Assessing the Homeland Security advisory system

Ted Greenhalgh
University of Nevada, Las Vegas

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ASSESSING THE HOMELAND SECURITY ADVISORY SYSTEM

by

Ted Greenhalgh

Bachelor of Science
University of Nevada, Las Vegas
1996

A thesis submitted in partial fulfillment
of the requirements for the

Master of Science Degree in Environmental Science
Department of Environmental Studies
Greenspun College of Urban Affairs

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The Graduate College
University of Nevada, Las Vegas

April 13, 2007

The Thesis prepared by

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Ted Greenhalgh

Entitled

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Assessing the Homeland Security Advisory System

is approved in partial fulfillment of the requirements for the degree of

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Master of Science in Environmental Science

[Signatures]

Examination Committee Chair

[Signatures]

Dean of the Graduate College

Examination Committee Member

Examination Committee Member

Graduate College Faculty Representative
ABSTRACT
Assessing the Homeland Security Advisory System

by

Ted Greenhalgh

Dr. David M. Hassenzahl, Thesis Committee Chair
Professor of Environmental Studies
University of Nevada, Las Vegas

Since its inception, the Department of Homeland Security (DHS) was tasked with communicating local and national threat information. Over the last four years, DHS improved its technical ability to communicate, but many people still question its actions. Often it seems that regardless of the message released by DHS, somebody will criticize either the message content or the timing of the press release. This begs the question of how effective is DHS at delivering messages and if it can be improved. Using a checklist of effective communication strategies, this study evaluated eighteen DHS press releases that identified new threats. The study found that DHS struggles the same issues that traditional mass media does when reporting new risks, as well as politicizing its own messages. By loading terrorism messages with vague information, DHS forced the audience to reach its own conclusions about the risks, leaving reports vulnerable to partisan reaction.
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CHAPTER 1

INTRODUCTION

Following the tragic events of September 11, 2001, perceived weaknesses in the government’s structure led to the creation of the Department of Homeland Security (DHS). In its mission statement, DHS recognizes the difficulty it faces and sees its mission as a learning process not only for the Department, but for the public as well:

“Ready.gov is a common sense framework designed to launch a process of learning about citizen preparedness. One of the primary mandates of the U.S. Department of Homeland Security is to educate the public, on a continuing basis, about how to be prepared in case of a national emergency – including a possible terrorist attack.”

(www.ready.gov, 2006)

Tasked with not only protecting the public, but also keeping it aware of possible threats, both natural and man-made, DHS created the Ready.gov web site (www.ready.gov, 2006) and the Homeland Security Advisory System (www.dhs.gov, 2006).

The Ready.gov site targets individual and organization preparedness, offering visitors detailed instructions on how to make emergency plans, prepare resources, and receive information during times of emergency. True to its mission statement, DHS continues to develop and improve the Ready.gov site. In 2006 DHS overhauled their web site twice, attempting to create a more professional and accessible resource for the public.

The same can't be said for the Homeland Security Advisory System, which continues to operate much as it has since its creation. Designed as the all-encompassing primary source of information dissemination, the DHS website states that the Advisory System consists of three parts, Homeland Security Threat Advisories, Homeland Security Information Bulletins, and the Color-coded Threat Level System (www.dhs.gov, 2006). Taken from their website, Homeland Security sets the following goals to accomplish these three tasks:

Homeland Security Threat Advisories contain actionable information about an incident involving, or a threat targeting, critical national networks or infrastructures or key assets. They could, for example, relay newly developed procedures that, when implemented, would significantly improve security or protection. They could also suggest a change in readiness posture, protective actions, or response. This category includes products formerly named alerts, advisories, and sector notifications. Advisories are targeted to Federal, state, and local governments, private sector organizations, and international partners.

Homeland Security Information Bulletins communicate information of interest to the nation's critical infrastructures that do not meet the timeliness, specificity, or significance thresholds of warning messages. Such information may include statistical reports,
periodic summaries, incident response or reporting guidelines, common vulnerabilities and patches, and configuration standards or tools. It also may include preliminary requests for information. Bulletins are targeted to Federal, state, and local governments, private sector organizations, and international partners.

Color-coded Threat Level System is used to communicate with public safety officials and the public at-large through a threat-based, color-coded system so that protective measures can be implemented to reduce the likelihood or impact of an attack. Raising the threat condition has economic, physical, and psychological effects on the nation; so, the Homeland Security Advisory System can place specific geographic regions or industry sectors on a higher alert status than other regions or industries, based on specific threat information.

While these concepts seem reasonable and practical, effectively communicating risk events, like natural disasters and terrorist attacks, remains an elusive goal, not only for federal agencies, but for most media outlets as well (Levy, et al. 1986; Crane, 1992; Rogers, 1999; Roche & Muskavitch, 2003). The inherent uncertainty associated with complex issues like risk assessment places these agencies in a difficult scenario plagued by a milieu of problems.
CHAPTER 2

REVIEW OF RELATED LITERATURE

Problems with Communicating Uncertainty – Reporting Agencies

Even with the proliferation of reporting on the internet, people still depend on mass media for most of their news (Zucker, 1978; Singer & Endreny, 1993; Allan, 2002; Ten Eyck, 2002). This position of primacy of information also carries a heavy burden of accuracy and completeness, often not met when trying to report new risks. Reporting agencies, both governmental and mass media, distribute information using a traditional framing of news issues approach that can hinder audience comprehension of complex information (Levy, et al. 1986; Crane, 1992; Rogers, 1999). The traditional framing approach stresses putting the most recent events first in the story and filling the rest of the story with whatever historical information the reporter can find quickly. Little time or space is devoted to putting issues into proper context which leaves the audience to filter the new information based on their own history and not necessarily that of the story. Since most readers lack any real understanding of a newly reported threat beforehand, this lack of stated context invariably distorts the message (Rogers, 1999).

Journalists are expected to be reporting generalist with few specialists, especially terrorism specialist, even at large news agencies (Becker et al. 2000). Lacking the expertise to convey the uncertainty element of the risk, journalists often over-simplify important information (Levy, et al. 1986; Ethiel 2002). Making matters even more
complicated, the demographics of the potential audience for any mass media report are highly variable, making it difficult for reporters to effectively craft stories that can target such diverse audiences. Complex issues and technical terms not fully explained tend to alienate less educated readers, while oversimplified explanations often omit information the audience considers important. Reporters need to provide complete and accurate information and not make assumptions about the audience or run the risk of being marginalized by their readers (McAdams & Elliott 1996). Surprisingly, less than ten percent of news stories provide adequate explanations of technical terms (Long, 1995). Lacking the background to understand these terms or an explanation in the story, readers simply fail to process the facts they don’t understand or stop reading altogether.

Often, producers frame news stories out of context with the body of the report or use visuals that don’t support the message reported (Rogers, 1999). Global warming reporting is a classic example of this and even today, long after scientific consensus has been reached on the issue, most reports on the issue lead in with the phrase “controversial scientific theory.” Add to this that production staffs rate the quality of a newscast based on technical issues like live shots and whether the reporters look professional instead of the quality of information (Crane, 1992). Most news agencies operate under the mistaken belief that audiences are passive sponges that soak up information, which isn’t true for issues that raise concern among the audience (Epstein, 1995). In the past, audiences had to rely on mass media outlets for all their information, but that’s no longer the case. With easy access to the Internet, more information, both of quality and some questionable, can be found with little effort. While more in-depth online content might help reporting
agencies fill in the gaps of their time-limited televised coverage, internet use also allows for the potential spread of misinformation from less reputable online sources.

