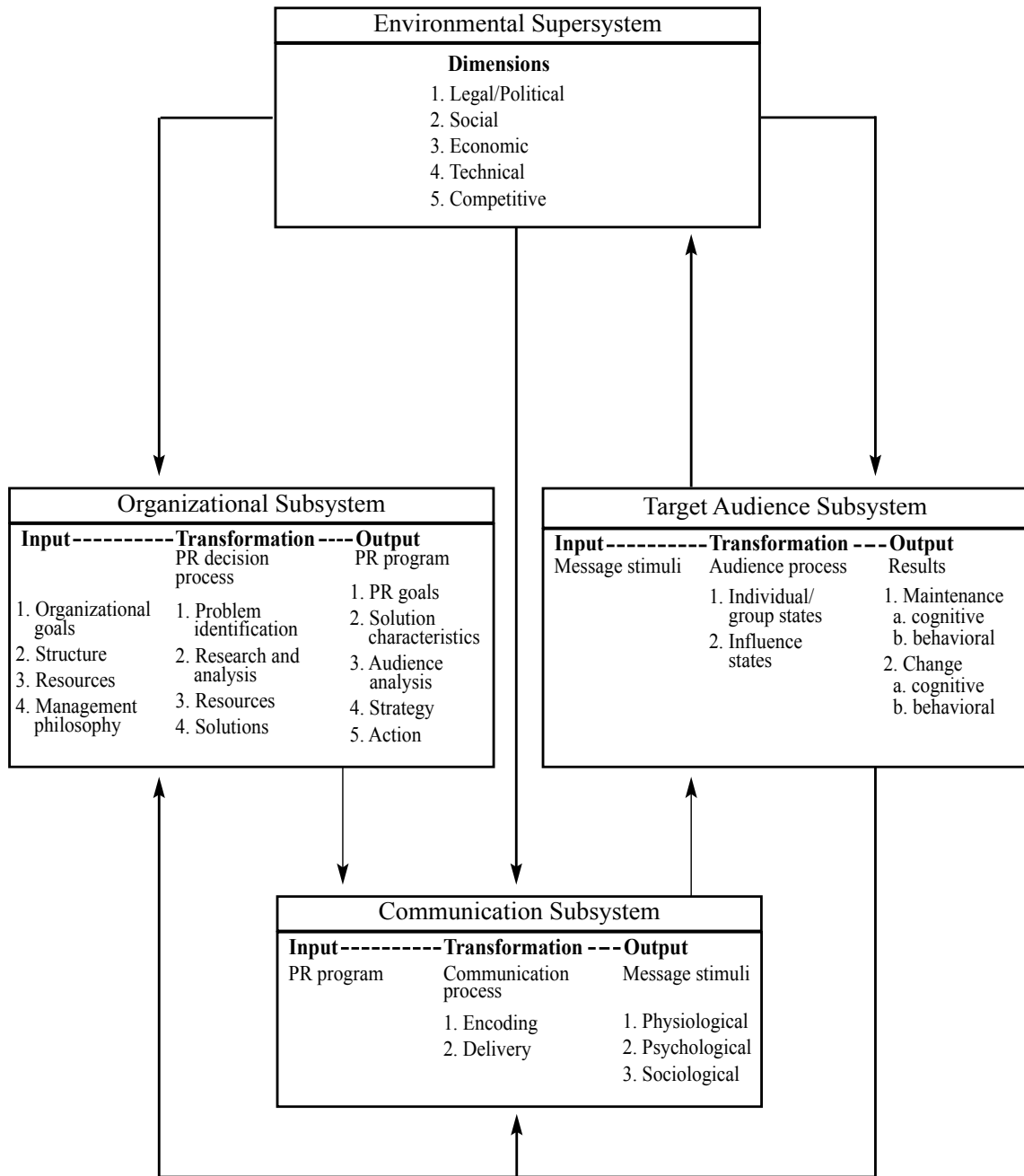


Figure 1. Public Relations Process Model (Werder, 2005; adapted from Hazleton & Long, 1988)

“Target audience output results in environmental and organizational maintenance, adaptation, or alteration” (Hazleton et al., 1987, p. 12). This process has the ability to affect behaviors, which can impact structural change within an organization. It is circular

in that its output gets pushed back through the environment super system and the subsystem, continually influencing public relations activities. Defined microscopically, the three subsystems—input, transformation, and audience—will have their own cycles (Hazleton & Long, 1988).

“Organizations rely on symbols to accomplish organizational goals applicable to public relations” (Hazleton, 1993, p. 97). Public relations communication consists of one or more symbols encoded as a message by one party and decoded by another (Hazleton, 1993). Symbols are often used as organizational resources; thus, in order to be effective, both parties must understand the use of symbols in communication.

Hazleton (1992) developed a matrix for the analysis of public relations messages using symbols (see Figure 2). The left side of the matrix consists of three concepts—content, structure, and function. These concepts may function independently, but are present at every point in the communication process (Hazleton, 1993).

As referenced, messages contain physical, psychological, and sociological properties, and must take a tangible form before they can be communicated. The top of the matrix contains the physical, psychological, and sociological levels of abstractions of the audience.

At the psychological level, Hazleton (1992) identified six functions of messages that represent the goals of public relations regarding the impact messages have on audiences and the meaning of messages. The functions represent general message and persuasion strategies—facilitate, inform, persuade, coerce, bargain, and solve problems. Facilitate, inform, persuade, and coerce were borrowed from social change literature and represent strategies for planned change (Zaltman & Duncan, 1977). The remaining two

functions, bargaining and solving problems, stem from J.E. Grunig's (1992) excellence theory.

	<b>Physical</b>	<b>Psychological</b>	<b>Sociological</b>
<b>Content</b>	graphic-visual oral-aural tactile olfactory taste	A. <u>Reference</u> denotative connotative  B. <u>Style</u> logical interesting emotional assertive face-preserving concise ambiguous factual	rhetorical visions fantasy themes symbolic cues fantasy types sagas
<b>Structure</b>	intensity contrast spatial order chronological order	A. <u>Organic</u> spatial chronological types  B. <u>Psychological</u> cause/effect problem/solution climax anti-climax	A. <u>Distribution</u> network size network shape symmetry relationship  B. <u>Frequency</u> activity topic/symbol
<b>Function</b>	A. <u>Attributions to Symbols</u> repeat contradict substitute complement accent verify  B. <u>Attributions to Communicators</u> relationship status affect	facilitate inform coerce bargain solve problems persuade	A. <u>Task Performance</u> problem identification  solution identification  behavior regulation  information exchange  B. <u>Group Maintenance</u> socialization  consciousness raising  conflict resolution leadership

Figure 2. Matrix for the Analysis of Public Relations Symbols (Werder, 2005; adapted from Hazleton, 1993)



From these six psychological functions, and based off of general systems theory, Hazleton (1992) developed a taxonomy of seven public relations strategies organizations use when communicating with publics. Similar to his definition of public relations, Hazleton's (1988) public relations model focuses on achieving goals using communication strategies. These goals relate to the meaning of messages determined by a single individual and the impacts that the messages produce (Hazleton, 1993).

The seven strategies include: informative; facilitative; persuasive; promise and reward; threat and punishment; bargaining; and cooperative problem solving. Strategy selection is determined by an organization's perception of the audience with which it is communicating at a given time (Hazleton, 1992). Each strategy has unique characteristics, and can be used more or less frequently depending on the organization's motives (Page & Hazleton, 1999). Below is an explanation of the seven public relations strategies (from Hazleton, 1993; Page & Hazleton, 1999; Werder, 2003, 2005, 2006).

The informative strategy is based on the presentation of neutral, unbiased facts. Informative messages maintain neutral language, do not draw conclusions, and use natural patterns of organization to assist comprehension. The strategy assumes a rational, motivated audience and presumes that the audience will come to the appropriate conclusions. In addition, this strategy may confer alternative solutions to issues (Hazleton, 1993; Werder, 2006).

“Research indicates that time-on-task and frequency of exposure to messages are positively related to learning” (Werder, 2006, p. 339). Thus, informative strategies may be used to build a foundation for future learning, create awareness of a problem, and establish that the problem can be solved. They are particularly useful when behavioral

change within a target public does not have to occur quickly. Alone, however, an informative strategy may not be effective when an organization does not have the resources to maintain involvement long-term (Zaltman & Duncan, 1977).

The facilitative strategy provides resources to the audience, often becoming an enabler for the targeted audience to act in ways it has already been programmed to act. Resources provided might be tangible or intangible, constituting a cognitive structure needed to reach a particular goal, or accomplish an intended action (Hazleton, 1993). According to Werder (2006), facilitative strategies are most effective when used with a program that creates awareness among a public and offers the public availability for assistance (p. 340). For example, an organization is using the facilitative strategy when it offers itself as a resource for its public to seek information. Thus, “All the information that you need can be found on our Web site,” is an example of the facilitative strategy in use.

The persuasive strategy provides for a biased delivery of information often caused by a selective presentation of information. “Persuasion is a symbolic process in which communicators try to convince individuals to change their attitudes and behaviors regarding an issue through the transmission of a message in an atmosphere of free choice” (Perloff, 2008, p. 17). This strategy appeals to individuals’ values and presumes that the audience lacks motivation or is resistant. The persuasive strategy provides for a call to action either implicitly or overtly, and is often effective when communicating a message that involves time constraints (Werder, 2006).

Zaltman and Duncan (1977) argue that persuasive strategies are utilized when a problem is not recognized or considered important by a public, or when involvement is

low. When a specific solution does not seem effective, persuasive strategies are implemented (Werder, 2006).

Promise and reward and threat and punishment strategies are components of Hazleton's power strategies, formerly known as coercive strategies (see Holtzhausen & Werder, 2009). Both promise and reward and threat and punishment strategies are considered to be coercive functions because they involve an exercise of power, and utilize promises or threats to gain compliance. Coercion is a technique used for forcing individuals to behave, as the coercer wants them to act. It proposes an exercise of power, and though it shares overlapping qualities with persuasion, Perloff (2008) argues that coercion is often perceived as a more derogatory term due to the element of force contrived in the definition. Unlike persuasion, coercion lacks the clause concerning free will to act. Thus, the receiver acts contrary to their personal preferences (Perloff, 2008).

Power (see Holtzhausen & Werder, 2009) is useful when a public's perceived need for change is low, when it is anticipated that resistance to change will occur, or when a problem's solution must be found and implemented rapidly (Werder, 2003). Power strategies create the ability to gain compliance and assume resistance to compliance by intended publics. They assume that the source of the message controls an outcome that is important to the receiver of the message.

The promise and reward power strategy uses positive coercion to gain compliance. It is linked to performance as the source of the message controls an outcome desired or liked by the receiver of the message. It includes a request for action and a related outcome that may or may not be directly related to an individual's action to carry out the request.

The threat and punishment power strategy uses negative coercion as a compliance-gaining technique. The source of the message controls an outcome feared or disliked by the receiver. This strategy may require a request for action directly or indirectly related to an individual's performance of the request. In essence, the source creates a negative message in order to coerce the intended audience to act or make a change in its attitudes, beliefs, or behavioral intentions. Schuch's (2007) analysis of activist message strategies on receivers found that the threat and punishment strategy had the greatest effect on goal compatibility.

The sixth strategy, bargaining, reflects characteristics similar to J.E. Grunig's (1992) two-way asymmetrical model, meaning that it uses contrasting symbols to define groups. Individuals are likely to have differing goals and dissimilar information, yet use a common method to reach an end. To simplify, words such as "us" and "them" are used, and an organized exchange of messages between two parties takes place (Hazleton, 1993). The bargaining strategy will not be tested in this study since it requires an organized exchange of messages between communicators.

Last, the cooperative problem solving strategy acts as an opposite to bargaining. Rather than using "us" and "them," to define audiences, cooperate problem solving uses, "we." Werder (2006) argues that cooperation is effective when an organization and its target public feel a need for each other's participation in identification of problems and development of alternative solutions (p. 341). The cooperative problem solving strategy facilitates the composition of a single, functional group with a desire to work on problems together, and find solutions together. (Hazleton, 1993; Werder, 2006).

Though largely unexplored, Hazleton and Long's public relations process model (1988) provides scholarship for the analysis of public relations message strategies. "A useful public relations model must facilitate partitioning of selected variables for closer investigation" (Hazleton et al., 1987, p. 5). Thus, the taxonomy presents a visual conceptualization of the public relations behavior of organizations while maintaining communication as its centerpiece (Hazleton et al., 1987; Page & Hazleton, 1999; Werder, 2005).

### *Theory of Reasoned Action*

There is a need for campaigns to reduce the information deficit regarding boater safety messaging, but information alone does not always change behavior. For example, Anderson (2000) conducted an experiment to test the impact of symbolic modeling and persuasive efficacy information on self-efficacy beliefs and intentions to perform breast self-examination. He studied health communicators who model prevention skills and instill in individuals the belief that they can apply skills successfully under stressful conditions (Anderson, 2000). Study findings indicated that efficacy expectations operate as cognitive mediators of intentions to adopt preventative health practices, and symbolic modeling enhanced perceived self-efficacy and behavioral intentions. Thus, the greater the perceived efficacy, the greater are intentions to perform the behavior (Anderson, 2000).

Anderson's (2000) study sheds light on the influence of skills training on targeted publics. "Training helps translate motivation into action, yet it is up to the public to determine how much effort to invest in refining skills" (Anderson, 2000, p. 111).

Literature from social psychology suggests that Ajzen and Fishbein's (1980) theory of reasoned action is a practical model to measure individuals' attitudes, beliefs, and behavioral intentions as a prediction to actual behaviors (see Figure 3).

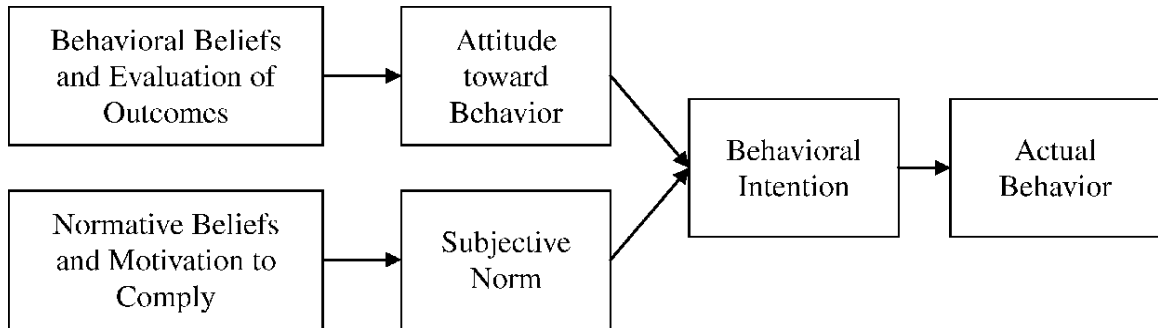


Figure 3: Theory of Reasoned Action (Petty & Cacioppo, 1996; adapted from Ajzen & Fishbein, 1980)

Humans are rational beings that systematically process information provided to them. A calculation of the costs and benefits of engaging in a particular action and careful thought process about how important others will view the behavior under consideration takes place. Specifically, (1) behavior is determined by intention to engage in behavior, (2) intention is determined by attitude toward the behavior and subjective norm, (3) attitude is determined by behavioral beliefs and evaluations of the salient outcomes, and (4) subjective norm is determined by normative beliefs and motivation to comply with the most important referents (Fishbein & Ajzen, 2005). Behavioral intentions are the single best predictor of one's behavior, and can be determined by assessing an individual's subjective norm (Petty & Cacioppo, 1996).