Finally, the issue of trust between reporting agency and audience must be considered. Research shows agency trust has a great effect on people’s perception of reported risks (Rayner, 1988; Trumbo & McComas, 2003). If the source of the information lacks public confidence the report’s value and effect will be diminished and distorted. Many public agencies lack the properly trained staff to assist journalist in reporting risk issues, which can lead to ineffective or inaccurate stories being reported (Gursky et al., 2003). Reporting agencies must always strive to be as informative, accurate and as responsive as possible to its audience to cultivate a long lasting sense of trust.

Problems with Communicating Uncertainty – The Audience

The audience itself also presents a number of problems. Walter Lippmann recognized one of the key problems with effective communication early in the 20th century. Everyone constructs new reality based on previous experience (Lippmann, 1922). As individuals encounter new events, they filter them through the “tiny pictures” in their minds before incorporating them as new knowledge. This creates a situation where the reporting agency not only has to address the accuracy of the message, but how to correctly convey the message based on the individual’s understanding of the world. This creates a situation where any gaps in information are subject to the widely varying personal experiences of the audience.

Cultural and demographic differences also create wide ranges of trust and understanding of messages (Slovic, 1987; Flynn et al., 1994; Johnson, 2002). Even the very concept of “risk” gets defined differently between subgroups of the audience.
(Fischoff & Slovic, 1978; Slovic, 1999; Satterfield et al., 2004). Highly educated people tend to understand and trust the information when learning of a new risk. Minority groups tend to distrust government reports and misunderstand reported risks more often. Women tend to perceive risks higher than men and almost universally everyone perceives risks higher than they would prefer (Fischoff & Slovic, 1978).

Audience focus groups cite two main areas of frustration in reading complex news reports: lack of context and lack of technical information (Rogers, 1999). People want to understand the world around them, but mass media often fail to deliver when it comes to complex subjects. Even for impossible to answer questions, like the likelihood of a terrorist attack or natural disaster, people are ready to make estimates on their own (Fischoff & Slovic, 1978). This creates a situation where people still rely on mass media to get the story, but evaluate the importance of it through interpersonal channels of communication and social interaction (Dunwoody & Neuwirth, 1999; Beck, 2000).

Many personal understandings of risk also impact risk perception. Voluntary exposure to a risk, familiarity with the risk, equity of exposure to the risk, a feeling of control about exposure, and a belief that the risk might bring other beneficial results all lower risk perception (Starr, 1969; Slovic, 1987; Satterfield et al., 2004). On the other hand, the catastrophic potential of risk, a sense of dread, and the feeling of hopeless all increase risk perception. Audiences exposed to similar risk reports on a regular basis begin to exhibit more pronounced attitude changes toward the subject over time. At moderate levels of exposure they begin to amplify the risk in their minds both individually and through social interaction (Gerbner, et al. 1980; Kasperson & Slovic 1992). In some cases, people exposed to even more frequent reporting begin to
underestimate the threat, basically becoming desensitized to any new information. Both of these situations can become problematic for reporters. People already sensitive to a risk will tend to overreact to each new report while those who have become desensitized might cynically ignore the message believing the government to just be “crying wolf.”

Problems with Communicating Uncertainty – The Medium

The medium used to convey the message also creates unique problems. Newspaper and Internet outlets can provide space for more in-depth explanations, while radio and television outlets tend to create more concise reports. This creates a situation where not only does the reporting agency need to create different releases for each type of outlet, it must also consider the restrictions each outlet imposes on its editors to ensure that critical information isn’t changed or removed due to presentation restraints. The same multi-page news release created for online or print agencies will probably be too large to telecast. This necessitates the production of tailored versions of the message that can meet both the time restrictions of televised news and the audience’s need of complete information. Even the particular medium used to relay the information can make a difference. As Marshall McLuhan famously noted, “The medium is the message” (McLuhan, 1965). This perceived ratio of importance that the audience places on the medium presenting the risk report can also distort the message, making incomplete televised reports particularly vulnerable.
CHAPTER 3

PURPOSE OF THE STUDY

Considering the formidable task that effectively communicating risk information is, it’s understandable that the DHS regularly comes under fire from pundits and political partisans. Traditional news framing leaves out details the audience wants to know, leaving it up to them to fill in the blanks. This makes messages coming from government agencies particularly vulnerable to perceived political bias. Even traditional news outlets have questioned the use of Advisory System to deflect possible criticism away from the current executive administration. During the MSNBC news broadcast on October 6, 2005 Keith Olbermann surmised:

"Remarkably enough, Karl Rove's possible legal problems were book-ended today by two pieces of terror news. Before, came a presidential speech on the war on terror. After, came a supposed terrorist threat to New York's subway system. Stop what you're thinking. It's just an amazing coincidence. The terrorists just happened to wait to make these threats until there's bad news about the administration that it needs to preempt. Just a coincidence."

While the motives involved in changes to the Homeland Security Advisory System continue to be discussed across the political and editorial landscape, this study instead focuses on the effectiveness of the communication strategies being used by DHS to shape
risk perception among the public. Arguably, research concerning how to effectively report uncertainty messages is nascent, however researchers from a number of fields continue to study risk communication and we have some knowledge about uncertainty and its effects on individual and community perception. Most research findings come almost anecdotally and lack broad consensus between studies. Not surprisingly, most mass media and government reporters seem unaware of these findings and continue to frame threats to society in traditional formats (Rogers, 1999). If the researchers haven’t reached agreement on what constitutes good message framing, how could a media outlet know which one to select?

A Framework for Communicating Uncertainty

Research into communicating risk and uncertainty shows some convergence into a general understanding of what makes good reporting:

Determine the threat potential – Calculating the actual risk probability is considered by many, perhaps falsely, to be the easiest part of the process (Kammen & Hassenzahl, 1999). This evaluation of the likelihood and severity of the event involves getting the best available information and using the best methods to calculate the risk (Fischhoff, 1995). Audience members evaluate the importance of the message based on the quality of the methods used to determine the threat probability (Rogers, 1999). The more precise and detailed a method seems, the more attention the audience will give it. Placing the probability and method into a relevant and easily understood context also plays a role in audience understanding.

Most people lack the background or training to understand statistical probability figures and the esoteric methods of creating them (Golding et al., 1992; Slovic, 2000).
Research shows that comparison narratives can impact audience belief (Golding et al., 1992). This requires the reporting agency to couch the probability in more familiar terms which takes some finesse on the part of the reporting agency. Telling the audiences they have a one in a million chance of being affected is meaningless and obtuse. This is especially problematic for terrorist threats owing to the novelty of such attacks and their potential for massive loss of life. While it might be tempting to compare every new terrorism threat to the attacks of 9/11 or every natural disaster to Hurricane Katrina, it's not quite that simple.

Care must be taken in selection of the contextual example to ensure that the more common threat seems a reasonable comparison for people to make (Johnson, 2005). Uncertainty already places the audience in a demanding position and a poorly chosen context will make a difficult situation worse. Also, different demographic groups tend to react variably to new risks and contexts (Slovic, 1987; Flynn et al., 1994; Johnson, 2002). In controlled experiments of adding narrative contexts to risk issues, the effects of the narrative have been mixed (Slovic et al., 1990; Johnson 2004). Finally, some researchers feel that it might be too difficult for reporters to adequately address the uncertainty inherent in probability, so reporters should focus on mitigation issues (Boholm, 2003).

As muddled as the research seems to be, making probability and uncertainty readily understandable to people is something of a grail quest for reporters, because it's one of the primary concerns audiences raise in surveys (Rogers, 1999). Some headway has been made in finding more effective contexts (Johnson, 2005). By simply asking what kinds of contexts make sense to test subjects, agencies can address many of the issues raised in the previous paragraph. Since government and mass media organizations routinely form
focus study groups to evaluate their operations, this would be an ideal time to get feedback from audiences (Crane, 1992). While this topic still needs much research (Slovic et al., 1990; Johnson, 2004), by building and sharing a functional database of these acceptable comparisons reporting agencies could help each other communicate with their audiences more effectively.

**Report the threat** – The risk should be reported using clear and unambiguous language. Audiences want to know details of the situation when faced with uncertainty (Rogers, 1999). They want to know the location, time, and duration of the event as well as whom it will impact. Keeping the message accurate and to the point helps the audience focus on these important facts (McAdams & Elliott, 1996). People evaluate risks based on their understanding of the world (Fox, 1999). Any omissions deemed important by the audience are filtered through this worldview and a guess generated. Special consideration to the medium and editorial requirements must be observed to ensure important information isn’t lost through editing due to lack of space or time.

**Explain what the threat means** – When people hear that their life might be in danger, they want answers. If the reporting agency doesn’t supply these answers directly, people will seek out other less reliable sources which can make a dire situation worse (Fischoff & Slovic, 1978; Dunwoody & Neuwirth, 1999). Reports should not contain complicated technical terms and esoteric jargon (Rogers, 1999). Anything deemed too technical for the average person in the report should be explained in detail (McAdams & Elliot, 1996). Likely questions a reasonable person might ask should also be addressed and care must be taken to ensure that people understand what this threat means to them, their families and communities.
Give the new threat context – In most instances, audience should be given a frame of reference using another more common risk event (Rogers 1999). This requires the reporting agency to have a working knowledge of other types of risks and how they relate to the current situation. A comparison to being killed in a car crash or killed by lightning creates a better understanding than saying killed in a lab accident. Few people have any experience with lab accidents, but most are well aware of the dangers of driving and lightning. If the risk is unavoidable, like a threat to a metropolitan mass transit system, use comparisons to other risks that people take daily to gain some benefit (Slovic, 1987; Satterfield et al., 2004). Again, many of the context issues discussed in the probability section above must be carefully considered and much more research needs to be done in this area.

Explain mitigation strategies – People want to know what they can do when faced with adversity. They want to know what actions they can take and what actions others are taking. The reporting agency should explain the events and indicators that precipitate the threat followed by what actions the audience can take to lessen their exposure to a risk or the effects once it does occur. Warning people about catastrophic life-threatening events can increase their sense of dread dramatically, but telling them how to cope with the situation makes it more manageable. The research on crafting efficacious mitigation messages for audiences hasn’t been conclusive. Some of the research shows a correlation between efficacy and action (Weinstein, 1983; Weinstein et al., 1990) while others found no correlation (Svenson et al., 1985) and some found mixed results (Rimal & Real, 2003). It’s still worthwhile to pursue because once people feel they can cope with the risk they are more willing to accept it (Starr, 1969; Slovic, 1987; Satterfield et al., 2004).
Make sure people don’t feel isolated – Due to the nature of mass media reporting people often feel isolated by the report, since they generally get their information individually. In the case of a dread inducing threat, this sense of isolation can seem overwhelming, causing the audience to miss important information. Reports should accentuate how the risk event affects the community and what agencies can help people during the crisis.

Research Questions

The literature indicates that when faced with a new threat, people want information. If they can’t get this information from official sources, they’ll seek out other sources (Dunwoody & Neuwirth, 1999; Beck, 2000) or simply fill in the blanks based on their personal experience (Lippmann; 1922; Fox, 1999). The literature also shows that normal mass media approaches to reporting uncertainty, while timely and efficient, often lack a context that the audience can understand which reduces efficacy (Rogers, 1999). Add to this the difficulty of trying to identify terrorist threats, which are highly uncertain by nature, and it becomes obvious that traditional media methods will prove problematic for DHS to communicate effectively and build agency trust (Raynor, 1988). If the agency crafts its messages using traditional mass media methods, it’s likely they’ll encounter the same types of difficulties and limitations that continue to plague media outlets. This raises the following questions with respect to how the Department of Homeland Security communicates with the public:

RQ1: Does the DHS employ the processes advocated by risk communication research or does it rely on standard mass media structures and content in presenting its messages?
RQ2: Could the limitations caused by using standard mass media framing lead to agency mistrust by forcing the audience to fill in missing information themselves?

Using the literature as a guide of what good risk reporting should contain, this study examines the content of the new threat press releases listed on the www.dhs.gov website to determine if the department uses standard reporting practices that could lead to public's misinterpretation of the message. If DHS already uses better reporting practices, then the lack of faith some have in the agency probably comes from another source.
CHAPTER 4

METHODOLOGY

Using the six-point framework outlined above, this study examines the contents of DHS threat messages and evaluates what factors might influence audience perception. By constructing a table that compares effective strategies and actual DHS messages any missing elements are identified. Compiling all these findings into a case study of DHS messages should indicate effective and ineffective strategies being used by the agency. Armed with this new knowledge, the study suggests improvements for future agency communications.

This project uses an explanatory case study approach due to the difficulty of separating the intent of DHS messages from the text of the messages (Yin, 1993). This allows objectivity while the composite framework limits preconceived bias toward the DHS. To further reduce researcher bias, each message will be evaluated separately by three independent coders and the aggregate of the three findings discussed.

Collection of Data

Design

Coders use the worksheet found in Appendix A that lists the six communication strategies in one column, the ideal message components in the second column, the actual DHS message content in the third column, and then describe the clarity of the message in the fourth column, for each DHS press release. Upon completion of the worksheets, they
are collected and compared by the primary researcher create an aggregate listing of what
the coders found in each message. Any variation between the coder’s findings is noted
for reliability analysis. Once inter-coder reliability is established and found acceptable (α
> 0.70), systemic trends in the messages are discussed and reporting issues noted.

Procedure

The coders evaluate each DHS press release or news conference transcript that raised
the color-coded National Threat Level or identified a new natural threat using the work
sheet in Table 1. For each section the coder notes the following in the appropriate boxes:

Determine the Threat Potential - DHS Message Content: Any risk probability
presented in the message and the method the agency used to arrive at that number. If the
message lacks any risk probability assessment, the coder enters “none”.

Determine the Threat Potential – Clarity: The coder rates how well they understood
the risk probability in the message as either “good”, “vague”, or “not at all”.

Report the Threat – Identify Specific Threat – DHS Message Content: The coder
enters the threat identified in the message. If the threat isn’t identified, the coder enters
“none”.

Report the Threat – Identify Specific Threat – Clarity: The coder rates how well they
understood the specific threat in the message as either “good”, “vague”, or “not at all”.

Report the Threat – Identify Specific Location – DHS Message Content: The coder
enters the potential areas that the threat might impact listed in the message. If the
location isn’t identified, the coder enters “none”.