In most cases, individuals will perform behaviors they find popular with others and will refrain from behaviors they regard as unpopular or unfavorable with others (Petty & Cacioppo, 1996). Therefore, they will concede to social norm, which is the perception of the social pressures placed on the person to perform or not to perform the action. Human

attitudes and behaviors are intertwined, and most individuals act consistently with their attitudes (Werder, 2006).

Attitude consists of behavioral beliefs referring to the consequences of a behavior, and outcome evaluations or the evaluations of the consequences (Perloff, 2008). Attitude predicts behavior; however, it does not always predict action. For example, individuals who know that abstaining from the consumption of alcohol while boating will lead to positive outcomes should be more likely to quit consuming alcohol while boating. Likewise, individuals who enjoy consuming alcohol while boating—holding a negative attitude toward abstaining—should not necessarily plan to quit consuming alcohol. Individuals maintaining negative attitudes towards abstaining from the consumption of alcohol may believe that if they quit consuming alcohol, they will get seasick or temperamental—two highly undesirable outcomes.

Subjective norm also has two elements including normative beliefs and motivation to comply. First, normative beliefs refer to an individual's beliefs that other specific individuals or groups maintain about whether a behavior should or should not be performed. A decision to perform a behavior is, in essence, decided by the most popular or most esteemed referent. Second, motivation to comply explains the motivation for an individual to follow along with the popular or esteemed. Motivation to comply with a behavior entails elaborate reasoning; however, motivation to comply to the most popular referent ideally deals with the individual's assumption that fitting in or becoming part of the popular group is necessary (Perloff, 2008).

Next, behavioral intention is the extent to which an individual intends to perform a particular behavior. This includes the plan to put the behavior into action. Positive

attitudes and the subjective norm impact behavioral intent (Perloff, 2008). For example, if there is a favorable attitude toward abstaining from the consumption of alcohol while operating a boat, and everyone around the situation wants to abstain, an individual is likely to comprise a plan of action to abstain from consuming alcohol while operating a boat.

The majority of individuals have the ability to control their social behaviors (Fishbein & Ajzen, 1975). As mentioned, intention to perform a behavior is a prediction for the behavior. However, behavioral intent must match exactly with the actual predicted performance of the behavior in order for the prediction to be an accurate representation of the behavior (Perloff, 2008). To simplify, if one wants to predict whether individuals will abstain from consuming alcohol at the boat ramp tomorrow, one should ask individuals if they intend to abstain from consuming alcohol at the boat ramp tomorrow. Asking individuals if they plan to abstain from consuming alcohol or to stop breaking laws is too general and would not predict the specific behavior. All variables must be congruent with the original question.

Ajzen and Fishbein's (1980) theory of reasoned action provides reasoning for behavioral predictions. However, positive and negative attitudes, and subjective norms including individuals' desires to side with the most popular referent are variables that should be considered when predicting behaviors. Proponents of Ajzen and Fishbein's (1980) theoretical model argue that not all individuals have control over their behavior or that they lack the psychological capability of premeditating and conducting behaviors. Still, the theory of reasoned action has been used to predict behaviors in a variety of disciplines (Ajzen & Fishbein, 2005; Perloff, 2008).



Sperber, Fishbein, and Ajzen (1980) studied women's occupational orientations. Brinberg and Durand (1983) examined behaviors regarding intentions to eat at fast-food restaurants. A number of studies have predicted health-related behaviors, including Manstead, Proffitt, and Smart's (1983) analysis of breast-feeding or bottle-feeding infants and Anderson's (2000) experiment regarding the impact of symbolic modeling and persuasive efficacy information on self-efficacy beliefs and intentions to perform breast self-examination. Booth-Butterfield and Reger (2004) found that theory based approaches to public health interventions were useful for designing, implementing, and evaluating research. Specifically, their "1% or less" nutrition intervention study found significant and predicted changes in intervention participants on intention, attitude, and behavioral beliefs (Booth-Butterfield & Reger, 2004, p. 581).

The theory of reasoned action offers a thoroughly tested framework for analyzing the influence public relations strategies have on the beliefs, attitudes, and behavioral intentions of individuals. Ajzen and Fishbein (1980) argue that these variables must be analyzed in the context of a specific behavior. Since boater safety is a growing public issue, it should be considered to be of critical importance to public relations scholars and practitioners. Therefore, this study focuses on the beliefs, attitudes, and behavioral intentions of individuals responding to boater safety messaging.

#### *Situational Theory of Publics*

Research suggests that the use and effectiveness of public relations message strategies depends on the attributes of the public to whom the strategy is directed (Page & Hazleton, 1999; Werder, 2005, 2006). Communication effects from a public relations perspective can be more easily answered using situational theory of publics (Werder,

2006). J. E. Grunig (1984) argues that by measuring how members of publics perceive situations in which they are affected by organizational consequences, communication behaviors of publics can be understood.

J. E. Grunig (1978) defines a public as a group of people facing a similar independent situation, recognizing what is problematic in the specific situation, and organizing to do something to fix the problem. Hallahan (2000b) defines a public as a group of people who relate to an organization, and demonstrate varying degrees of activity or passivity that may or may not interact with others concerning their relationship. Hallahan's (2000, 2000b) definition introduces varying levels of involvement in specific publics. From J.E. Grunig's (1978) definition, however, four types of publics can be identified: nonpublic, latent public, aware public, and active public (J.E. Grunig & Hunt, 1984). Hallahan (2000b) extends J.E. Grunig's four categories introducing a fifth public, aroused. Organizational responses may need to be addressed differently to publics in each category depending on the circumstances, and considering the different levels of knowledge and involvement that these publics exhibit (Hallahan, 2000).

A nonpublic does not contain any of the three conditions of J.E. Grunig's (1978) definition of a public. It does not face a similar situation as an organization, recognize a problem in a situation, nor organize to fix the problem. Nonpublics have low levels of involvement and little knowledge about a topic of interest to an organization, particularly because the topic is not relevant to them (Hallahan, 2000). These publics are least attentive to public relations message strategies, making this large population of individuals difficult and costly to reach.

Inactive publics are the groups from which other publics are created. Hallahan (2000) states, “creating awareness and interest among otherwise disinterested audiences is the foundation upon which virtually all influence theories are based” (p. 465).

A latent public faces a specific situation prompted by a result from an organization, but does not recognize the negative situation. J.E. Grunig and Hunt (1984) argue that as much as one third of the population could be described as either a nonpublic or latent public on any particular topic (Hallahan, 2000, p. 464).

An aware public recognizes that it faces the situation and understands the problem associated with the organizational result. Last, a group becomes active when it understands all of the three aspects of J.E. Grunig’s (1978) definition, including acknowledgement, organizing, and actively fixing the problem. Active publics talk about problems, and systematically arrange to fix them (J.E. Grunig & Hunt, 1984). They are more opinionated than other publics, and are likely to maintain well-organized opinions to guide their behaviors (J. E. Grunig, 1997).

Active publics help to accomplish goals that will further impact organizations. Thus, “the stronger a public’s identity with an organization, the stronger will be its reaction to what the organization says and does” (Hallahan, 2000, p. 464).

Researchers can better understand publics by measuring how individuals in the targeted public perceive situations in which they are interested in or affected (J.E. Grunig, 1997; Werder, 2006). Three factors, or independent variables, are used to predict communication behavior, attitude change, and behavior change (J.E. Grunig, Toth, & L.A. Grunig, 2007). Developed by J.E. Grunig (1997), level of involvement, problem recognition, and constraint recognition become variables that determine whether a

targeted public will actively or passively engage in some sort of intended behavior (Werder, 2006).

Involvement, perhaps the most important variable, is defined as the extent to which an issue, problem, or situation has personal relevance to an individual (J.E. Grunig & Hunt, 1984); it has the ability to explain thought processes, and behavioral intentions (Werder, 2005). Involvement may occur from actual participation in a situation, or it may arise internally (J.E. Grunig, 1997). Enhancing the relevance of the message to individuals is a technique that has been shown to increase involvement and message elaboration, “particularly including appeals to fear and guilt, to self-interest, and to socially important interests” (Hallahan, 2000, p. 470).

High levels of involvement lead to easier identification of problem recognition. Individuals high in need for cognition recall more message arguments, generate a greater number of issue-relevant thoughts, and seek more information about complex issues than those with low need for cognition (Petty & Cacioppo, 1996). Highly involved individuals practice more information seeking behaviors, yet individuals rarely seek out information that does not directly affect them (L.A. Grunig et al., 2002).

Next, problem recognition, the extent to which individuals recognize a problem is facing them, is dependent upon individuals’ ability to cognitively perceive that a situation has consequences, notice a problem in the situation, and craft problem solving techniques to mend the situation (J.E. Grunig et al., 2007). J.E. Grunig and Hunt (1984) argue that individuals do not stop to think about situations unless they perceive that something needs to be done to remedy the situation. Therefore, the probability of communication is

increased by problem recognition, and information seeking behavior takes place even in low involvement situations (J.E. Grunig et al., 2007).

Last, constraint recognition is the extent to which individuals perceive factors that inhibit their ability to move to action or change behavior (J.E. Grunig et al., 2007). This deals with individuals' ability to recognize shortcomings or obstacles in a situation that may inhibit their free will to make decisions and act on them. Perceived high constraints are likely to reduce communication. "For a campaign to move people to develop organized cognitions to perhaps change their behavior, the campaign must show how people can remove constraints to their personally doing anything about the problem" (J.E. Grunig et al, 2007, p. 341).

Werder's (2006) study found that items measuring involvement and goal compatibility were the strongest predictors of information seeking behavior. Information seeking behavior is defined as the premeditated scanning of the environment for messages about a particular topic of interest to the targeted public. Targeted publics actively seek information if they maintain high levels of problem recognition, low constraint recognition, and high levels of involvement (Werder, 2006; Perloff, 2008).

The situational theory of publics helps to identify target publics according to their level of involvement, problem recognition, and constraint recognition (J.E. Grunig et al., 2007). Segmenting publics according to their level of engagement with an issue for purposes of creating effective message strategies and campaigns has proven beneficial in public relations (Werder, 2005). In addition, organizational resources can be more easily distributed to appropriate publics.

## *Hypotheses*

This study analyzes boater safety message strategy effects on receiver variables. Four hypotheses and four propositions were developed based on the purpose of, and literature reviewed for, this study.

The theory of reasoned action posits that salient beliefs predict attitude toward behavior and that attitude toward behavior and subjective norm regarding behavior predict intention. To test the predictions of the theory of reasoned action, the following two hypotheses and two propositions were tested:

H1: Salient beliefs predict attitude toward behavior.

H2: Attitude toward behavior and subjective norm regarding behavior predict behavioral intention.

P2.1 Promise and reward strategies will produce more positive attitudes than threat and punishment strategies.

P2.2 Message strategies will have a greater influence on attitude toward message than on attitude toward issue or attitude toward organization.

Akin to the situational theory of publics, information processing as a dependent variable will be examined in this study. The last two hypotheses relate to J.E. Grunig's (1997) situational theory of publics.

H3: Problem recognition, constraint recognition, and level of involvement influence information seeking behavior in publics.

Hypothesis three asks whether the degree of information seeking behavior is dependent on the amount of problem recognition, constraint recognition, and level of involvement acquired by publics.

H4: The use of public relations message strategies in boater safety communication will influence problem recognition, constraint recognition, and level of involvement.

P4.1: Threat and punishment strategies will have the strongest effect on information seeking behavior.

P4.2: Facilitative and cooperative problem solving strategies will have the greatest influence on problem recognition.

Hypothesis four is a relational statement claiming that the six message strategies, derivatives of the public relations strategies developed from Hazleton and Long's (1988) public relations process model, are independent variables that influence the dependent variables of problem recognition, constraint recognition, and level of involvement. The two propositions related to Hypothesis four were developed based on previous research findings (Hazleton & Long, 1988; Werder, 2006).

Propositions 4.1 and 4.2 examine whether the public relations strategies used as independent variables will significantly affect the dependent variables, information seeking behavior and problem recognition.

The next chapter provides the methodology used to test the hypotheses and propositions posited above. It provides data collection, instrumentation, and data analysis procedures used to form conclusions about the topic of study. In addition, this section will aid in forming recommendations for effective boater safety messaging, and limitations for future public relations studies.

## Chapter Three

### Methodology

This study explores the effect of public relations message strategies on beliefs, attitudes, and behavioral intentions of individuals regarding boater safety. It is significant to public relations literature because it examines how both active boaters and non-boaters perceive safety messages. There appears to be no research on the use of safe boating messages. Thus, there is no research on how public relations messages about boater safety affect boaters' attitudes, awareness, and behavioral intentions. Determining effective boater safety messages will help reduce boater accidents, injuries, and fatalities in years to come (U.S. Coast Guard, 2009), making this study both necessary and original.

An experiment was conducted using safety messages derived from Hazleton and Long's (1988) public relations process model. Specifically, Fishbein and Ajzen's (1975) theory of reasoned action and J.E. Grunig's (1997) situational theory of publics were used to examine the communication effects of message strategies proposed by Hazleton and Long (1988).

In his *Primer of Public Relations Research*, Stacks (2002) argues that the only way that researchers can distinctly test whether something actually causes a change in something else is by means of experimentation (p. 196). Experiments utilize both dependent and independent variables. Specifically, the independent variable causes some sort of change in the dependent variable; thus, the dependent variable is dependent for its



value on the independent variable (Stacks, 2002). Experiments identify specific causal variables for testing, giving the researcher control. In persuasion research, experiments are used to test the effectiveness of sources and message content on the attitudes and behaviors of intended audiences (Boynton & Dougall, 2006). The primary objective of experimentation is to establish that two or more variables are related to one another in predictable ways (Stacks, 2002).

Werder (2003) used an experimental method to test the effects of public relations strategies on beliefs, attitudes, and behavioral intentions, and Werder (2006) used a similar experimental method to test strategy influence on problem recognition, constraint recognition, level of involvement, and goal compatibility, all independent variables used to analyze an activist organization. Schuch (2007) also used an experimental method to test activist message strategy influence on the same variables.

This study intends to extend Werder's (2003, 2006) and Schuch's (2007) findings by utilizing the variables: problem recognition, constraint recognition, and level of involvement to test the influence of message strategies. However, there are clear distinctions between their studies and this study.

First, Werder's (2003, 2006) studies involved an actual case of activism between two real organizations, People for the Ethical Treatment of Animals (PETA) and McDonald's. Unlike Werder's studies, Schuch's (2007) study was not based on a real activist organization or its events. Instead, Schuch's Gopher Tortoise Advocacy Group was modeled after an actual organization, and the issue addressed by the group in her study was real.

Second, Werder was interested in participants' perceptions of McDonald's after their exposure to both PETA's activism and McDonald's responses. The messages Werder used to test strategy influence were designed as McDonald's responses to PETA's activism. Schuch's messages explored participants' perceptions of an activist organization in order to determine strategy effectiveness in making publics more active and sympathetic to the activist's cause.