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Report the Threat – Identify Specific Location – Clarity: The coder rates how well they understood the threatened location in the message as either “good”, “vague”, or “not at all”.

Report the Threat – Expected Duration – DHS Message Content: The coder enters the threat’s expected duration information from the message. If the duration isn’t listed, the coder enters “none”.

Report the Threat – Expected Duration – Clarity: The coder rates how well they understood the threat’s duration in the message as either “good”, “vague”, or “not at all”.

Report the Threat – Population at Risk – DHS Message Content: The coder enters what populations the message says are potentially at risk. If the message doesn’t state a population, the coder enters “none”.

Report the Threat – Population at Risk – Clarity: The coder rates how well they understood the what population was at risk in the message as either “good”, “vague”, or “not at all”.

Explain What It Means – Jargon – DHS Message Content: The coder enters any unexplained acronyms or jargon that appears in the message. If all esoteric terms were explained or the message didn’t contain any, the coder enters “none”.

Explain What It Means – Jargon – Clarity: The coder rates how well they understood the jargon used in the message as either “good”, “vague”, or “not at all”.

Explain What It Means – Technical Terms – DHS Message Content: The coder lists any unexplained technical terms contained in the message. If all technical terms were explained or the message didn’t contain any, the coder enters “none”.

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Explain What It Means – Technical Terms – Clarity: The coder rates how well they understood the technical terms used in the message as either “good”, “vague”, or “not at all”.

Give the Threat Context – DHS Message Content: The coder enters any common risk use in the report to make the new threat more understandable. If a more common risk wasn’t used in the report the coder enters “none”.

Give the Threat Context – Clarity: The coder rates how well they understood the risk using the more common context used in the message as either “good”, “vague”, or “not at all”.

Explain Mitigation Strategies – How to Minimize Exposure – DHS Message Content: The coder lists any steps that the report says people should do to avoid or lessen the effects of the new threat. If the report contained no minimizing or avoidance steps the coder enters “none”.

Explain Mitigation Strategies – How to Minimize Exposure – Clarity: The coder rates how well they understood the steps to minimize or avoid the risk in the message as either “good”, “vague”, or “not at all”.

Explain Mitigation Strategies – What to do if Exposed – DHS Message Content: The coder lists the steps the report says people should take if exposed to the new risk. If the report contains no information on what to do if somebody is exposed to the risk the coder enters “none”.

Explain Mitigation Strategies – What to do if Exposed – Clarity: The coder rates how well they understood what they should do if exposed to the threat in the message as either “good”, “vague”, or “not at all”.
Explain Mitigation Strategies – What Others Will be Doing – DHS Message Content:
The coder lists what the report says other people and agencies are doing about the threat.
If the report didn’t list this information, the coder enters “none”.

Explain Mitigation Strategies – What Others Will be Doing – Clarity: The coder rates how well they understood what steps other people and agencies would be doing about the threat in the message as either “good”, “vague”, or “not at all”.

Make Sure People Don’t Feel Isolated – Community Affected – DHS Message Content: The coder lists the community building statements contained in the message. If the message didn’t contain any community building statements, the coder enters “none”.

Make Sure People Don’t Feel Isolated – Community Affected – Clarity: The coder rates the effectiveness of the message to build community ties as either “good”, “vague”, or “not at all”.

Make Sure People Don’t Feel Isolated – Getting More Help – DHS Message Content: The coder lists any phone numbers, contact agencies, and websites where the message says people can find more information or seek help. If the message didn’t have any of these sources, the coder enters “none”.

Make Sure People Don’t Feel Isolated – Getting More Help – Clarity: The coder rates the message’s listing of additional help sources as “good”, “vague”, or “not at all”.

Treatment of the Data

After the outside coders have completed the message worksheets, the primary researcher collects and compares them to their own worksheets. Using a simple binary (0 for no match, 1 for a match) ranking system the primary researcher notes whether the outside coder agrees with them. For each worksheet comparison the primary researcher
generates and records a straight percentage of coder agreement, a Pearson’s Correlation between datasets, and a Cronbach’s alpha to determine the relationship between the coder responses and inter-coder reliability of the instrument (Cronbach, 1951). Once all the worksheets have been evaluated, the primary researcher also records the average of those three tests for the entire case study of messages. Pearson’s Correlation is used to measure the tendency of outside coder results to follow those of the primary researcher as well as provide data for Cronbach’s alpha. The Cronbach’s alpha measures the internal reliability of the instrument. It’s necessary to test the instrument and coder findings because of the novelty of this approach. None of the coders are experts in risk communication and the instrument has never been used before.
CHAPTER 5

FINDINGS

During the initial analysis of the data it became apparent that it would be more informative to separate the DHS messages into two categories, Hurricane Warnings and Terrorism Warnings, since they follow a different content formats. Casual observation of the messages doesn’t identify this trend, so it’s not possible to determine if this divergence was intentional. Regardless, the Pearson’s Correlation and Cronbach’s alpha for the groups combined or separated were very good (0.80 – 1.0 and 0.94 – 1.0 respectively).

All of the hurricane warnings in table 1 lacked any kind of threat probability, which was a curious omission, because this information was readily available on the government’s National Hurricane Center website (www.nhc.noaa.gov, 2006). This same website also details the methods used in determining the hurricane threat potentials, another content element missing from all the messages. None of the messages attempted to generate a better understanding of the probability with a more common threat. Not surprisingly, by omitting all probability information in every message, the threat probability sections all lacked clarity.

Things improved considerably when the messages reported the threat. All of the messages identified the hurricane threat and some even included wind speed classification information. The location information was easy to understand, even
considering the large areas that can be affected by a hurricane. All of the hurricane
duration information was expressed in vague terms, like “weeks following landfall.”
Although it wasn’t specifically stated in every message what populations were at risk, it
was easy to deduce in all the messages what people were at risk. Despite the duration
vagueness, all the messages reported the threat clearly.

Most of the hurricane warnings avoided technical jargon and on the rare occasion
when the reports used a technical term, they explained it. Combined with good reporting
content, this made the messages easy to understand. The only other context that was used
to explain the new threat was another hurricane, which didn’t make the threat context
noticeable clearer. Still, the coders all reported they could follow the hurricane messages
and understand them.

Mitigation strategies were solid for the most part. All of the messages told people
how to minimize their risk and what government agencies would be doing during the
crisis. Almost all explained what people affected by the storm should do for assistance
and self-preservation. Community building was rarely (only 25%) attempted. Most press
releases contained useful listings to relief agencies and locations for additional
information, but a quarter of the messages didn’t have any contact information at all.

One curious finding was the lack of a press release warning for Hurricane Katrina on
the DHS website. There had been previous warnings for other hurricanes and warnings
for hurricanes after, but none for Katrina. In the months following the devastation caused
by the storm, DHS had dozens of Katrina-related press releases, making the warning
omission even more notable.

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Table 1  Percentage of Hurricane Warning Messages Containing New Framework Content. Listed by Evaluation Criteria (rows) and Findings (columns).

<table>
<thead>
<tr>
<th>Framework Criteria</th>
<th>Message Element</th>
<th>DHS Message Content</th>
<th>Coder Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Adequate</td>
<td>Vague</td>
</tr>
<tr>
<td>Determine the threat</td>
<td>Risk Probability</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Method Used</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Probability Context</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Clarity</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Report the threat</td>
<td>Identify Threat</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Identify Location</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Expected Duration</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Population at Risk</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Clarity</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Explain what it means</td>
<td>Explanation of Terms</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Clarity</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Give the threat context</td>
<td>Common Risk Comp.</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Clarity</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Explain mitigation</td>
<td>Minimize Risk</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>strategies</td>
<td>Actions if Affected</td>
<td>63%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Other’s Mitigations</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Make sure people don’t</td>
<td>Community Aspect</td>
<td>25%</td>
<td>0%</td>
</tr>
<tr>
<td>feel isolated</td>
<td>Help or Information</td>
<td>75%</td>
<td>0%</td>
</tr>
</tbody>
</table>

8 messages: Cronbach’s $\alpha = 0.98$: Average Coder Agreement = 96%.

The terrorism warning messages data from table 2 shows a slightly different picture.

All of the messages contained the ubiquitous National Threat Level of either Orange/High Risk of attack or Red/Severe Risk of attack. While the nominal approach indicated a sense of probability, it was still considered somewhat vague and clouded message clarity. 75% of the messages mentioned some of the methods used to arrive at the new probability of attacks. These varied from “consensus of national terror experts” to “increased chatter” and in most cases didn’t make the threat potential any clearer.
None of the messages attempted to frame the probability in an easier to understand context.

Unlike the hurricane warnings, the terrorism warnings lacked specifics when reporting the nature of the threat. More than 50% of the messages described the threat in vague terms such as “shadow warriors” or “unspecific threats.” Similarly, locations were described in very vague terms in half the messages, sometimes limiting the location to “anywhere in the world.” Continuing the trend, the expected durations of the new threat were vague, open ended, or used political time frames like “until after the elections” or “up through the president’s inauguration.” Most messages lacked clarity with only 30% of the reports identifying the threat.

In explaining terrorism warnings DHS occasionally used unexplained jargon or technical terms, like “weaponized anthrax,” but 80% of the messages avoided the mistake. Unfortunately, these explanations didn’t improve clarity in 70% of the messages. Risk comparisons were only used once and the context was questionable when the anthrax attack was compared to the yearly flu epidemic. None of the reports were made clearer using comparison contexts.

Mitigation strategies were very good for most of the messages, with 90% of the reports offering ways to lower risk exposure and all of them detailing what federal and state agencies would be doing to decrease the threat. Oddly, messages rarely (10%) offered any suggestions on what to do if people were actually exposed to the risk. This contrasted with the hurricane messages which provided the information in about two-thirds of the reports. In 30% of the messages some form of community building was attempted and a like number of reports offered additional sources people go use to get
help or additional information about the threat. Again, the lack of sources for help or additional information in terrorism messages was significantly different than those found in the hurricane warnings.

<table>
<thead>
<tr>
<th>Framework Criteria</th>
<th>Message Element</th>
<th>DHS Message Content</th>
<th>Coder Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Adequate</td>
<td>Vague</td>
</tr>
<tr>
<td>Determine the threat potential</td>
<td>Risk Probability</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Method Used</td>
<td>0%</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>Probability Context</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Clarity</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Report the threat</td>
<td>Identify Threat</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Identify Location</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Expected Duration</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Population at Risk</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Clarity</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Explain what it means</td>
<td>Explanation of Terms</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Clarity</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Give the threat context</td>
<td>Common Risk Comp.</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Clarity</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Explain mitigation strategies</td>
<td>Minimize Risk</td>
<td>90%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Actions if Affected</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Other’s Mitigations</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Make sure people don’t feel isolated</td>
<td>Community Aspect</td>
<td>30%</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Help or Information</td>
<td>30%</td>
<td>0%</td>
</tr>
</tbody>
</table>

10 messages: Cronbach’s $\alpha = 0.96$: Average Coder Agreement = 93%.
CHAPTER 6

DISCUSSION

Overall, the hurricane warnings look mostly complete and comparable with standard mass media reporting formats. It could be argued that the inclusion of probability information wasn't necessary, but this just leaves the audience to create its own impression of the probabilities (Lippmann, 1922). Research shows that people are perfectly willing to make a guess in the absence of facts (Fischhoff & Slovic, 1978) or seek out information from interpersonal social sources (Dunwoody & Neuwirth, 1999; Beck, 2000). The National Hurricane Center website lists landfall location probabilities and storm intensity information for every hurricane it tracks, so there's really no reason not to include the information in the press releases (www.nhc.noaa.gov, 2006). Since this information is readily available from a number of other government websites it makes correcting this problem in the future trivial.

When reporting and explaining the threat, the messages are uniformly good, with the exception of duration information. Durations were given in rather vague terms and the coders were simply confused as to what constituted actual duration information. Again, by making this information so vague, only makes it more likely for misinterpretation. A generalized version of this information can be found on the DHS and other government websites, but the government has a lot of experience dealing with hurricanes. There's no reason that DHS couldn't tailor the expected duration of the storm and expected time for
relief to arrive after each storm based on past experiences with similar storms in similar areas.

The lack of more common risk comparisons to generate a more understandable context doesn’t actually weaken hurricane warnings. Hurricanes are one of the more common natural threats people face, particularly among those likely to be exposed to such storms. Mitigation strategies were also uniformly good, only occasionally lacking information on what people should do when affected by the storm. Most of the hurricane warnings lacked community bonding aspects, which seems out of place considering hurricanes impact entire regions and hundreds of communities. By building a connection with the community before the event, agencies can lower isolation apprehension and also implant the idea of working together in the storm’s wake.

Other than the ubiquitous National Threat Level changes, the terrorism warnings contained no other threat probability information. Taken at face value, stating there was a “high” or “severe” risk of a terrorist attack seems reasonable, but compared to what? After being told 10 times that the risk of attack was “high” or “severe” and nothing happened, what should people make of those terms? At the very best, these kinds of minimal probability can only be considered vague. Most reports carried a vague description of the methods used to determine the threat. It might be that divulging how the new threat was identified would violate national security, but the ethereal nature of explanations offered didn’t increase understanding.

Taken together these vague messages and omissions create a situation ripe for personal interpretation (Lippmann, 1922). Again, research shows that people are willing to make a guess in the absence of facts (Fischoff & Slovic, 1978) or seek out information

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from interpersonal social sources (Dunwoody & Neuwirth, 1999; Beck, 2000). This can wildly distort the message as it’s filtered on personal and interpersonal levels without any real grounding and was expressed when the outside coders didn’t equate color-code changes with risk probability at all. It was meaningless to them.

Several times comments made by the DHS Secretary only added to this confusion by generating mixed messages. In press conferences announcing that they were increasing the National Threat Level because terrorist attacks were considered imminent, both Secretaries then told everyone to go about their business and basically ignore the threat. These kinds of mixed messages come about because there’s no common context for terrorist attacks and the Secretaries apparently lacked the understanding or finesse to explain the nature of low probability/high damage threats adequately. Comparing a terrorist attack to a rare, but well understood tragedy, could generate a more appropriate context. People would then know it could happen and be devastating, but probably not to them. For most people, this would increase their awareness of the threat without causing panic behavior, which seems to be the outcome DHS wanted.