Like Schuch's study, this study is modeled after an actual organization, and the issue addressed by the group is authentic; however, this study seeks to examine the beliefs, attitudes, and behavioral intentions of two understudied publics—active boaters and non-boaters. This differs from Werder (2003, 2006) and Schuch's (2007) activist message strategy studies due to the differing publics analyzed and strategy intentions.

The theory of reasoned action and the situational theory of publics offer theoretical background that explains the effects of communication on targeted publics. Six of the seven strategies derived from Hazleton and Long's (1988) public relations process model will be examined to determine effective boater safety messaging.

### *Design of Study*

The organization of interest in this study, the Safe Boating Advocacy Group, was modeled after an actual boater safety organization to keep the scenario as realistic as possible. A contrived organization and message strategies were used to avoid bias from attitudes previously existing about a familiar organization or its messages.

The Safe Boating Advocacy Group's message content is a call to action for the general public to join the advocacy group. The issue of boater safety was chosen due to

its geographic proximity to the participants who attend a large southeastern university, as well as the researcher's personal interest.

To examine the influence of public relations message strategies, participants were shown a message based on the strategy definitions discussed in the literature review. Each message was presented in the form of a screen shot from the Safe Boating Advocacy Group's Web site. After reading and analyzing the screen shot, participants rated their problem recognition, constraint recognition, level of involvement and the intent to seek information about safe boating. Participants also rated their beliefs, attitudes, and behavioral intentions toward the Safe Boating Advocacy Group using measures determined by the theory of reasoned action. The instrument used for the pretest and experiment can be found in Appendix J of the Appendices.

#### *Date Collection for Experiment*

Participants were undergraduate students enrolled in a mass communication course at a large southeastern university. The sample totaled 329 participants. Of these, 87 (26.4%) were male, 231 (70.2%) were female, and 11 (3.3%) did not report their gender. The age of the participants ranged from 17 to 39, with an average age of 20.

Of the 329 participants, 203 (61.7%) were White/Caucasian, 30 (9.1%) were Black/African American, 42 (12.8%) were Hispanic, 24 (7.3%) were Asian/ Pacific Islander, 3 (.9%) were Native American, 14 (4.3%) reported an ethnicity other than the five choices listed above, and 13 (4.0%) did not report their ethnicity. This report on ethnicity corresponds with the U.S. Census Bureau statistics on ethnicity for the state of Florida (U.S. Census Bureau, 2010), making this study's experimentation and results presumably credible.

The experiment took place in a large lecture hall, at the beginning of class, and each participant was randomly assigned to one of the eight different treatment conditions. The use of booklets containing a message from the Safe Boating Advocacy Group derived from one of the public relations strategies, and the instrument designed to measure the receiver variables of interest allowed for variation among conditions. At the beginning of each booklet, participants were provided with an informed consent statement, an explanation of the study's purposes, and instructions for completing the experiment. Participation in the experiment was voluntary and no incentives were given to participants. The script used for the pretest and experiment is located in Appendix A.

### *Instrumentation*

Participants were exposed to one of eight different messages from the Safe Boating Advocacy Group. Six of the messages were manipulations of the public relations strategies identified in the literature review, while the seventh message was unrelated to the organization's campaign, in order to control for strategy type. The eighth item was the overall control, which tested the absence of a message to determine whether using a message would indeed create greater effects than no message at all. The seven tangible messages were presented in the format of Web screen shots that would typically be found on a Web site produced by the Safe Boating Advocacy Group.

Each booklet was coded with a number from one to eight. For each number, a different message of a screen shot of the Safe Boating Advocacy Group's Web site could be found. Thus, participants who received a booklet coded with a 'one' received the overall control for the experiment. The overall control had no message, so participants were instructed to disregard the lack of message and begin the questionnaire. Participants

receiving a booklet coded with a ‘two’ received the message strategy control, those with a booklet numbered ‘three’ received the informative treatment, the booklet numbered ‘four’ contained the facilitative message, those assigned a booklet numbered ‘five’ received the persuasive message, booklet ‘six’ contained the promise and reward message treatment, booklet ‘seven’ contained the threat and punishment treatment, and participants randomly assigned booklet ‘eight’ received a screen shot with the cooperative problem solving message. Coding the booklets from one to eight was a way for the researcher to differentiate the message treatments without participants’ knowledge that each booklet contained a different treatment item.

All seven treatments had identical photos and layout. The six strategies derived from the public relations strategy taxonomy, and the control treatment shared the exact text in the main body of the treatment explaining the mission of the Safe Boating Advocacy Group (see Table 1). The main body of the six strategy treatments, and the control treatment contained 61 words and six lines of text. The content of the control treatment screen shot was unrelated to that of the six academic public relations strategies, though the format was the same as the strategy treatments (see Table 2). The message control treatment contained 39 words and five lines of text.

Table 1. Shared Text for Treatments

<i>Shared Text for Treatments</i>
<p>The Safe Boating Advocacy Group was established in 2006 by a group of recreational boaters and others concerned with boater safety. The Advocacy Group offers safety education and outreach; encourages the study of statistical data for future safe boating campaigns; conducts active public information groups and education programs, and creates ‘how-to guides to boating’ for recreational boaters throughout the southeastern United States.</p>

Table 2. Text for Message Strategy Type Control Treatment

<i>Message Strategy Type Control</i>
Captain Joe will be hosting clinics on offshore angling at Pete’s Pier in Crystal River, Florida from 8 a.m. to 6 p.m. during the first and last weekends in May. Proceeds from the clinics will benefit the Florida Fish and Wildlife Commission’s research programs.

Table 3. Operationalization of Public Relations Message Strategies

<i>Message Strategy</i>	<i>Strategy Definition</i>	<i>Message Content</i>
Informative	Based on the presentation of unbiased facts. These messages do not draw conclusions, but presume the public will infer appropriate conclusions from accurate data. They are characterized by objectivity and the use of neutral language.	‘Ninety percent of drowning fatalities due to boating accidents could have been prevented if the victim was wearing a life jacket.’
Facilitative	Makes resources available to a public that allow it to act in ways that it is already predisposed to act. Resources may be tangible items, such as tools or money, or they may be directions or information needed to accomplish specific tasks.	‘All of the resources you need to learn about the importance of safe boating and how you can become a safe boater can be found in this Web site.’
Persuasive	Is characterized by appeals to a public’s values or emotions. This strategy may include a selective presentation of information, and messages are directive in the sense that they provide a call for action either indirectly or directly.	‘When boating fatalities occur friends and family members are left to suffer the loss of a loved one. Help reduce boating fatalities by joining our organization and learning about boater safety.’
Power: Promise & Reward	Uses positive coercion and involves the exercise of power to gain compliance. It includes a request for action and a related outcome that may be directly or indirectly linked to an individual’s	‘Studies show that 90 percent of boating accident victims will drown if not wearing a life jacket. When you join our organization, you will receive a free t-shirt and boating safety information kit.’

	performance of the request. The source of the message controls an outcome desired or liked by the receiver of the message.	
Power: Threat & Punishment	Uses negative coercion and involves the exercise of power and threat to gain compliance. It includes a request for action and a related outcome that may be directly or indirectly linked to an individual's performance of the request. The source of the message controls an outcome feared or disliked by the receiver of the message.	'Studies show that 90 percent of boating accident victims will drown if not wearing a life jacket. If you don't join our organization and learn about boater safety, you may become the next boating fatality!'
Cooperative Problem Solving	Demonstrates a willingness to jointly define problems and solutions to problems. These messages are characterized by an open exchange of information to establish a common definition of the problem, common goals, and sharing positions and responsibilities about the issue. These strategies use inclusive symbols, such as 'we' and 'us.'	'We are cooperating closely with the U.S. Coast Guard to spread awareness about the importance of safe boating. If you would like to help us in this cooperative effort, please join our organization. Together, we can reduce boating injuries and fatalities.'

The messages used to test the manipulation for strategy type, along with the operational definitions of the strategies are provided in Table 3. The eighth condition, the overall condition, did not contain a message from the Safe Boating Advocacy Group; it did not have a treatment or message. All of the eight treatment conditions used the same instrument to measure the variables of interest.

After viewing a message strategy from the Safe Boating Advocacy Group, the participants were asked to complete a questionnaire. Located directly following the

instructions on the instrument, participants were asked to check the appropriate category for the following question: Do you have access to a boat on a regular basis (Yes \_\_\_ No \_\_\_)?

Next, the instrument contained items measuring attributes of publics. Items were created to measure problem recognition, level of involvement, constraint recognition, and information seeking behavior. The instrument also contained items to measure participant's beliefs and subjective norm. Attributes of publics, and items measuring participant's beliefs and subjective norm were rated on a 7-point Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Seven-point semantic differential scales were used to measure participants' attitudes toward the message strategy, and attitudes toward the behavior.

Items measuring the independent and dependent variables of situational theory of publics were replicated from previous literature with slight modifications to fit the context of the present study. Similarly, items measuring beliefs, attitudes to message, attitude to issue, attitude toward the organization, subjective norm, and behavioral intent were modified from previous studies on the theory of reasoned action, with slight modifications to fit the context of this study.

Specifically, problem recognition, the first variable tested, was measured using four statements. These statements were: 1) I believe there is a problem with the way people perceive the importance of boater safety; 2) I do not believe that operating without the proper safety equipment on board is a boat is a threat to individuals; 3) I believe there is a problem with current methods to facilitate boater safety messages; 4) I do not view boater safety as a problematic issue.



Level of involvement was measured by the following five statements: 1) I am personally affected by situations involving boating; 2) I am concerned about boater safety, but am not personally affected by it; 3) I do not have any involvement with situations involving boating; 4) I do not have any involvement with situations involving safety precautions; 5) Being a safe boater affects me.

To measure constraint recognition, the third variable tested, the following four items were used: 1) I do not think there is anything I can do to prevent boating accidents; 2) I am able to make a difference in situations involving safe boating; 3) My actions will reduce the likelihood of getting into a boating accident; 4) My actions will be too inconsequential to impact the amount of recreational boating accidents that occur annually in the U.S.

Information seeking behavior was measured using the following items: 1) I plan to seek out additional information about ways that I can become a safer boater; 2) I plan to visit a Web site for further information on safety skills for boating; 3) I would send an email requesting further information on situations involving boater safety.

Behavioral intent was measured using the above information seeking items; specifically behavioral intent was measured using the above six statements: 1) I would forward an email about situations involving safe boating practices to my friends; 2) I would donate money to families who experienced an injury in their family due to a boating accident; 3) I would donate money to families who experienced a death in their family due to a boating accident; 4) I would attend a meeting of the U.S. Coast Guard; 5) I would take a boater safety course on the Internet; 6) I would take a boater safety course in a classroom.

Participants' salient beliefs were measured using the following items: 1) I believe boater safety is important; 2) I believe communicating messages about boater safety is important; 3) I believe boating accidents are a growing problem; 4) I believe recreational boaters should take safety education seriously; 5) I believe there should remain a mutual respect between a boater and the water.

Subjective norm was measured using the following items: 1) If aware of situations involving boating accidents, people who are important to me would think there is a problem; 2) If my friends and family knew about the Safe Boating Advocacy Group, they would want me to support it.

Using a 7-point semantic differential scale, attitude toward the message, attitude toward the organization, and attitude toward the issue was measured. The following items were used to measure attitude toward the message: 1) Messages from the Safe Boating Advocacy Group are not informative/ formative; 2) Messages from the Safe Boating Advocacy Group are unbalanced/ balanced; 3) Messages from the Safe Boating Advocacy Group are not credible/ credible; 4) Messages from the Safe Boating Advocacy Group are untrustworthy/ trustworthy.

Attitude toward the organization was measured using the following three items concerning the Safe Boating Advocacy Group: 1) My attitude toward the Safe Boating Advocacy Group is unfavorable/ favorable; 2) My attitude toward the Safe Boating Advocacy Group is negative/ positive; 3) My attitude toward the Safe Boating Advocacy Group is bad/ good.

The remaining three items measured attitude toward the issue; specifically, situations involving boater safety: 1) My attitude toward situations involving boater

safety is unfavorable/ favorable; 2) My attitude toward situations involving boater safety is negative/ positive; 3) My attitude toward situations involving boater safety is bad/ good.

In addition to the previous items measured, participants were asked to provide demographic responses for gender, age, and ethnicity, major, class standing, and birth state. Gender, ethnicity, and class standing required participants to circle the most appropriate category. For the gender question, participants were instructed to circle either 'male' or 'female.' For the ethnicity question, participants were instructed to circle one of the six choices: 1) White, Caucasian; 2) African-American; 3) Hispanic; 4) Asian-Pacific Islander; 5) Native American; 6) Other. For the class standing question, participants were instructed to circle one of the six choices: 1) Freshman; 2) Sophomore; 3) Junior; 4) Senior; 5) Graduate student; 6) Other.

Age, major, and birth state required open-ended responses. Participants' ages represented ordinal responses, and major and birth state reflected nominal responses.

#### *Manipulation Check for Strategy Type*

Prior to conducting the hypotheses tests, a manipulation check was administered to determine individuals' level of understanding of the Safe Boating Advocacy Group's message strategies derived from Hazleton and Long's (1988) public relations process model. The messages used to test manipulations for strategy type are provided in Table 3. The text box where the strategy message text was presented contained between four and six lines of text and 20 and 40 words.

The manipulation check determined whether messages from the Safe Boating Advocacy Group satisfactorily matched the academic definitions for each message.

Participants wrote the number of the strategy that best matched and defined the Safe Boating Advocacy Group’s message. Items were replicated from previous studies (Werder, 2003, 2006; Schuch, 2007) and adapted for the context of this study. See Appendix J for Instrument.

Sixty-three undergraduate students from research and writing classes in the School of Mass Communications participated in the manipulation check. Eighteen out of 31 (58%) students in the research class got all matching items correct. Six students missed one or two matching items (19%). Seven students missed four or more out of the six matching items (22%). Thirty-two students from the writing course completed the manipulation check. Nineteen students got all of the matching items correct (59%), and nine students missed one or two matching items (28%). Four students attempting the manipulation check missed three or more out of the six matching items (1%).

Thirty-seven out of 62 (60%) students successfully identified all of the corresponding treatments and definitions, and 15 out of 62 students (24%) missed one or two matching items. Nearly 84 percent (83.9%) of students attempting the manipulation check understood the matching exercise missing no more than two of the items. The results of the manipulation check are shown in Table 4.

Table 4. Correct Responses for Manipulation Check Across Treatments

<i>Treatment Condition</i>	<i>Number of Participants with Correct Response</i>	<i>Percent Correct</i>
Threat & Punishment	58	93.54
Promise & Reward	52	83.87
Cooperative Problem Solving	51	82.25
Facilitative	50	80.64
Informative	47	75.80
Persuasive	45	72.58
Total:	62	100%

The threat and punishment strategy performed the best. Of the 62 participants, 58 (94%) correctly matched the threat and punishment message. The promise and reward message and the cooperative problem message percentages were also high. Of the 62 participants, 52 (84%) correctly matched the promise and reward message, and 51 (82%) correctly matched the cooperative problem solving message. Of the 62 participants, 50 (81%) correctly matched the facilitative message with its academic definition.