When reporting and explaining the threat, information was presented in very vague terms more than half the time, making it difficult to understand or follow. This again lowered inter-coder reliability as the coders struggled to identify what exactly DHS was trying to say in the messages. Again, this could be an issue of national security and DHS might be parsing its words to avoid giving away too many details, but it still leaves the audiences guessing what the message means. Comparing the terrorism messages to the hurricane messages, it’s pretty obvious that something has changed in how DHS covered the factual information in the reports.
This was a little surprising, since traditionally, reporters cover the five W’s (who, what, where, when, why) of uncertainty issues fairly well (Crane, 1995). Often these reports were so vague it seemed DHS was saying anything could happen to anyone, anywhere, and at anytime. This omission of normally expected information again leads the audience to fill in the missing facts with guesswork (Fischoff & Slovic, 1978) and rumor (Dunwoody & Neuwirth, 1999; Beck, 2000). It also gives the impression that DHS is either hiding or doesn’t know the information, both of which impact agency trust (Rayner, 1988; Trumbo & McComas, 2003).

Presenting information framed in political terms only lends them to political interpretation. Saying “until after the elections” can create mistrust when just saying “until December” would have given a similar duration with a neutral connotation. While it seems trivial, DHS shouldn’t give away credibility due to sloppy writing. In the politically polarized environment that the agency must navigate its messages today, more care needs to be taken to ensure people aren’t given a reason to disbelieve the message.

Only one of the warnings was compared to a more common risk, the yearly outbreak of influenza, which was oddly compared to the spat of anthrax mail incidents. The rest were not compared to other common risks, but three made comparisons to the unique attacks of 9/11. During one press conference, when a reporter asked Secretary Ridge to compare the current alert with past ones, he declined to comment. This left a number of important issues for the audience to determine on their own (Lippmann, 1922; Fischoff & Slovic, 1978), which can harm agency image as a reliable information source and create mixed messages in the social sphere as each person creates their own reality of the threat.
(Dunwoody & Neuwirth, 1999; Beck, 2000). All of these were curious choices, since none of them fit the particular context very well.

Comparing the narrowly targeted anthrax incidents to a yearly occurrence that kills 10,000 people seems uninformed, at best. While it might be tempting to use the attacks of 9/11 to impress the potential damage effects of a terrorist attack, it fails to convey probability well owing to its once in a lifetime uniqueness. Coupling the 9/11 attack's effects with a better understood low probability event could make an effective message, however the agency needs to carefully conduct some research first to see if audiences will accept the comparison first.

Mitigation strategies were generally covered well, with the exception of what people should do if they were affected by an attack. Most of the information that people would need to know in case of an attack are already on the DHS Ready.gov website, the agency just needs to include that information in future press releases. In all its messages, DHS very thoroughly described what it and other agencies were doing to mitigate these new threats, it just needs to apply that same principle to telling people what they should be doing during the crisis.

Some of the community remarks were effective, but others were politically loaded bordering on propaganda. More neutral phasing can generate the wanted results without tempting the audience to discount the message as being political. The first few terrorist warnings all carried a listing of places people could find more information, but the later messages dropped this useful strategy. People need to be assured the government is doing all it can to protect them in the crisis and that they aren't alone. They want to know who can help them and how they can help others. All press releases should carry
relevant listings of support agencies and locations of additional information for the audience.
CHAPTER 7

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The study’s findings show that Department of Homeland Security uses traditional framing approaches in constructing its messages, but also identified other content and language issues. It seems reasonable that these omissions of important information and politically loaded wording contribute to agency mistrust and allow partisans to question the motives behind issuing threat warnings. Fortunately, none of these issues are particularly difficult to correct and, in fact, much of the material needed to support their messages already exists on government websites.

DHS clearly needs to rethink how it constructs terrorist warning messages. While the color-coded National Threat Level might be a valuable tool at an organizational level, it isn’t an effective substitute for conveying risk probability to people. DHS also needs to be more precise when identifying terrorist threats in press releases. Vague warnings might actually cause more harm than good and the certainly have the potential to damage agency credibility.

Also, flowing patriotic/propaganda concepts like “American spirit”, “be vigilant and ignore rumors”, or how “resolute and indivisible” we are as a nation are better left for political speeches and not press releases warning of possible terrorist attacks. Emotional appeals, like patriotic messages, can distract attention away from important details contained in the message. The cosmopolitan nature of the audience must always be
considered when drafting a new message. Anything that can be construed negatively by political opponents should be avoided or the agency risks alienating them from the warning.

The findings also justify the development of a method to construct and evaluate messages that deal with uncertainty. By having an instrument to gauge the message’s content, the study not only found the expected issues, but also illuminated other problems. Although the method used here proved useful, it’s still a crude beginning, and the author encourages recommendations for refinement.

Future efforts should focus on improving and testing the instrument. Using a quantitative measurement, like a five or seven point Likert scale, in gauging message clarity might be a more rigorous test for the instrument. Messages should be created using the worksheet guidelines and compared to traditional risk messages through focus groups. Also, the applicability of the instrument to other case studies of should be considered. Perhaps the method could be used to create messages designed to increase stakeholder understanding of scientific reports or improving the general population’s understanding of controversial issues. Semi-technical periodicals like “Popular Science” and “Popular Mechanics” seem more capable of reporting uncertainty and evaluating their content might provide useful research.

The discussion about communicating uncertainty has been going on for years, but reporters still have difficulty effectively addressing it. While a number of organizational and editorial obstacles will likely remain, giving journalist an effective framework to convey a better understanding of uncertainty is a start. Most of the weaknesses identified in the DHS messages could be corrected with better word choices and by including some
additional information they had readily available. This seems to indicate merely a lack of understanding on their part, and is something current research can improve. By defining what the framework of uncertainty reporting should look like, researchers can give journalists the tool they need to inform the public. Now, researchers just need to find something they can agree will work.
APPENDIX A

<table>
<thead>
<tr>
<th>Framework Criteria</th>
<th>Ideal Content</th>
<th>DHS Message Content</th>
<th>Clarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the threat potential</td>
<td>Risk probability and method used to generate it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report the threat</td>
<td>Identify specific threat</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identify specific location</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expected duration, from when to when</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What specific populations are at risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explain what it means</td>
<td>No esoteric DHS or police jargon</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical terms explained</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Give the threat context</td>
<td>Comparisons to more common risks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explain mitigation strategies</td>
<td>How to minimize exposure to the risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What to do if you’re exposed to the risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mitigation other people, police etc, will be doing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make sure people don’t feel isolated</td>
<td>Explain how the event affects the entire community</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lists of additional help or information?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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APPENDIX B


Determine the threat potential:

  Risk Probability: None
  Method Used: None
  Context: None
  Clarity: None

Report the threat:

  Identify Threat: Anthrax in the mail
  Identify Location: Brentwood Post Office, Washington D.C.
  Identify Duration: Ongoing
  Identify Population Threatened: Postal workers, medical personnel
  Clarity: Good

Explain what the threat means:

  Terms Explained: No, “weaponized anthrax”
  Clarity: Vague

Give the threat context:

  Comparison Given: Yearly flu outbreak, 9/11 attacks
  Clarity: None

Mitigation Measures:
Minimize Exposure: Wear protective clothing
When Exposed: None
Other’s Actions: Screening/sanitizing mail

Audience Isolation:
Affects Community: None
Get More Info: USPS.gov, CDC.gov

Intercoder Reliability: $\alpha = 0.98$

Discussion: Comparison to yearly flu outbreak and its 10,000 deaths was confusing. Comparison to 9/11 attacks seemed out of place.