Findings indicated that the majority of students successfully completed the exercise; however, messages are often multifaceted. Slight differences between the six academic definitions may be difficult for a layperson to determine. Moreover, the definition represented in the message treatment from the Safe Boating Advocacy Group may have been difficult to discern as each message focused on a call to action to join the advocacy organization.

Time allotted is perhaps another reason for the mixed findings, specifically for the students missing more than two of the matching items. The researcher allotted approximately five minutes for the manipulation check. Though the researcher asked if more time was needed to complete the manipulation check, some participants may have needed more time to complete the matching exercise. Due to the percentage of participants who scored well on the matching exercise (84%), it was determined that the experiment would be conducted using the operational definitions examined in the manipulation check.

### *Experiment Pretest*

Following the manipulation check, a pretest was conducted using the same undergraduate students studying mass communication. Thirty students in the research course, and 31 students in the writing course, totaling 61 students, participated in the pretest.

#### *Instrumentation*

There were no incentives, nor did participation influence or effect course grades. The researcher asked for verbal consent for participation to keep students anonymous and responses confidential. See Appendix A for Experiment Script.

The pretest took place during regularly scheduled class time. The researcher arrived before class to ensure that proper seating, writing utensils, and experiment documents were prepared and available. Once students entered the room and sat in their seats, the pretest began. The pretest took approximately 20 minutes.

The researcher stood in front of the students and read the consent form aloud. After reading the consent form script, the researcher paused for one minute to allow students in the classroom the option to decline participation and step outside of the room until the completion of the pretest. None of the students declined participation.

The researcher read the instructions for the questionnaire, and verified that all participants thoroughly understood their role in the pretest. After the researcher's explanation concluded, participants began the pretest (see Appendix J: Instrument). Participants were instructed to remain seated and quiet for the duration of the pretest. After all participants completed the questionnaire, the researcher collected the data and

thanked the students for their participation. The researcher instructed the participants to proceed with regularly scheduled class time and exited the classroom.

### *Results*

Pretest results were examined to ensure the variability in mean scores across the variables measured in this study. A series of one-way ANOVAs were run for each item in the questionnaire. The results indicate variability in mean scores for the message types. Significant differences were found for one of the constraint recognition items, CR4,  $F(7, 53)=2.184, p=.050$ . This item stated, “My actions will be too inconsequential to impact the number of recreational boating accidents that occur annually in the U.S.” The variability in responses was determined to be adequate to proceed with this study. In addition, no modifications were made to the questionnaire for the actual experiment. The sample of students from the pretest was added to the sample of students that participated in the actual experiment. Therefore, the 61 responses for the pretest were added to the number of responses for the actual experiment, totaling 329 responses from undergraduate mass communication students at a large southeastern university.

### *Data Analysis Procedure*

Data was analyzed using SPSS 16.0 for Windows. An alpha level of .05 was required for significance in all of the statistical procedures. Partially completed questionnaires were used, so the number of responses varied for each statistical test. Before hypotheses were tested, analysis of the reliability of scales used to measure the variables of interest was performed using Cronbach’s alpha, and Pearson’s  $r$ . Procedures to test the hypotheses included correlations analysis using Pearson’s  $r$ , linear regression analysis, and analysis of variance (ANOVA).

The multiple-item sets measuring salient beliefs, subjective norm, attitude toward message, attitude toward organization, attitude toward issue, behavioral intent, information seeking behavior, problem recognition, constraint recognition, and level of involvement were assessed for internal consistency using Cronbach's alpha and Pearson's correlation coefficient. When applicable, multiple-item sets were collapsed to create composite measures for further testing.



## Chapter Four

### Results

This study replicated Werder's (2003, 2006) and Schuch's (2007) public relations studies, and deepened understanding of Hazleton's (1988) message strategies. It analyzed which public relations strategies were more likely to influence the beliefs, attitudes, and behavioral intentions of individuals regarding boater safety. As such, this study tested the following hypotheses:

H1: Salient beliefs predict attitude toward behavior.

H2: Attitude toward behavior and subjective norm regarding behavior predict behavioral intention.

P2.1 Promise and reward strategies will produce more positive attitudes than threat and punishment strategies

P2.2 Message strategies will have a greater influence on attitude toward message than on attitude toward issue or attitude toward organization.

H3: Problem recognition, constraint recognition, and level of involvement influence information seeking behavior in publics.

H4: The use of message strategies in boater safety communication will influence problem recognition, constraint recognition, and level of involvement.

P4.1: Threat and punishment strategies will have the strongest effect on information seeking behavior.

P4.2: Facilitative and cooperative problem solving strategies will have the greatest influence on problem recognition.

*Preliminary Data Analysis*

Message strategies tested in this study were randomly assigned to participants. Forty-seven participants were randomly assigned the message control treatment, and 44 participants received the overall control. Forty-two students received either the informative, facilitative, or persuasive message treatments. In addition, the promise and reward and the threat and punishment message treatments were equally randomly assigned to participants. The results of message treatments assigned to participants are shown in Table 5.

Table 5. Message Frequency and Valid Percent

<i>Treatment Condition</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Overall Control	44	13.4	13.4	13.4
Message Control	47	14.3	14.3	27.7
Informative	42	12.8	12.8	40.4
Facilitative	42	12.8	12.8	53.2
Persuasive	42	12.8	12.8	66.0
Promise & Reward	38	11.6	11.6	77.5
Threat & Punishment	38	11.6	11.6	89.1
Cooperative	36	10.9	10.9	100.0
<b>Total</b>	<b>329</b>	<b>100.0</b>	<b>100.0</b>	

Before conducting testing for hypotheses, Cronbach’s alpha was used to assess the internal consistency of the multiple-item indexes for salient beliefs, subjective norm, attitude toward message, attitude toward organization, attitude toward issue, behavioral intent, information seeking behavior, problem recognition, constraint recognition, and level of involvement. Reversed items were transformed before performing the reliability analysis. Pearson’s *r* was used to conduct a correlation analysis on items used to measure

indexes with less than three items. Several items were collapsed because the alpha indicated high internal consistency items in the index. The results of the analysis are shown in Table 6 and explained more thoroughly in tables below.

Table 6. Cronbach's Alpha for Multiple-Item Indexes

<i>Variable</i>	<i>Cronbach's alpha <math>\alpha</math></i>	<i>Pearson's r <math>r, p</math></i>	<i>Number of items</i>
Salient Beliefs	.85		4
Subjective Norm		$r = .48, p \leq .001$	2
Attitude Toward Message	.85		4
Attitude Toward Organization	.93		3
Attitude Toward Issue	.93		3
Behavioral Intent	.87		7
Information Seeking Behavior		$r = .84, p \leq .001$	2
Problem Recognition	.39		4
Constraint Recognition	.72		3
Level of Involvement	.71		4

The five items included to test salient beliefs produced an alpha scale reliability coefficient of .83. Results indicate that internal consistency of the five-item beliefs index is strengthened by omitting item 16 on the questionnaire, B3, "I believe boating accidents are a growing problem." The resulting four-item index yielded a Cronbach's alpha of .85. In addition, the two items included to measure subjective norm produced a Pearson's  $r$  of .48,  $p \leq .001$ .

The attitude items were split into three categories: attitude toward message, attitude toward behavior, and attitude toward issue. Results indicate that attitude toward message yielded a Cronbach's alpha of .85. Attitude toward behavior yielded a Cronbach's alpha of .93, and the attitude toward issue items yielded a Cronbach's alpha of .93.

Nine items were included to measure behavioral intent. Results indicate that internal consistency of the nine-item index would be strengthened if the questions were collapsed into two categories: 1) a seven-item index for behavioral intent, and 2) a two-item measure of information seeking behavior. The resulting seven-item index testing behavioral intent yielded a Cronbach's alpha of .87. The two remaining information seeking items yielded a Pearson's  $r$  of .84,  $p \leq .001$ .

The four items included to measure problem recognition yielded an alpha scale reliability coefficient of .39. Due to the low internal consistency of the items used to measure problem recognition, the decision was made to use the four items as single-item measures of problem recognition in testing of hypotheses.

The four items included to measure constraint recognition produce an alpha scale reliability coefficient of .70. Results indicate that by dropping item 13 on the questionnaire, CR4, the alpha coefficient was increased to .72. Therefore, "My actions will be too inconsequential to impact the number of recreational boating accidents that occur annually in the U.S," was omitted from the multiple-item index of constraint recognition.

The five items used to measure level of involvement produce an alpha scale reliability coefficient of .50. Results indicate that the internal consistency of the five-item level of involvement index would be strengthened if item six on the questionnaire, I2, was omitted. This item states, "I am concerned about boater safety, but am not personally affected by it." After omitting I2, the four remaining items produced an alpha scale reliability of .71.

According to Stacks (2002), correlation coefficients express how much one variable explains another. Correlations below .30 are considered “weak,” those between .40 and .70 are considered “moderate,” those between .70 and .90 are considered “high,” and correlation coefficients .90 and greater are considered “very high” (Stacks, 2002). Though alphas .80 to 1.00 indicate high reliability (Stacks, 2002), a correlation coefficient of .70 or above is usually considered an acceptable measure of constructs (Nunnally, 1978). However, lower thresholds including an alpha coefficient of .50 or greater is often determined to be an adequate measure of scale reliability in the social sciences (Nunnally, 1978).

According to Stack’s (2002) internal reliability coefficient explanation, the theory of reasoned action and the variables used to measure it have proven reliable in numerous studies (Sperber et al., 1980; Brinberg & Durand, 1983; Manstead et al., 1983; Anderson, 2000). For example, the theory of reasoned action has been used as a prediction for individuals’ behavioral intent regarding health (Manstead et al., 1983), nutrition (Brinberg & Durand, 1983), women’s occupational orientations (Sperber et al., 1980), and the effects of efficacy (Anderson, 2000). In this study, the Cronbach’s alphas for the three attitude items ranged from .85 to .93, indicating very high reliability.

The situational theory of publics, however, has faced criticism in regards to the items that measure its constructs. Specifically, researchers critique the theory due to the weak internal reliability produced by the items measuring problem recognition, constraint recognition, and level of involvement—the three independent variables tested in this study. The four items included to test problem recognition produced an alpha scale reliability coefficient of .39 demonstrating “weak” internal reliability. The three-item

index for constraint recognition yielded an alpha scale reliability of .72 demonstrating “moderate” internal reliability. Like the problem recognition variable, the level of involvement variable produced a “moderate” internal reliability of .71. The complexity of testing these perceptions perhaps suffices as reasoning for the weak to moderate internal reliability found among the above listed independent variables used to test the premise of the situational theory of publics.

#### *Hypotheses Related to the Theory of Reasoned Action*

As aforementioned, the coefficient values for the items measuring the theory of reasoned action constructs demonstrate high internal reliability. The decision was made to use the collapsed indexes developed for the salient beliefs, subjective norm, and behavioral intent items in hypothesis testing for this study. The three attitude measures—attitude toward the message, attitude toward the organization, and attitude toward the issue—were used as separate measures of attitudes in this study.

Before testing the hypotheses related to the theory of reasoned action, a correlation analysis was conducted to examine the relationship between the independent and dependent variables of the theory. Results indicate that all variables are positively correlated. The greatest correlation is found between attitude toward issue and attitude toward organization,  $r=.649, p\leq.001$ . All correlations were significant and are shown in Table 7.

Table 7. Correlations Between the Independent and Dependent Variables of the Theory of Reasoned Action

<i>Variable</i>	<i>B</i>	<i>Att. Mess</i>	<i>Att. Org</i>	<i>Att. Issue</i>	<i>SN1</i>	<i>SN2</i>	<i>Beh. Intent</i>	<i>Info. Seek</i>
<i>B</i>								
Pearson Correlation	1	.281	.384	.452	.267	.334	.267	.111
Sig. (2- tailed)		<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.045</b>
N	329	310	316	317	327	328	323	325
<i>Attitude Mess.</i>								
Pearson Correlation	.281	1	.502	.402	.141	.271	.197	.164
Sig. (2- tailed)	<b>.000</b>		<b>.000</b>	<b>.000</b>	<b>.013</b>	<b>.000</b>	<b>.000</b>	<b>.004</b>
N	310	310	309	309	310	310	310	310
<i>Attitude Issue</i>								
Pearson Correlation	.452	.402	.649*	1	.090	.328	.309	.212
Sig. (2- tailed)	<b>.000</b>	<b>.000</b>	<b>.000</b>		.112	<b>.000</b>	<b>.000</b>	<b>.000</b>
N	317	309	316	317	317	317	316	317
<i>Attitude Org.</i>								
Pearson Correlation	.384	.502	1	.649*	.163	.348	.316	.213
Sig. (2- tailed)	<b>.000</b>	<b>.000</b>		<b>.000</b>	<b>.004</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>
N	316	309	316	316	316	316	315	316
<i>SN1</i>								
Pearson Correlation	.267	.141	.163	.090	1	.479	.233	.282
Sig. (2- tailed)	<b>.000</b>	<b>.013</b>	<b>.004</b>	.112		<b>.000</b>	<b>.000</b>	<b>.000</b>
N	327	310	316	317	327	327	323	325
<i>SN2</i>								
Pearson Correlation	.334	.271	.348	.328	.479	1	.452	.485
Sig. (2- tailed)	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>		<b>.000</b>	<b>.000</b>
N	328	310	316	317	327	328	323	325
<i>Beh. Intent</i>								
Pearson Correlation	.267	.197	.316	.309	.233	.452	1	.703
Sig. (2- tailed)	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>		<b>.000</b>
N	323	310	315	316	323	323	323	323
<i>Info. Seek</i>								
Pearson Correlation	.111	.164	.213	.212	.282	.485	.703	1
Sig. (2- tailed)	<b>.045</b>	.004	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	
N	325	310	316	317	325	325	323	325

Correlation is significant at the 0.01 level (2-tailed)

\*B= Beliefs

\*Att. Mess. = Attitude Toward Message

\*Att. Org. = Attitude Toward Organization

\*Att. Issue = Attitude Toward Issue

\*SN1 = Subjective Norm Item One

\*SN2 = Subjective Norm Item Two

\*Beh. Intent = Behavioral Intent

\*Info. Seek= Information Seeking Behavior

### *Hypothesis 1*

Hypothesis one states that salient beliefs predict attitude toward behavior. A series of linear regression analyses were conducted to test this hypothesis and the premise of the theory of reasoned action. Specifically, three regressions were performed; each with one of the three attitude measures—attitude toward the message, attitude toward the organization, and attitude toward the issue—entered as the criterion variable, to demonstrate support for H1. In each test, the attitude measure, the dependent variable, was regressed on the measure of salient beliefs, the predictor variable. Salient beliefs was the only predictor variable entered in the regression equation for these three separate tests. In the first test, the results indicate that nearly 8% of the variance in attitude toward the message is due to salient beliefs,  $R^2=.079$ ,  $Adj. R^2=.076$ ,  $F(1, 308)=26.395$ ,  $p\leq.001$ . In the second test, nearly 15% of the variance in attitude toward the organization is due to salient beliefs,  $R^2=.147$ ,  $Adj. R^2=.144$ ,  $F(1, 314)=54.193$ ,  $p\leq.001$ . In the third test, 20% of the variance in attitude toward the issue is due to salient beliefs,  $R^2=.204$ ,  $Adj. R^2=.202$ ,  $F(1, 315)=80.910$ ,  $p\leq.001$ . All three tests indicate that salient beliefs have a significant effect on the attitude measures, but beliefs has the strongest effect on attitude toward the issue, according to the  $R^2$  values,  $R^2=.204$ . The results are shown in Tables 8-11 and indicate that beliefs influence the dependent variables of attitude toward the message, attitude toward the organization, and attitude toward the issue.

Table 8. Beliefs Predicting Attitude Variables

<i>Dependent Variable</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>
Attitude Toward Issue	.452 <sup>a</sup>	.204	.202	1.08497
Attitude Toward Organization	.384 <sup>a</sup>	.147	.144	1.11002
Attitude Toward Message	.281 <sup>a</sup>	.079	.076	1.08625



Table 9. Regression Model for Beliefs Predicting Attitude Toward Message

<i>Dependent Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t(308)</i>	<i>Sig.</i>
Attitude Toward Message	.326	.063	.281	5.138	.000

Table 10. Regression Model for Beliefs Predicting Attitude Toward Organization

<i>Dependent Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t(314)</i>	<i>Sig.</i>
Attitude Toward Organization	.472	.064	.384	7.362	.000

Table 11. Regression Model for Beliefs Predicting Attitude Toward Issue

<i>Dependent Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t(315)</i>	<i>Sig.</i>
Attitude Toward Organization	.563	.063	.452	8.995	.000

Next, regression analysis was used to determine if salient beliefs have an effect on the subjective norm items, SN1 and SN2. Item 19 on the questionnaire, subjective norm item one, states, “If aware of situations involving boating accidents, people who are important to me would think there is a problem. Item 20 on the questionnaire, subjective norm item two, states, “If my friends and family knew about the Safe Boating Advocacy Group, they would want me to support it.” Both tests indicate a significant effect on subjective norm due to beliefs, but the  $R^2$  value,  $R^2=.111$  is larger for SN2. Therefore, the results, shown in Tables 12-14, indicate that beliefs have the strongest effect on subjective norm item two.

Table 12. Beliefs Predicting Subjective Norm Variables

<i>Variable</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>
SN1	.267 <sup>a</sup>	.072	.069	1.315
SN2	.334 <sup>a</sup>	.111*	.109	1.405

Table 13. Regression Model for Beliefs on Subjective Norm Item 1

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i> (325)	<i>Sig.</i>
SN1	.371	.074	.267	5.003	.000

Table 14. Regression Model for Beliefs on Subjective Norm Item 2

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i> (324)	<i>Sig.</i>
SN2	.506	.079	.334	6.388	.000

Finally, a regression analysis was conducted to test the effect of the two subjective norm items and the three attitude measures on information seeking behavior. The results of the regression analysis were significant,  $R^2=.262$ , *Adj. R*<sup>2</sup>=.250,  $F(5, 303)=21.526$ ,  $p\leq.001$ . However, only SN2 made a significant contribution to the unique item variance,  $\beta=.446$ ,  $p\leq.001$ . The results indicate that both subjective norm items are stronger predictors of information seeking behavior than the attitude measures. Of the attitude measures, however, attitude toward the organization is the strongest predictor for information seeking behavior. The results are shown in Table 15.

Table 15. Regression Model for Subjective Norms and Attitudes Predicting Information Seeking Behaviors.

<i>Independent Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i> (307)	<i>Sig.</i>
Subjective Norm 2	.426	.058	.446*	7.381	.000
Subjective Norm 1	.089	.059	.085	1.504	.134
Attitude Toward Issue	.063	.078	.054*	.812	.418
Attitude Toward Message	.018	.073	.014	.245	.807
Attitude Toward Organization	-.014	.083	-.012	-.168	.867

### *Hypothesis 2*

Hypothesis two states that attitude toward behavior and subjective norm regarding behavior predict behavioral intention. The effects of the two subjective norm items, and the three attitude measures on behavioral intent were examined, as the theory of reasoned action proposes. Linear regression analyses were used to test this hypothesis. Behavioral

intent, the dependent variable, was regressed on the attitude measures—attitude toward message, attitude toward the issue, and attitude toward organization—and the two subjective norm items—SN1 and SN2.

The regression equation indicates that 24% of the variance in behavioral intention is explained by the independent variables,  $R^2=.252$ ,  $Adj. R^2=.24$ ,  $F(5, 303)=20.423$ ,  $p\leq.001$ . Subjective norm item two, “If my friends and family knew about the Safe Boating Advocacy Group, they would want me to support it,” is the most significant item acting as a unique predictor of behavioral intent. Results indicate that subjective norm influences behavioral intent more than attitude toward behavior in this study. The omnibus test indicates the theory of reasoned action is supported, with a very high  $Adj. R^2$  of .240.

The coefficient test indicates that only subjective norm item two (SN2) contributes to the unique item variance for the behavioral intent measure, meaning that it is the strongest predictor of behavioral intent. The results are shown in Table 16.

Table 16. Regression Model for Subjective Norms Predicting Behavioral Intent

<i>Independent Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t(307)</i>	<i>Sig.</i>
Subjective Norm 2	.316	.052	.372*	6.115	.000
Attitude Toward Issue	.126	.070	.120	1.806	.072
Attitude Toward Organization	.118	.075	.112	1.585	.114
Subjective Norm 1	.034	.053	.037	.644	.520
Attitude Toward Message	-.016	.065	-.015	-.252	.801

*Proposition 2.1*

Proposition 2.1 states that promise and reward strategies will produce more positive attitudes than threat and punishment strategies. To test this proposition, an independent samples T-test was conducted to determine if significant differences in mean

scores for the promise and reward message and the threat and punishment message were found across the attitude measures.

First, a Levene’s test for equality of variance was conducted to determine if the population variances for the two groups were equal across the dependent variables. The test produced no significant results ( $F=.779, p=.381$ ;  $F=.010, p=.921$ ;  $F=1.005, p=.320$ ).

Neither the promise and reward nor the threat and punishment messages produced significant effects; therefore, P2.1 is not supported. However, the promise and reward message has the greater mean across all three attitude measures—attitude toward message, attitude toward organization, and attitude toward issue—compared to the threat and punishment message. The results of the T-test are shown in Table 17.

Table 17. Means and Standard Deviations for Attitudes Across Promise and Reward and Threat and Punishment Messages

<i>Strategy</i>		<i>N</i>	<i>M</i>	<i>SD</i>
ATTMESS	Promise & Reward	37	4.9122*	1.18177
	Threat & Punishment	37	4.6689	1.06238
ATTORG	Promise & Reward	37	5.3694*	1.19356
	Threat & Punishment	37	4.9369	1.34449
ATTISSUE	Promise & Reward	37	5.2523*	1.28237
	Threat & Punishment	37	5.1081	1.12780

*Proposition 2.2*

Proposition 2.2 states that message strategies will have a greater influence on attitude toward message than on attitude toward issue or attitude toward organization. To test this proposition, a series of ANOVAs were conducted with strategy type as the independent variable and the three attitude measures entered as dependent variables.

The results of the first ANOVA are not significant,  $F(7, 302)=1.608, p=.133$ ,  $\eta^2=.036$ . The strength of the relationship between message type and attitude toward

message, as assessed by  $\eta^2$ , is weak, accounting for about 4% of the variance in the attitude toward message measure. However, post hoc comparisons indicate that significant differences in mean scores for the attitude toward message measure exist across strategy type. The mean and standard deviation for message type for the attitude toward message measure are shown in Table 18. Specifically, four message types produced significantly higher mean scores for the attitude toward message measure than the overall control treatment: persuasive, informative, cooperative problem solving, and promise and reward treatments (see Table 19).

Table 18. Means and Standard Deviations for Message Type Across Attitude Toward Message

<i>Message Type</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Persuasive	41	5.0671	1.00627
Cooperative Problem Solving	35	4.9643	1.05046
Promise & Reward	37	4.9122	1.18177
Informative	40	4.8188	1.00637
Message Control	43	4.7326	1.03710
Facilitative	41	4.7012	1.19402
Threat & Punishment	37	4.6689	1.06238
Overall Control	36	4.3056	1.41183

Table 19. ANOVA for Message Type Across Attitude Toward Message

<i>Message Type</i>	<i>M Diff.</i>	<i>SE</i>	<i>Sig.</i>
<b>Overall Control</b>			
Message Control	-.4270	.25354	.093
Informative	-.5132	.25783	.047*
Facilitative	-.3957	.25634	.124
Persuasive	-.7615	.25634	.003*
Promise & Reward	-.6066	.26274	.022*
Threat & Punishment	-.3634	.26274	.168
Cooperative Problem Solving	-.6587	.26641	.014*

The results of the second ANOVA also indicate no significant difference,  $F(7, 309)=.850, p=.546, \eta^2=.019$ . The strength of the relationship between message type and attitude toward issue, as assessed by  $\eta^2$ , is weak, accounting for about 2% of the variance in the attitude toward issue measure. However, post hoc comparisons indicate that significant differences in mean scores for the attitude toward issue measure exist across strategy type. The mean and standard deviation for message type for the attitude toward issue measure are shown in Table 20. Specifically, the results indicate that the persuasive message produced a significantly higher mean than the overall control as shown in Table 21.

Table 20. Means and Standard Deviations for Message Type Across Attitude Toward Issue

<i>Message Type</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Persuasive	41	5.4878	1.46837
Facilitative	41	5.3333	1.20876
Informative	40	5.3083	1.19206
Message Control	46	5.2609	1.10423
Promise & Reward	37	5.2523	1.28237
Cooperative Problem Solving	35	5.1524	1.01731
Threat & Punishment	37	5.1081	1.12780
Overall Control	40	4.8917	1.26173

Table 21. ANOVA for Message Type Across Attitude Toward Issue

<i>Message Type</i>	<i>M Diff.</i>	<i>SE</i>	<i>Sig.</i>
<b>Overall Control</b>			
Message Control	-.3692	.26299	.161
Informative	-.4167	.27201	.127
Facilitative	-.4417	.27034	.103
Persuasive	-.5961	.27034	.028*
Promise & Reward	-.3606	.27747	.195
Threat & Punishment	-.2164	.27747	.436
Cooperative Problem Solving	-.2607	.28155	.355

Finally, results from the third ANOVA indicate no significant results in message strategies across attitude toward organization,  $F(7, 308)=1.552, p=.149, \eta^2=.034$ . The strength of the relationship between message type and attitude toward organization, as assessed by  $\eta^2$ , is weak, accounting for about 3% of the variance in the attitude toward organization measure. Specifically, the results indicate that the persuasive and promise and reward strategies produced significantly higher means than the overall control, as shown in Table 22. However, significant differences in mean scores, indicated by post hoc comparisons, for the attitude toward organization measure exist across strategy type.

Table 22. Means and Standard Deviations for Message Type Across Attitude Toward Organization

<i>Message Type</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Persuasive	41	5.5285	1.22696
Promise & Reward	37	5.3694	1.19356
Facilitative	41	5.2033	1.15921
Cooperative Problem Solving	35	5.1698	1.04475
Informative	40	5.1167	1.07430
Message Control	46	5.0797	1.05920
Threat & Punishment	37	4.9369	1.34449
Overall Control	39	4.8034	1.40741

Table 23. ANOVA for Message Type Across Attitude Toward Organization

<i>Message Type</i>	<i>M Diff.</i>	<i>SE</i>	<i>Sig.</i>
<b>Overall Control</b>			
Message Control	-.2763	.25963	.288
Informative	-.3132	.26842	.244
Facilitative	-.3998	.26680	.135
Persuasive	-.7250	.26680	.007
Promise & Reward	-.5660	.27374	.040
Threat & Punishment	-.1335	.27374	.626
Cooperative Problem Solving	-.2607	.28155	.057

### *Hypotheses Related to the Situational Theory of Publics*

Though the internal reliability of the items measuring the constructs of the situational theory of publics is not as strong as those measuring the theory of reasoned action, Nunnally (1978) argues coefficient values .70 or above are adequate for items measuring the situational theory of publics. Specifically, an alpha coefficient of .50 or greater is often determined to be an adequate measure for scale reliability (Nunnally, 1978).

Prior to hypotheses testing on the situational theory of publics, a correlation analysis was conducted to examine the linear relationship between the independent and dependent variables of the theory. Results indicate that all variables were positively correlated with the exception of constraint recognition. Constraint recognition has a negative correlation with the other variables, which is explained by the premise of the theory. The greatest correlation is found between problem recognition item one and problem recognition item three,  $r=.390, p\leq.001$ . All correlations are significant and are shown in Table 24.



Table 24. Correlations Between Independent and Dependent Variables of the Situational Theory of Publics

<i>Variable</i>	<i>IS</i>	<i>PR1</i>	<i>PR2</i>	<i>PR3</i>	<i>PR4</i>	<i>LI</i>	<i>CR</i>
<i>IS</i>							
Pearson Correlation	1	.168	.046	.074	.257	.341	-.339
Sig. (2- tailed)		<b>.002</b>	.410	.182	<b>.000</b>	<b>.000</b>	<b>.000</b>
N	352	325	325	325	324	324	324
<i>PR1</i>							
Pearson Correlation	.168	1	.072	.390*	.177	.094	-.102
Sig. (2- tailed)	<b>.002</b>		.191	<b>.000</b>	<b>.001</b>	.089	.065
N	325	329	329	329	328	328	328
<i>PR2</i>							
Pearson Correlation	.046	.072	1	-.077	.211	.000	-.089
Sig. (2- tailed)	.410	.191		.166	<b>.000</b>	.996	.107
N	325	329	329	329	328	328	328
<i>PR3</i>							
Pearson Correlation	.074	.390*	-.077	1	.150	.019	-.034
Sig. (2- tailed)	.182	<b>.000</b>	.166		<b>.006</b>	.727	.538
N	325	329	329	329	328	328	328
<i>PR4</i>							
Pearson Correlation	.257	.177	.211	.150	1	.221	-.302
Sig. (2- tailed)	<b>.000</b>	<b>.001</b>	<b>.000</b>	<b>.006</b>		<b>.000</b>	<b>.000</b>
N	324	328	328	328	328	327	327
<i>LI</i>							
Pearson Correlation	.341	.094	.000	.019	.221	1	-.568
Sig. (2- tailed)	<b>.000</b>	.089	.996	.727	<b>.000</b>		.000
N	324	328	328	328	327	328	327
<i>CR</i>							
Pearson Correlation	-.339	-.102	-.089	-.034	-.302	-.568	1
Sig. (2- tailed)	<b>.000</b>	.065	.107	.538	<b>.000</b>	<b>.000</b>	
N	324	328	328	328	327	327	328

Correlation is **significant** at the 0.01 level (2-tailed)

\*IS= Information Seeking Behavior

\*PR= Problem Recognition

\*LI= Level of Involvement

\*CR= Constraint Recognition

### *Hypothesis 3*

Hypothesis three states that problem recognition, constraint recognition, and level of involvement influence information seeking behavior in publics. To test this hypothesis, multiple regression analysis was conducted. The two-item information seeking measure, the dependent variable, was regressed on the measures of the four problem recognition items, the composite level of involvement measure, and the composite constraint recognition measure. These six measures were entered as predictor variables.