Determine the threat potential:
Risk Probability: None
Method Used: Intel Reports
Context: None
Clarity: None

Report the threat:
Identify Threat: “Shadow soldiers” attacking Americans
Identify Location: US and abroad
Identify Duration: Through the holidays
Identify Population Threatened: Americans
Clarity: Vague
Explain what the threat means:

Terms Explained: Yes

Clarity: Vague

Give the threat context:

Comparison Given: 9/11 attacks

Clarity: Good

Mitigation Measures:

Minimize Exposure: Be aware and mindful of suspicious activity

When Exposed: Contact authorities

Other’s Actions: Increased security by officials

Clarity: Good

Audience Isolation:

Affects Community: Nation is at war

Get More Info: None

Clarity: None

Intercoder Reliability: α=0.98

Discussion: Very vague specifics with a lot of political rhetoric.


Determine the threat potential:

Risk Probability: None

Method Used: Top intelligence advisors

Context: None
Clarity: None

Report the threat:

Identify Threat: Terrorists attacks on Americans

Identify Location: US and abroad

Identify Duration: None

Identify Population Threatened: Americans

Clarity: Vague

Explain what the threat means:

Terms Explained: Yes

Clarity: Vague

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: None

When Exposed: None

Other’s Actions: Federal and state officials increasing security

Clarity: None

Audience Isolation:

Affects Community: None

Get More Info: None

Clarity: None

Intercoder Reliability: $\alpha=0.98$
Discussion: Very vague on specifics.


Determine the threat potential:

Risk Probability: None
Method Used: Lead up to invasion of Iraq
Context: None
Clarity: Vague

Report the threat:
Identify Threat: WMD attacks by terrorists
Identify Location: Military bases, transportation, infrastructure, symbols of US
Identify Duration: None
Identify Population Threatened: Americans
Clarity: Vague

Explain what the threat means:
Terms Explained: Yes
Clarity: Vague

Give the threat context:
Comparison Given: None
Clarity: None

Mitigation Measures:
Minimize Exposure: Be aware and prepared
When Exposed: None
Other's Actions: Increased security, public health sector on alert

Clarity: Good

Audience Isolation:

Affects Community: All state governors assisting DHS

Get More Info: Yes

Clarity: Good

Intercoder Reliability: $\alpha=0.98$

Discussion: The WMD aspects mimicked pre-war intelligence posturing.


Determine the threat potential:

Risk Probability: None

Method Used: Lead up to invasion of Iraq

Context: None

Clarity: Vague

Report the threat:

Identify Threat: Terrorist trying to harm Americans

Identify Location: Chemical/food plants, borders, everywhere

Identify Duration: From now until DHS changes it

Identify Population Threatened: Americans

Clarity: Vague

Explain what the threat means:

Terms Explained: Yes
Clarity: Vague

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: Be informed, report suspicious activity, ignore rumors

When Exposed: None

Other’s Actions: More security by federal and state govt.

Clarity: Vague

Audience Isolation:

Affects Community: All travelers can expect delays

Get More Info: Yes

Clarity: Good

Intercoder Reliability: $\alpha=0.95$

Discussion: Very vague message. Mitigation efforts suffered from “ignore rumors” political statement.


Determine the threat potential:

Risk Probability: None

Method Used: Reaction to foreign terrorist attacks

Context: None

Clarity: Vague
Report the threat:

Identify Threat: Terrorists either armed, using car bombs, or WMDs.

Identify Location: Large public gatherings

Identify Duration: None

Identify Population Threatened: Large crowds of people

Clarity: Vague

Explain what the threat means:

Terms Explained: Yes

Clarity: Vague

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: Vigilance, report suspicious activity

When Exposed: None

Other's Actions: Federal and state agencies increasing security

Clarity: Good

Audience Isolation:

Affects Community: All of us working together can make a difference

Get More Info: None

Clarity: Vague

Intercoder Reliability: $\alpha=0.96$
Discussion: Very mixed messages to warn people about an imminent attack and then tell them to go about their normal messages.


Determine the threat potential:

Risk Probability: None
Method Used: Storm watch
Context: None
Clarity: Vague

Report the threat:

Identify Threat: Hurricane
Identify Location: Mid-Atlantic east coast
Identify Duration: Landfall Thursday
Identify Population Threatened: People at location and inland
Clarity: Good

Explain what the threat means:

Terms Explained: Yes
Clarity: Good

Give the threat context:

Comparison Given: None
Clarity: None

Mitigation Measures:

Minimize Exposure: Monitor TV/radio for info, prepare supplies for 3 days
When Exposed: Listen to official announcements

Other's Actions: Federal and state agencies will be on hand to help

Clarity: Good

Audience Isolation:

Affects Community: None

Get More Info: None

Clarity: None

Intercoder Reliability: $\alpha=0.95$

Discussion: A hurricane probably is the most common threat they have experienced.


Determine the threat potential:

Risk Probability: None

Method Used: Increased terrorist chatter

Context: Rival or exceed 9/11

Clarity: Good

Report the threat:

Identify Threat: Terrorist using aircraft as weapons

Identify Location: Urban areas

Identify Duration: Holiday season and beyond

Identify Population Threatened: Everyone

Clarity: Vague

Explain what the threat means:
Terms Explained: No
Clarity: Vague

Give the threat context:
Comparison Given: 9/11 attacks
Clarity: Good

Mitigation Measures:
Minimize Exposure: Vigilance and emergency plans, report suspicious activity
When Exposed: None
Other’s Actions: Federal and state agencies increasing security
Clarity: Good

Audience Isolation:
Affects Community: Thanks for putting up with travel delays
Get More Info: No
Clarity: Vague

Intercoder Reliability: $\alpha=0.95$

Discussion: Mixed messages again, warning of airplane attacks on urban areas and
telling people to go ahead with holiday plans.


Determine the threat potential:
Risk Probability: None
Method Used: Storm tracking
Context: None
Clarity: Vague

Report the threat:

Identify Threat: Hurricane

Identify Location: Florida coast

Identify Duration: Landfall soon

Identify Population Threatened: People in Florida

Clarity: Good

Explain what the threat means:

Terms Explained: Yes

Clarity: Good

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: Prepare supplies and listen to officials

When Exposed: Listen to officials

Other’s Actions: Federal and state agencies will be helping

Clarity: Good

Audience Isolation:

Affects Community: None

Get More Info: Yes

Clarity: None

Intercoder Reliability: $\alpha=0.99$
Discussion:

New Threat: Public address to reporters about the threat to financial sectors, August 1, 2004.

Determine the threat potential:

Risk Probability: None
Method Used: None
Context: None
Clarity: None

Report the threat:

Identify Threat: Terrorist with a car bomb
Identify Location: IMF, Worldbank, Prudential, Citigroup and NYSE
Identify Duration: Until after the election
Identify Population Threatened: People in and around financial buildings

Clarity: Good

Explain what the threat means:

Terms Explained: No
Clarity: Yes

Give the threat context:

Comparison Given: None
Clarity: None

Mitigation Measures:

Minimize Exposure: Be vigilant
When Exposed: None
Other’s Actions: Security increased at the locations

Clarity: Good

Audience Isolation:

Affects Community: “American spirit” “Can’t dampen our resolve” “Indivisible”

Get More Info: None

Clarity: Vague

Intercoder Reliability: $\alpha=0.96$

Discussion: Mixed messages again warning of a car bomb attack, but telling people to ignore the threat and go about their business. The patriotic hyperbole might be considered propaganda by some.