The results indicate that 16.6 % of the variance in the information seeking variable is accounted for by the six predictor variables entered in the regression analysis,  $R^2=.181$ ,  $Adj. R^2=.166$ ,  $F(6, 315)=11.635$ ,  $p\leq.001$ .

Table 25. Independent Variables Predicting Information Seeking Behavior

<i>Dependent Variable</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>
Information Seeking Behavior	.426 <sup>a</sup>	.181	.166	1.30560

According to the regression model, the results suggest that level of involvement is the strongest predictor of information seeking behavior,  $\beta=.203$ ,  $t(320)=11.635$ ,  $p\leq.001$ , followed by constraint recognition, which has a negative Beta weight,  $\beta=-.169$ ,  $t(320)=11.635$ ,  $p=.008$ . This indicates that constraint recognition has an inverse relationship with the information seeking measure.

Item four on the questionnaire, PR4, also makes a significant contribution to the regression equation,  $\beta=.146$ ,  $t(320)=11.635$ ,  $p=.009$ . This item states, “I do not view boater safety as a problematic issue.”

The results indicate that the independent variables—problem recognition, constraint recognition, and level of involvement—influence individuals’ information

seeking behavior regarding safe boating. Therefore, H3 is supported.

Table 26. Regression Model for Situational Theory Variables

<i>Independent Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	<i>t(320)</i>	<i>Sig.</i>
PR1	.118	.061	.108	1.917	.056
PR2	-.009	.041	-.012	-.225	.822
PR3	-.009	.078	-.006	-.111	.911
PR4	.142	.054	.146	2.622	.009
Involvement	.195	.060	.203	3.253	.001
Constraint Recognition	-.165	.062	-.169	-2.652	.008

#### *Hypothesis 4*

Hypothesis four states that message strategies in boater safety communication influence problem recognition, constraint recognition, and level of involvement.

Hypothesis four tested the effect of message type on the situational theory of publics independent variables: problem recognition, constraint recognition, and level of involvement as suggested by the situational theory of publics. To test this hypothesis, a series of one-way ANOVAs were conducted. These tests yielded no significant differences in mean scores for the independent variables based on message type.

However, the results indicate that the message strategies produced the strongest effect on problem recognition item one,  $F(7, 321)=1.290, p=.254$ , followed by problem recognition item four,  $F(7, 320)=.811, p=.578$ . Problem recognition item one states, “I believe there is a problem with the way people perceive the importance of boater safety.” Problem recognition item four states, “I do not view boater safety as a problematic issue.”

An evaluation of mean scores indicates that the threat and punishment strategy produced the highest mean score for problem recognition item one ( $M=4.84, SD=1.128$ ), followed by problem recognition item three ( $M=4.47, SD=1.084$ ). The means and standard deviations for problem recognition item one are shown in Table 27.

Table 27. Means and Standard Deviations for Problem Recognition Item One Across Treatments

<i>Treatment Condition</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Threat & Punishment	38	4.84	1.128
Cooperative Problem Solving	36	4.56	1.252
Message Control	47	4.51	1.397
Informative	42	4.50	1.366
Facilitative	42	4.45	1.273
Persuasive	42	4.33	1.373
Promise & Reward	38	4.24	1.364
Overall Control	44	4.07	1.149

*Proposition 4.1*

Proposition 4.1 states that threat and punishment strategies will have the strongest effect on information seeking behavior. ANOVAs were used to test this proposition. The results indicate no significant differences on information seeking behavior across message types,  $F(7, 317)=.957$ ,  $\eta^2=.021$ ,  $p=.463$ .

In addition, the threat and punishment message did not produce the highest mean for information seeking behavior. The cooperative message produced the highest mean score ( $M=2.9167$ ,  $SD=1.48565$ ), followed by the persuasive message ( $M=2.8902$ ,  $SD=1.31107$ ). Of the eight treatments used in this study, the threat and punishment message produced the fifth highest mean for information seeking behavior ( $M=2.6316$ ,  $SD=1.51873$ ); thus, proposition 4.1 is not supported. The results from the mean and standard deviation scores for information seeking behavior across message treatments are shown in Table 28.

Table 28. Means and Standard Deviations for Information Seeking Behavior Across Treatments

<i>Treatment Condition</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Cooperative Problem Solving	36	2.9167	1.48565
Persuasive	41	2.8903	1.31107
Facilitative	41	2.8415	1.36674
Message Control	47	2.6596	1.51121
Threat & Punishment	38	2.6316	1.51873
Promise & Reward	37	2.5946	1.44260
Overall Control	44	2.4659	1.39933
Informative	41	2.2805	1.36953

*Proposition 4.2*

Proposition 4.2 states that the facilitative and cooperative problem solving strategies will have the greatest influence on problem recognition.

Four measures were used to test problem recognition. Problem recognition item one, PR1, states, “I believe there is a problem with the way people perceive the importance of boater safety.” Problem recognition item two, PR2, states, “I do not believe that operating without the proper safety equipment on board a boat is a threat to individuals.” Problem recognition item three, PR3, states, “I believe there is a problem with current methods to facilitate boater safety messages.” Problem recognition item four, PR4, states, “I do not view safety as a problematic issue.”

As discussed in H4, the results of the ANOVAs indicated that message strategies did not produce significant differences in mean scores, but the evaluation indicates that the threat and punishment strategy produced the highest mean for the first problem recognition item, PR1 ( $M=4.84$ ,  $SD=1.128$ ). The mean and standard deviation scores for problem recognition across all treatments are shown in Table 27 in Hypothesis 4.

The mean for the informative strategy is the greatest for PR2 ( $M=5.79$ ,  $SD=1.646$ ). The mean score for the threat and punishment strategy is the greatest for PR3

( $M=4.47$ ,  $SD=1.084$ ). Finally, the cooperative problem solving strategy produced the greatest mean for PR4 ( $M=4.81$ ,  $SD=1.390$ ).

According to the mean scores and standard deviations for the four-item problem recognition measurement, proposition 4.2 is minimally supported, since PR4 indicates that the cooperative problem strategy has the greatest mean of the eight treatments. The means for the facilitative strategy across the four problem recognition items fall among the middle of the strategies. Thus, the facilitative strategy has the third highest mean for PR1, the fourth highest mean for PR2, the third highest mean for PR3, and the fourth highest mean for PR4. These results are shown in Table 29.

Table 29. Means and Standard Deviations for Problem Recognition Measures Across Treatments

<i>Treatment Condition</i>	<i>PR1 M</i>	<i>PR1 SD</i>	<i>PR2 M</i>	<i>PR2 SD</i>	<i>PR3 M</i>	<i>PR3 SD</i>	<i>PR4 M</i>	<i>PR4 SD</i>
Overall Control	4.07	1.149	5.75	1.793	4.25	.751	4.48	1.486
Message Control	4.51	1.397	5.47	1.743	4.04	1.083	4.72	1.556
Informative	4.50	1.366	5.79	1.646	4.12	1.194	4.20	1.600
Facilitative	4.45	1.273	5.50	1.929	4.17	1.057	4.69	1.645
Persuasive	4.33	1.373	5.67	1.748	4.24	.983	4.79	1.279
Promise & Reward	4.24	1.364	5.39	2.007	4.29	1.160	4.74	1.369
Threat & Punishment	4.84	1.128	5.58	1.898	4.47	1.084	4.74	1.369
Cooperative Problem Solving	4.56	1.252	5.47	2.077	4.36	.931	4.81	1.390

\*PR= Problem Recognition

A comprehensive discussion is required to fully understand the results presented in this chapter. The results of the data analysis for the four hypotheses, and four propositions tested in this study will be discussed in Chapter 5. Following this discussion, conclusions will be drawn and recommendations for organizations will be discussed. Limitations concerning this study and areas for future research will also be discussed.

## Chapter Five

### Discussion

The objective of this study was to explain the communication effects of public relations strategies derived from Hazleton and Long's (1988) public relations process model using Fishbein and Ajzen's (1975) theory of reasoned action and J.E. Grunig's (1997) situational theory of publics. To examine message strategy effect on individuals regarding safe boating communication, four hypotheses and four propositions were tested. Isolating the variables of interest via experimentation was an ideal way to verify that expected relationships truly existed (Stacks, 2002, p. 198).

The predictions of the theory of reasoned action—that salient beliefs predict attitude toward behavior, and attitude toward behavior and subjective norm predict behavioral intention—were the first two hypotheses tested. These predictions were supported by the results of this study.

In tests related to H1, salient beliefs were found to predict attitude toward behavior. Twenty percent of the variance in attitude toward the issue was due to salient beliefs. Therefore, results indicated that salient beliefs had the greatest effect on the attitude toward issue measure among the three attitude items measured—attitude toward message, attitude toward organization, and attitude toward issue. This may be due to the importance of the topic tested, and/or the absence of information provided about the mock organization used in this study. Participants were not provided information about the activist organization, except for a call to action statement on the treatment. The



importance of the safety-related *issue*, boater safety, may have been more important to participants in this study than the organization or the message type used to communicate about the issue.

Next, salient beliefs were tested on two subjective norm items. Subjective norm item one, SN1, stated, “If aware of situations involving boating accidents, people who are important to me would think there is a problem.” Subjective norm item two, SN2, stated, “If my friends and family knew about the Safe Boating Advocacy Group, they would want me to support it.” Results indicated that salient beliefs had a significant effect on both subjective norm items, but a stronger effect on SN2.

Finally, the effects of both subjective norm items, and all three attitude measures on information seeking behavior were tested. Again, results related to the premise of the theory of reasoned action were significant, and both subjective norm items were stronger predictors than the three attitude measures. More important, subjective norm item two, SN2, was the strongest predictor across items.

Hypothesis 2 stated that attitude toward behavior and subjective norm predict behavioral intention. Subjective norm was the greatest predictor of behavioral intent across the independent variables tested—the three attitude items and the two subjective norm items.

In Werder’s (2003) study, attitude toward behavior was found to be the stronger predictor of behavioral intent; however, in Schuch’s (2007) study, subjective norm was found to be the stronger predictor of behavioral intent. Like Schuch’s (2007) study, subjective norm proved to be the strongest predictor of behavioral intent in this study, and there are several reasons to support this finding.

As mentioned, and supported in H1, the issue addressed proved to be more important than the organization, or the public relations messages created by the researcher. Boater safety has become more salient to the members of the community by the local media's response to recent boating accidents in the Tampa Bay area and in the state of Florida (see U.S. Coast Guard, 2010). Since Florida is surrounded by water, the importance of precautionary measures involving waterways is a continuous topic of discussion. For example, opinion leaders, activist groups, organizations, media, and the general public discuss the importance of practicing precautionary safety measures regarding outdoor activities year-round (NSBC, 2010; U.S. Coast Guard, 2010). Therefore, the more significant the issue, the more frequent the topic of conversation on the media's agenda.

Another explanation regarding subjective norm could be the population used in this study. The average participant was a 20-year-old undergraduate college student. It is likely that participants in this study placed importance on how others viewed their behavior, particularly how others perceived their choices during the experiment. Specifically, participants may have thought that the most important referents—media and/or peers—wanted them to respond in favor of increasing safety awareness.

Results indicating that the two subjective norm items were the strongest predictors of attitudes, beliefs, and behaviors, is perhaps this study's greatest contribution to public relations research. Human attitudes and behaviors are often intertwined (Werder, 2006); however, literature posits that individuals will perform behaviors they find popular with others and will refrain from behaviors they regard as unpopular or unfavorable with others (Petty & Cacioppo, 1996; Werder, 2003). Participants perhaps

conceded to social pressure, and the perceptions of the societal norm to make the ‘right’ choices regarding safety. Perhaps this occurrence takes place more frequently than researchers acknowledge, or issue-relevant topics—even geared toward passive publics—produce a greater impact on individuals than less important topics on active publics. Hallahan (2000) argues organizational responses may need to be addressed differently to publics in each category depending on the circumstances, and considering the different levels of knowledge and involvement that these publics exhibit.

Proposition 2.1 predicted that promise and reward strategies would produce more positive attitudes than threat and punishment strategies. Since results indicated that the type of message strategies used to communicate about the issue produced no significant differences in the variables tested in this study, it is hard to speculate about the importance of specific message types used to create effective communication about boater safety. There is, however, limited evidence to suggest that organizations involved in boater safety issues can achieve better results in developing positive attitudes among publics with some strategies more than others.

Of the promise and reward and threat and punishment messages, the promise and reward message yielded greater mean scores across all three-attitude measures—attitude toward message, attitude toward organization, and attitude toward issue. This is perhaps due to the positive tone of the message and the suggestion that some reward would be provided to the message receiver (see Hazleton & Long, 1988).

The threat and punishment treatment stated, “Studies show that 90 percent of boating accident victims will drown if not wearing a life jacket. If you don’t join our organization and learn about boater safety, you may become the next boating fatality!”

The promise and reward treatment stated, “Studies show that 90 percent of boating accident victims will drown if not wearing a life jacket. When you join our organization, you will receive a free t-shirt and boating safety kit.” Both promise and reward and threat and punishment strategies are considered to be coercive functions because they involve an exercise of power (Perloff, 2008), and both messages openly demonstrate a problem as well as a solution to the problem. However, each strategy exploits promises or threats, negatives or positives, to gain compliance. It is likely that the positive versus negative nuance of the messages is a reason for the three higher attitude means reported for the promise and reward message.

Proposition 2.2 predicted that message strategies would have a greater influence on attitude toward the message than on attitude toward the issue or attitude toward the organization. Individuals form attitudes toward messages from organizations, and these attitudes may influence salient beliefs, which influence attitudes toward behavior and behavioral intent (Werder, 2003). In this study, the strength of the relationship between message type and each of the attitude measures was weak, but the strength of the relationship between message type and attitude toward message produced a slightly higher variance (4%) than attitude toward issue (2%), and attitude toward organization (3%); therefore P2.2 was partially supported. Specifically, four message types—informative, persuasive, promise and reward, and cooperative problem solving—produced significantly higher means for the attitude toward message measure than the overall control treatment. The results of this study, unlike Werder’s (2003) study revealed that activist message strategies do not necessarily influence attitude toward strategy. However, the results do indicate that messages created by organizations are better than no

message at all, and of the messages, the persuasive and informative have the greatest effect on attitude toward the message. Like Werder's (2003) study, the threat and punishment had the least influence of all the strategies in this study.

The persuasive strategy provides for a biased delivery of information often caused by a selective presentation of information. This strategy appeals to individuals' values and presumes that the audience lacks motivation or is resistant. The persuasive strategy provides for a call to action either implicitly or overtly, and is often effective when communicating a message that involves time constraints (Werder, 2006). Zaltman and Duncan (1977) argue that persuasive strategies are utilized when a problem is not recognized or considered important by a public, or when involvement is low. According to this study's results that boater safety is indeed a relevant issue, the second part of Zaltman and Duncan's (1977) argument—to use persuasion when involvement is low—explains why the persuasive message was found to have the greatest effect on attitude toward the message. Specifically, only 67 (20.4%) of the 329 participants in this study have access to a boat on a regular basis. Two hundred forty-three (73.9%) participants do not have access to a boat, and 19 (5.8%) did not respond to the question. Since nearly 75% of responses indicated that participants do not have access to a boat on a regular basis, it is likely that participants primarily have low levels of involvement regarding boating.

Hypotheses 3 and 4, as well as P4.1 and P4.2, focus on the premise of the situational theory of publics. Previous research related to the theory indicated that the items that measure the constructs of the theory often demonstrate low internal reliability (Aldoory & Sha, 2007). This study is no different, demonstrating weak to moderate

internal reliability for the items used to test the independent variables of the theory.

The four items included to test problem recognition produced an alpha scale reliability coefficient of .39 demonstrating “weak” internal reliability. The three-item index for constraint recognition yielded an alpha scale reliability of .72 demonstrating “moderate” internal reliability. The level of involvement variable produced similar results as the problem recognition variable, with an alpha coefficient of .71, “moderate” internal reliability. The complexity of testing perceptual variables perhaps suffices as reasoning for the weak to moderate internal reliability among the independent variables associated with the situational theory of publics. In addition, the wording of the items used to measure the situational theory constructs may be difficult to determine for participants, especially because these items target different topics. For example, level of involvement item four, I4, stated, “I do not have any involvement with situations involving safety precautions.” Level of involvement item 5, I5, stated, “Being a safe boater affects me.” The first involvement statement uses the words, ‘safety,’ and, ‘precautions.’ The second involvement statement uses the words, ‘boater,’ and, ‘affects.’ These relational items ask unique questions stemming from having involvement toward safety in general, to having involvement regarding boater safety.

Hypothesis 3 stated that problem recognition, constraint recognition, and level of involvement influence information seeking behavior in publics. This hypothesis was supported by the results of this study, increasing the validity of the relationships predicted by the theory. Specifically, nearly 17% of the variance in information seeking behavior was found to be due to the three independent variables—problem recognition, constraint recognition, and level of involvement.

As discussed in the literature review, level of involvement has been found to be the strongest predictor of information seeking behavior among the independent variables in the situational theory of publics (Grunig, 1997; Werder, 2005; Schuch, 2007; Aldoori & Sha, 2007). This premise is supported by the results of this study. Constraint recognition was found to have an inverse relationship with the information seeking measure, and was the second strongest predictor; this, too, supports previous research related to the theory.

Petty and Cacioppo (1996) argue that high levels of involvement lead to easier identification of a problem. Individuals high in need for cognition recall more message arguments, generate a greater number of issue-relevant thoughts, and seek more information about complex issues than those with low need for cognition (Petty & Cacioppo, 1996). As the premise of the theory suggests, highly involved individuals practice more information seeking behaviors. Important, however, is that individuals rarely seek out information that does not directly affect them (L.A. Grunig et al., 2002). As previously mentioned, results indicated that only 67 (20.4%) of the 329 participants in this study have access to a boat on a regular basis. The access to a boat response demonstrates the minimal involvement among participants, a significant indicator of behavioral intent regarding boating and safety.

Item four on the questionnaire, PR4, also made a significant contribution to the regression equation. This item stated, "I do not view boater safety as a problematic issue." As mentioned in previous discussions, issue-relevant items have been found to demonstrate more significance than items measuring the organization or the message

throughout this study. Literature related to the role of activism supports the importance of issue-relevant topics in public relations research (Holtzhausen, 2000).

Activists join small groups based on their motivation and dedication toward a topic of interest (Holtzhausen & Voto, 2002). An activist public seeks to influence another public or publics through action (J.E. Grunig, 1992; L.A. Grunig et al., 2002). More important, activist groups are loyal to a cause rather than to a particular organization (Holtzhausen & Voto, 2002), and activists' goals are achieved via strategic planning and implementation of a desired position on a topic. Organizational activists strive to solicit others to become active in an issue-specific cause (Werder, 2006).

Proposition 4.1 stated that threat and punishment strategies would have the strongest effect on information seeking behavior. The cooperative problem solving message produced the highest mean score, followed by the persuasive message; however, evidence suggested that the proposition did garner limited support.

The cooperative message stated, "We are cooperating closely with the U.S. Coast Guard to spread awareness about the importance of safe boating. If you would like to help us in this cooperative effort, please join our organization. Together, we can reduce boating injuries and fatalities." Like this study, the cooperative problem solving message was found to have the strongest effect on information seeking behavior in Werder's (2005) study on the perceived attributes of publics on public relations message strategies. Her findings indicated that the cooperative problem solving strategy was successful when it was perceived that the target public had high problem recognition. In this study, support for problem recognition item four—an independent variable—was achieved.



Nonetheless, of the eight treatments used in this study, the threat and punishment message produced the fifth highest mean score on information seeking behavior.

Proposition 4.2 stated that facilitative and cooperative problem solving strategies would have the greatest influence on problem recognition. Four problem recognition items were tested. Results indicated that the threat and punishment strategy produced the greatest influence on the first problem recognition item tested. This item stated, “I believe there is a problem with the way people perceive the importance of boater safety.” The mean score for the informative strategy was the greatest for problem recognition item two. This item stated, “I do not believe that operating without the proper safety equipment on board a boat is a threat to individuals.” The mean score for the threat and punishment strategy was the greatest in problem recognition item three, and this item stated, “I believe there is a problem with current methods to facilitate boater safety messages.” Finally, the cooperative problem solving strategy produced the greatest mean score for the fourth problem recognition item, “I do not view safety as a problematic issue.”

The mean scores for the facilitative message across the four problem recognition items were located among the middle of the message strategies: The facilitative message had the third highest mean score for problem recognition item one, the fourth highest mean score for problem recognition item two, the third highest mean score for problem recognition item three, and the fourth highest mean score for problem recognition item four. Thus, the facilitative strategy did not have the highest mean score for any of the four problem recognition items, and the cooperative problem solving strategy produced the highest mean score for just one of the four problem recognition items. Since the threat

and punishment strategy had the highest mean scores for two of the problem recognition items, results indicated that it had the greatest influence on problem recognition. This is logical since threat and punishment strategies work well on passive audiences where the source creates a negative message in order to coerce the intended audience to act or make a change in its attitudes, beliefs, or behavioral intent; therefore, proposition 4.2 was not supported.

## Chapter 6

### Conclusions

Experiments are conducted to establish that two or more variables are related to one another in predictable ways. Stacks (2002) argues that experimentation requires the testing of theoretical relationships in such a way as to be sure that what is expected by the researcher is the case because the relationships truly exist; not because something irrelevant influenced the relationships (p. 198). Experimentation provides for a foundation to claim that the intended message strategies have truly caused a change in the public's perception or behavior, and this was a goal for this study.

This study contributed to theory-driven research in public relations by examining the influence of message strategies on individuals' beliefs, attitudes, and behavioral intentions regarding boater safety. A collection of scholarship relating to how and why individuals communicate, and what motivating factors contribute to organizational effectiveness through communication, was discussed. Specifically, Hazleton and Long's (1988) public relations process model, Fishbein and Ajzen's (1975) theory of reasoned action, and J.E. Grunig's (1997) situational theory of publics were used to assess how receiver variables affected boater safety messaging.

The premises of both theoretical frameworks tested—the theory of reasoned action and the situational theory of publics—yielded complex, yet specific findings. As discussed, the theory of reasoned action has been tested over a spectrum of disciplines, and is used as a prediction for individuals' behavioral intent. Findings in this study

overwhelmingly supported the theory, all of its variables demonstrating high internal reliability. Specifically, salient beliefs were found to significantly influence the three attitude items measured—attitude toward message, attitude toward issue, and attitude toward organization. Of the attitude measures, salient beliefs demonstrated the greatest effect on the attitude toward issue measure. In addition, this study determined that subjective norm most effectively predicted individuals' behavioral intent regarding safe boating, and this may be due to the emphasis that the most important referents have placed on boater safety as a salient issue.

The situational theory of publics, though often critiqued for the low internal reliability measuring its independent variables, also produced appealing findings that may extend public relations. Like Werder's (2003), and Schuch's (2007) study, the results of this study indicated that level of involvement was the best predictor for information seeking behaviors. This is a crucial finding since practitioners continuously strive for organizational effectiveness, and a vital aspect of strategic public relations is modeling messages to reach intended publics (Hallahan, 2000).

The manufacturing of a mock organization, the Safe Boating Advocacy Group, and use of message strategies coinciding with Hazleton and Long's (1988) public relations process model created noteworthy results. It is recommended that organizations use coercive strategies, now known as power strategies, to communicate information about issue-relevant topics. Specifically, organizations creating messages about boater safety for passive audiences should consider using the threat and punishment and promise and reward strategies. Participants in this study correctly matched the threat and punishment strategy more than any other strategy during the manipulation check. This

strategy often demonstrated a strong relationship with the variables measured, especially items measuring problem recognition. In addition, results indicated that the promise and reward strategy produced more positive attitudes than the threat and punishment strategy across the three attitude measures—attitude toward issue, attitude toward organization, and attitude toward message. Similarly, results from Schuch's (2007) examination of message strategy influence on variables related to the receiver of activist communication indicated that activist organizations would be most successful using persuasive and coercive strategies. Schuch (2007) argues that activists can use their issue and the outcome of the issue to persuade publics to act in a guided manner. The organizations defined in chapter two of this study, the NSBC and the U.S. Coast Guard, have taken an increasingly activist role in creating positive attitudes about boater safety, which in turn might reduce the number of boating injuries and fatalities each year.

#### *Areas for Further Research*

This study's findings indicated that messages produced by an organization are better than simply not communicating at all. The overall control, in which participants did not receive a message from the organization, was continuously found to have the least significant effect on individuals' information seeking behaviors and behavioral intent. As discussed, messages should be geared to the correct audience and the content of the messages must be understood and cognitively processed by the receiver of the message.

Strategy use and effectiveness should be tested in diverse settings, using a variety of methodologies in order to gain a better understanding of how message strategies contribute to public relations. Enhancing the relevance of the message to individuals is a technique that has been shown to increase involvement and message elaboration

(Hallahan, 2000). Researchers should develop more thorough messages that coincide with the academic definitions proposed by Hazleton and Long's (1988) public relations process model.

The use of highly involved recreational boaters or individuals employed in boating-related professions may be more of an appropriate sample for future studies concerning boater safety messaging. Nonetheless, the replication and extension of studies, using thoroughly tested theoretical framework, enhances the validity of public relations as a strategic process.

#### *Limitations of the Study*

Several limitations of this study must be addressed, the message strategies and the sample, the two obvious limitations. The messages produced little significant differences in means across treatment conditions in this study. The manipulation check determined that the majority of participants grasped the matching exercise and successfully matched the treatment message operational definition with its correct conceptual definition; however, the results from the actual experiment suggested otherwise.

This limitation is likely due to the lack of research on the strategies or the lack of differentiation created in the wording for each message treatment. In addition, participants' role in the experiment to analyze the messages may not have been thoroughly acknowledged nor understood. Future studies need to focus on participants' ability or inability to cognitively process messages prior to the researcher requiring feedback.

The sample of college students used as participants for the study is a third limitation. The results cannot be generalized beyond the subjects tested. Though the use

of students in undergraduate mass communication courses indeed creates a large sample of the population for participation, a segmented portion of the entire campus does not necessarily constitute a random sample of the entire student population at a large southeastern university. Although they may be seen as a primary demographic target group for communication about this issue, college students do not represent the entire public of recreational boaters, boater safety organizations, advocacy groups, and individuals with some sort of boating interest.

The fourth limitation concerns the motivation of the sample to wholeheartedly participate in the study without receiving any incentives. Topics not of high priority or interest to participants will receive less attention than topics important to individuals in the sample. In addition, L.A. Grunig et al. (2002) argue that individuals rarely seek out information that does not directly affect them.

The second involvement question, number six on the questionnaire stated, “I am concerned about boater safety but not personally affected by it.” According to the comparison of strategy type with all of the variables tested—problem recognition, constraint recognition, level of involvement, and information seeking behavior—the results for this item produced the most significant results. Participants’ level of involvement toward safety and boating undoubtedly influenced responses. Participants were found to be a passive audience in regards to boater safety, the Safe Boating Advocacy Group, and its related message strategies. Therefore, a limitation to this study is the very sample itself.

Subjective norm was measured in this study, but perhaps it is a limitation as well. Due to the wording and content of the treatments, it is unknown if participants responded in ways in which the most important referents—peers, and the media—would suggest.

Last, the issue of selection bias, an error in choosing the individuals or groups to take part in the study, is a limitation. Participants were randomly assigned treatment conditions, and two control groups were utilized; however there is the possibility that some participants had preexisting attitudes regarding safety, and specifically, preconceived attitudes about boater safety. Therefore, it is likely that some participants responded to the questionnaire based on their own attitudinal responses rather than drawing conclusions from the treatment conditions created for this study.

Even with the stated limitations, this study intends to add to theory-driven research in mass communication. Specifically, it extends the role of Hazleton's (1992) public relations strategies to an understudied topic, boater safety, and adds to the robust amount of literature on the theory of reasoned action and the situational theory of publics.



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## Appendix A: Experimental Script

## 1. Beginning of Experiment Activity

- a) Obtain copies of Instrument for Mass Communication and Society students.
- b) Ensure that an adequate number of seats are available in classroom prior to experiment day.
- c) Have all experiment-related materials available prior to meeting students.
- d) Verify that appropriate supplementary equipment, accessories, and devices are present to conduct experiment and record data.
- e) Meet students in their classroom before regularly scheduled class begins.

## 2. User Study Execution: Initial Preparation

- a) Give students two minutes to find a seat in classroom, turn off all electronic devices, and get focused for class.
- b) Greet students (participants) and introduce researcher (myself) that will be conducting the study.
- c) Formally welcome participants to the study and explain purpose of experiment.
- d) Explain importance of study, researcher's role, and content of questionnaire by reading the following:

On the next page of this booklet, you will see a message from a snapshot of the Safe Boating Advocacy Group's Web site. Please spend a few minutes reading the message. After you have read the message, please complete the questions about your opinion regarding boater safety and the Safe Boating Advocacy Group found on pages 3-7 of this booklet. Your opinion is most important and will help to understand what people like you think about boater safety. Please read the informed consent statement below for information on your rights as a participant in this study. Your help is greatly appreciated

in understanding the views people like you have about safe boating!

e) Reiterate the Informed Consent Statement below:

#### Informed Consent Statement

This research is being conducted by Emily Guilfoil under the supervision of Dr. Kelly Werder, 813-974-6790, School of Mass Communications, University of South Florida, 4202 E. Fowler Ave., Tampa, FL 33620. Your responses are voluntary and will remain confidential to the extent provided by law. You do not have to answer any questions you do not wish to answer, and you have the right to withdraw consent at any time without consequence. There are no anticipated risks associated with your participation in this research and you will receive no compensation for your participation. Neither your course status nor your grade will be affected by your decision to participate or not to participate in this study. If you have any questions concerning the procedures used in this study, you may contact the principle investigator at e-mail address [eguilfoi@mail.usf.edu](mailto:eguilfoi@mail.usf.edu) or supervising professor at [kpage@usf.edu](mailto:kpage@usf.edu). Questions or concerns about your rights as a research participant can be directed at the University of South Florida Institutional Review Board, 813-974-5638.