Determine the threat potential:

Risk Probability: None

Method Used: Storm tracking

Context: None

Clarity: Vague

Report the threat:

Identify Threat: Hurricane

Identify Location: Florida and Georgia

Identify Duration: Landfall soon

Identify Population Threatened: People in the two states

Clarity: Good
Explain what the threat means:

Terms Explained: Yes
Clarity: Good

Give the threat context:

Comparison Given: None
Clarity: None

Mitigation Measures:

Minimize Exposure: Be prepared with supplies
When Exposed: Listen to officials
Other’s Actions: Federal and state agencies will all be helping
Clarity: Good

Audience Isolation:

Affects Community: None
Get More Info: Yes
Clarity: Vague

Intercoder Reliability: $\alpha=0.99$

Discussion:


Determine the threat potential:

Risk Probability: None
Method Used: Storm tracking
Context: None
Clarity: Vague

Report the threat:

Identify Threat: Hurricane

Identify Location: Georgia, Florida, Alabama

Identify Duration: Landfall soon

Identify Population Threatened: People in those states

Clarity: Good

Explain what the threat means:

Terms Explained: Yes

Clarity: Good

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: Head all official warnings, be prepared

When Exposed: Follow official instructions

Other’s Actions: Federal and state agencies will all be there to help

Clarity: Good

Audience Isolation:

Affects Community: None

Get More Info: Yes

Clarity: Vague

Intercoder Reliability: \( \alpha = 0.99 \)
Discussion:


Determine the threat potential:

- Risk Probability: None
- Method Used: Storm tacking
- Context: None
- Clarity: Vague

Report the threat:

- Identify Threat: Hurricane
- Identify Location: Florida
- Identify Duration: Weekend landfall
- Identify Population Threatened: People in Florida
- Clarity: Good

Explain what the threat means:

- Terms Explained: Yes
- Clarity: Good

Give the threat context:

- Comparison Given: None
- Clarity: None

Mitigation Measures:

- Minimize Exposure: Follow warnings from officials, prepare for storm
- When Exposed: Visit staging areas for food, water, shelter and first aid
Other’s Actions: Thousands of federal and state workers will be helping

Clarity: Good

Audience Isolation:

Affects Community: None

Get More Info: Yes

Clarity: Vague

Intercoder Reliability: \( \alpha = 1.0 \)

Discussion:


Determine the threat potential:

Risk Probability: None

Method Used: Response to terrorist bombings overseas

Context: None

Clarity: Vague

Report the threat:

Identify Threat: Terrorist attack on US mass transit systems

Identify Location: Could be anywhere

Identify Duration: Short term

Identify Population Threatened: Mass transit users

Clarity: Vague

Explain what the threat means:

Terms Explained: Yes
Clarity: Vague

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: Be aware of surroundings when traveling

When Exposed: None

Other’s Actions: Increased security at mass transit sites

Clarity: Vague

Audience Isolation:

Affects Community: “America stands with Britain”

Get More Info: None

Clarity: Vague

Intercoder Reliability: $\alpha = 0.94$

Discussion: Mixed messages, again. After warning of the potential attack, Secretary Chertoff stressed that mass transit was safe and not to be afraid to use it.


Determine the threat potential:

Risk Probability: None

Method Used: Storm tracking

Context: None

Clarity: Vague
Report the threat:

Identify Threat: Hurricane

Identify Location: North Carolina and East Coast

Identify Duration: Landfall soon

Identify Population Threatened: People in those areas

Clarity: Good

Explain what the threat means:

Terms Explained: Yes

Clarity: Good

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: Obey mandatory evacuations and have 3 days of supplies

When Exposed: Follow instructions from local authorities

Other’s Actions: Federal and state agencies all prepared to help

Clarity: Good

Audience Isolation:

Affects Community: All of North Carolina under “State of Emergency”

Get More Info: Yes

Clarity: Good

Intercoder Reliability: α=0.98

Discussion:

Determine the threat potential:

Risk Probability: None

Method Used: Storm tracking

Context: None

Clarity: Vague

Report the threat:

Identify Threat: Hurricane

Identify Location: Texas gulf region

Identify Duration: Landfall soon

Identify Population Threatened: People in the area

Clarity: Good

Explain what the threat means:

Terms Explained: Yes

Clarity: Good

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: Listen to state officials

When Exposed: Listen to state officials

Other’s Actions: Federal and state agencies ready to help

Clarity: Good
Audience Isolation:

Affects Community: None
Get More Info: None
Clarity: None

Intercoder Reliability: $\alpha=0.98$

Discussion: Very vague for a hurricane warning.


Determine the threat potential:

Risk Probability: None
Method Used: Storm tracking
Context: None
Clarity: Vague

Report the threat:

Identify Threat: Hurricane
Identify Location: Florida and Gulf Coast
Identify Duration: Going into the weekend
Identify Population Threatened: People of the region
Clarity: Good

Explain what the threat means:

Terms Explained: Yes
Clarity: Good

Give the threat context:
Mitigation Measures:

Minimize Exposure: Be prepared with supplies and evacuation plan

When Exposed: Follow official instructions

Other’s Actions: Huge listing of agencies and where to get help

Clarity: Good

Audience Isolation:

Affects Community: None

Get More Info: Yes

Clarity: Vague

Intercoder Reliability: $\alpha=0.98$

Discussion: Best press release of the bunch.


Determine the threat potential:

Risk Probability: None

Method Used: Aftermath of British anti-terror success

Context: None

Clarity: Vague

Report the threat:

Identify Threat: Terrorist attacks on flights from UK to US and all US flights

Identify Location: Those flights
Identify Duration: 4am until they change it (this threat alert still in effect)

Identify Population Threatened: Passengers on the flights

Clarity: Vague

Explain what the threat means:

Terms Explained: Yes

Clarity: Vague

Give the threat context:

Comparison Given: None

Clarity: None

Mitigation Measures:

Minimize Exposure: Be vigilant when flying

When Exposed: None

Other’s Actions: Raised security at airports and banned gels

Clarity: Vague

Audience Isolation:

Affects Community: US and UK resolute

Get More Info: None

Clarity: Vague

Intercoder Reliability: $\alpha = 0.98$

Discussion: Mixed messages, again. Raised the threat level to red, but then stated there was no clear threat and to continue flying.
REFERENCES


VITA
Greenspun College of Urban Affairs
University of Nevada, Las Vegas

Ted Greenhalgh

Home Address:
517 Pearberry Ave.
Las Vegas, Nevada, 89183

Degrees:
Bachelor of Science, Biology, 1996
University of Nevada, Las Vegas

Special Honors:
Phi Kappa Phi International Honor Society
Golden Key International Honour Society

Thesis Title:
Assessing the Homeland Security Advisory System

Thesis Examination Committee:
Chairperson, Dr. David Hassenzahl, Ph.D.
Committee Member, Dr. Helen Neill, Ph.D.
Committee Member, Dr. Timothy Farnham, Ph.D.
Graduate Faculty Representative, Dr. Anthony Ferri, Ph.D.