- e) Allow one minute for students opting out of participation to quietly leave classroom until completion of study.
- f) Read the following instructions to participants:

#### Instructions

Please answer the following questions by circling the number from one to seven that best describes your agreement with the statement. Be sure to answer all items, reading each question carefully, and circling only one number on a single scale.



- g) Explain that questionnaire will take approximately 20 minutes to complete.
- h) Instruct participants to notify researcher upon completion of questionnaire.

### 3. Questionnaire

- a) Ask participants to fill out questionnaire and explain that they should ask for clarification if they do not understand a particular question.
- b) Ensure that participants know to ask questions if confused.
- c) Encourage participants to spend a minute or two familiarizing themselves with instructions to gain a better understanding of how to answer each section.
- d) If a participant asks a question, initially try to draw his or her attention to the instructions section.
- e) If problems persist, the researcher may need to help the participant directly. Write down any occurrences, specifying problems encountered by participants.
- f) When participants have completed the study, recover instruction sheets and questionnaires. Have participants pass both documents to end of row for easy collection.

### 4. End of the Experiment Activity

- a) Collect all questionnaires, instruction sheets, and notes together in one manila folder.
- b) Thank students for participating and explain that experiment has concluded.
- c) Ask non-participating students to enter back into classroom.
- d) Explain that class is now moving on to its regularly scheduled agenda.
- e) Exit classroom
- f) Back up experimental data to secondary data source.

## Appendix B: Manipulation Check Instrument

**Items 1-6 in the left column are definitions for six public relations message strategies. The items in the right are messages from the Safe Boating Advocacy Group. Please write the number of the strategy that best matches and defines each message in the right column.**

Background:

More than 4,730 boating accidents occurred in 2009, resulting in 3,358 injuries and 736 deaths. Studies indicate that boater safety education and precautionary measures can reduce the risk of boating accidents.

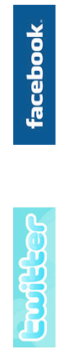
<p>1. An <b>informative strategy</b> is based on the presentation of unbiased facts. Informative messages do not draw conclusions, but presume the public will infer appropriate conclusions from accurate data. They are characterized by objectivity and the use of neutral language.</p> <p>2. A <b>facilitative strategy</b> is accomplished by making resources available to a public that allow it to act in ways that it is already predisposed to act. Resources may be tangible items, such as tools or money, or they may be directions or information needed to accomplish specific tasks.</p> <p>3. A <b>persuasive strategy</b> is characterized by appeals to a public's values or emotions. This strategy may include a selective presentation of information. It may use language that is not neutral and reflects the importance of the issue and/ or the involvement of the source in the situation. Persuasive messages are directive in the sense that they provide a call for action either indirectly or directly.</p> <p>4. A <b>promise and reward strategy</b> uses positive coercion and involved the exercise of power to gain compliance. It includes a request for action and a related outcome that may be directly or indirectly linked to an individual's performance of the request. This strategy implies that the source of the message controls an outcome desired or liked by the receiver of the message.</p> <p>5. A <b>threat and punishment strategy</b> uses negative coercion and involves the exercise of power and threat to gain compliance. It includes a request for action and a related outcome that may be directly or indirectly linked to an individual's performance of the request. This strategy implies that the source of the message controls an outcome feared or disliked by the receiver of the message.</p> <p>6. A <b>cooperative problem solving strategy</b> reflects a willingness to jointly define problems and solutions to problems. These messages are characterized by an open exchange of information to establish a common definition of the problem, common goals, and to share positions and responsibilities about the issue. These strategies use inclusive symbols, such as 'we' and 'us'.</p>	<p>_____ 'We are cooperating closely with the U.S. Coast Guard to spread awareness about the importance of safe boating. If you would like to help us in this cooperative effort, please join our organization. Together, we can reduce boating injuries and fatalities.'</p> <p>_____ 'Studies show that 90 percent of boating accident victims will drown if not wearing a life jacket. If you don't join our organization and learn about boater safety, you may become the next boating fatality!'</p> <p>_____ 'Studies show that 90 percent of boating accident victims will drown if not wearing a life jacket. When you join our organization, you will receive a free t-shirt and boating safety information kit.'</p> <p>_____ 'When boating fatalities occur friends and family members are left to suffer the loss of a loved one. Help reduce boating fatalities by joining our organization and learning about boater safety.'</p> <p>_____ 'All of the resources you need to learn about the importance of safe boating and how you can become a safe boater can be found in this Web site.'</p> <p>_____ 'Ninety percent of drowning fatalities due to boating accidents could have been prevented if the victim was wearing a life jacket.'</p>
--	--

## Appendix C: Informative Treatment

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The **Safe Boating Advocacy Group** was established in 2006 by a group of recreational boaters concerned with boater safety. The advocacy group offers safety education and outreach; encourages the study of statistical data for future safe boating campaigns; conducts active public information groups, and creates 'how-to guides to boating' throughout the southeastern United States.

'Ninety percent of drowning fatalities due to boating accidents could have been prevented if the victim was wearing a life jacket.'



## Appendix D: Facilitative Treatment

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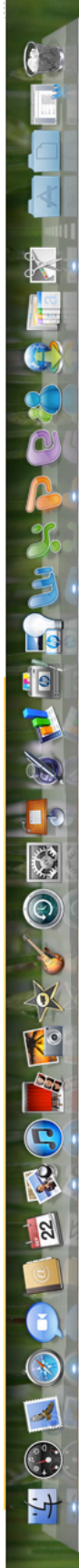
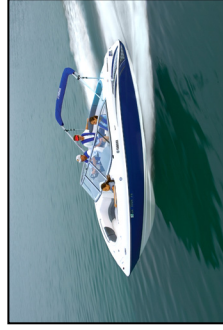


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'All of the resources you need to learn about the importance of safe boating and how you can become a safe boater can be found in this Web site.'



## Appendix E: Persuasive Treatment



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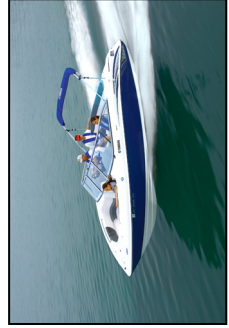
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'When boating fatalities occur friends and family members are left to suffer the loss of a loved one. Help reduce boating fatalities by joining our organization and learning about boater safety.'



## Appendix F: Promise and Reward Treatment

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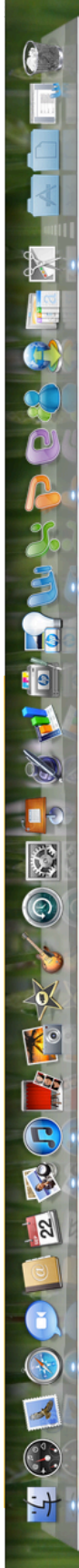
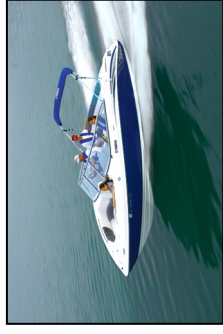


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'Studies show that 90 percent of boating accident victims will drown if not wearing a life jacket. When you join our organization, you will receive a free t-shirt and boating safety information kit.'



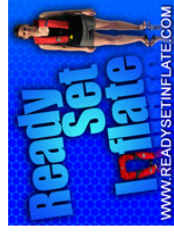
## Appendix G: Threat and Punishment Treatment

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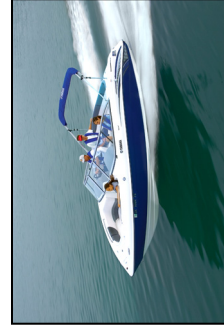


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'Studies show that 90 percent of boating accident victims will drown if not wearing a life jacket. If you don't join our organization and learn about boater safety, you may become the next boating fatality!'



## Appendix H: Cooperative Problem Solving Treatment

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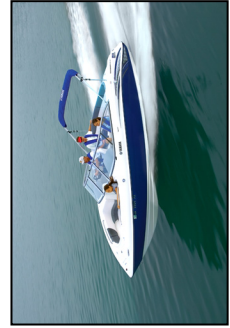
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'We are cooperating closely with the U.S. Coast Guard to spread awareness about the importance of safe boating. If you would like to help us in this cooperative effort, please join our organization. Together, we can reduce boating injuries and fatalities.'



## Appendix I: Strategy Type Control



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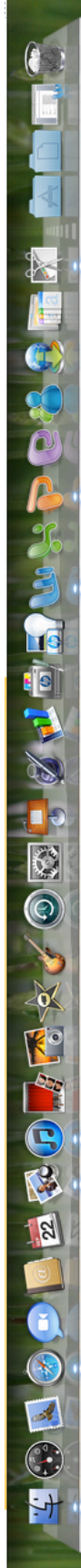
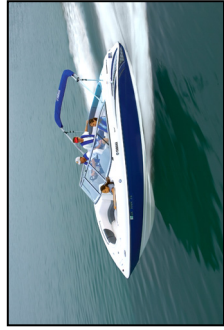


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'Captain Joe will be hosting clinics on offshore angling at Pete's Pier in Crystal River, Florida from 8 a.m. to 6 p.m. during the first and last weekends in May. Proceeds from the clinics will benefit the Florida Fish and Wildlife Commission's research programs.'



## Appendix J: Instrument

Strategy	Strategy #	Total #
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## Boater Safety Questionnaire

On the next page of this booklet, you will see a message on the Safe Boating Advocacy Group's Web site. Please spend a few minutes reading the message. After you have read the message, please complete the questions about your opinion regarding boater safety and the Safe Boating Advocacy Group found on pages 3-7 of this booklet. Your opinion is important and will help to understand what people like you think about boater safety. Please read the informed consent statement below for information on your rights as a participant in this study. Your help is greatly appreciated in understanding the views people like you have about safe boating!

### INFORMED CONSENT STATEMENT

This research is being conducted by Emily Guilfoil under the supervision of Dr. Kelly Werder, 813-974-6790, School of Mass Communications, University of South Florida, 4202 E. Fowler Ave., Tampa, FL 33620. Your responses are voluntary and will remain confidential to the extent provided by law. You do not have to answer any questions you do not wish to answer, and you have the right to withdraw consent at any time without consequence. There are no anticipated risks associated with your participation in this research and you will receive no compensation for your participation. Neither your course status nor your grade will be affected by your decision to participate or not to participate in this study. If you have any questions concerning the procedures used in this study, you may contact the principle investigator at e-mail address [eguilfoi@mail.usf.edu](mailto:eguilfoi@mail.usf.edu) or supervising professor at [kpage@usf.edu](mailto:kpage@usf.edu). Questions or concerns about your rights as a research participant can be directed at the University of South Florida Institutional Review Board, 813-974-5638.

Please check the appropriate category:

\* **Do you have access to a boat on a regular basis?** Yes \_\_\_\_\_ No \_\_\_\_\_

## **PART 1**

### **Instructions:**

Please answer the following questions by circling the number from one to seven that best describes your agreement with the statement. Some of the questions may appear to be similar, but they do address somewhat different issues. Be sure to answer all items, reading each question carefully, and circling only one number on a single scale.

### **Problem Recognition:**

- 1) I believe there is a problem with the way people perceive the importance of boater safety.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 2) I do not believe that operating without the proper safety equipment on board a boat is a threat to individuals.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 3) I believe there is a problem with current methods to facilitate boater safety messages.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 4) I do not view boater safety as a problematic issue.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

### **Level of Involvement:**

- 5) I am personally affected by situations involving boating.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 6) I am concerned about boater safety, but am not personally affected by it.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 7) I do not have any involvement with situations involving boating.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

8) I do not have any involvement with situations involving safety precautions.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

9) Being a safe boater affects me.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

**Constraint Recognition:**

10) I do not think there is anything I can do to prevent boating accidents.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

11) I am able to make a difference in situations involving safe boating.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

12) My actions will reduce the likelihood of getting into a boating accident.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

13) My actions will be too inconsequential to impact the number of recreational boating accidents that occur annually in the U.S.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

**Salient Beliefs:**

14) I believe boater safety is important.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

15) I believe communicating messages about boater safety is important.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

16) I believe boating accidents are a growing problem.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

17) I believe recreational boaters should take safety education seriously.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 18) I believe there should remain a mutual respect between a boater and the water.  
*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

**Subjective Norm:**

- 19) If aware of situations involving boating accidents, people who are important to me would think there is a problem.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 20) If my friends and family knew about the Safe Boating Advocacy Group, they would want me to support it.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

**PART 2**

**Information Seeking Behavior/ Behavioral Intent:**

- 1) I plan to seek out additional information about ways that I can become a safer boater.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 2) I plan to visit a Web site for further information on safety skills for boating.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 3) I would send an email requesting further information on situations involving boater safety.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 4) I would forward an email about situations involving safe boating practices to my friends.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 5) I would donate money to families who experienced an injury in their family due to a boating accident.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 6) I would donate money to families who experienced a death in their family due to a boating accident.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 7) I would attend a meeting of the U.S. Coast Guard.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 8) I would take a boater safety course on the Internet.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

- 9) I would take a boater safety course in a classroom.

*Strongly Disagree 1 : 2 : 3 : 4 : 5 : 6 : 7 Strongly Agree*

### **PART 3**

#### **Instructions:**

Please answer the following questions by circling the number from one to seven that best describes your agreement with the statement. For example, circling one on the scale indicates the most negative response and circling seven on the scale indicates the most positive response. Be sure to answer all items, reading each question carefully, and circling only one number on a single scale.

#### **Attitude Toward Strategy:**

- 1) The message I read from the Safe Boating Advocacy Group is:

Not Informative 1 : 2 : 3 : 4 : 5 : 6 : 7 Informative

Unbalanced 1 : 2 : 3 : 4 : 5 : 6 : 7 Balanced

Not Credible 1 : 2 : 3 : 4 : 5 : 6 : 7 Credible

Untrustworthy 1 : 2 : 3 : 4 : 5 : 6 : 7 Trustworthy

#### **Attitude Toward Behavior:**

- 2) My attitude toward the Safe Boating Advocacy Group is:

Unfavorable 1 : 2 : 3 : 4 : 5 : 6 : 7 Favorable

Negative 1 : 2 : 3 : 4 : 5 : 6 : 7 Positive

Bad 1 : 2 : 3 : 4 : 5 : 6 : 7 Good

- 3) My attitude toward situations involving boater safety is:  
 Unfavorable 1 : 2 : 3 : 4 : 5 : 6 : 7 Favorable  
 Negative 1 : 2 : 3 : 4 : 5 : 6 : 7 Positive  
 Bad 1 : 2 : 3 : 4 : 5 : 6 : 7 Good

**PART 4**

**Demographics:**

- 1) Gender (please circle):                    Male                    Female
- 2) Age: \_\_\_\_\_
- 3) Ethnicity (please circle):                White, Caucasian        Black, African-American  
     Hispanic                    Asian-Pacific Islander  
     Native American        Other \_\_\_\_\_
- 4) Major: \_\_\_\_\_
- 5) Class Standing (please circle):        Freshman                Sophomore  
     Junior                     Senior  
     Graduate                 Other \_\_\_\_\_
- 6) Birth State (please spell out): \_\_\_\_\_

*Thank you for your participation in this study!*