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**Exploring the Communication between Water Agencies and the Public in Southern California**

**Introduction**

The issue of water shortages has plagued the city of Los Angeles since it began to outgrow its water supply in the late1800s. A steady supply of water has been on the agenda of government leaders and water agencies for over a hundred years. The results of this issue led to numerous conflicts between city leaders in the South and their counterparts in Central and Northern California. These early conflicts resulted in the construction of aqueducts to move water from Central California to the more populated Southern region of the state. Several other conflicts occurred over the decades as rainfall varied as it is known to do in California. Droughts are commonplace in California, but the current drought is the driest the state has been since official records were recorded (California Department of Fish and Wildlife, California Department of Public Health). This current drought is ongoing and Los Angeles County water agencies, and government agencies are active in communicating with the public about what they can do to curb their water use in an effort to promote conservation due to the fear and risk of eventual water shortages.

This paper will be broken into two parts. First, there will be a brief review of literature on topics of risk communication, risk analysis, and environmental rhetoric. These various articles and areas of research will serve to inform the audience about the several different factors that inform an analysis of this type of communication. Drawing on scholars researching in environmental rhetoric, I will attempt to find voices that will set the groundwork for a comprehensive compilation of sources that exist on this topic, or topics that are similar wherein I can substitute their subject with water, or water conservation. This review is not intended to be a large scope of the numerous approaches and areas of concern regarding risk communication and environmental rhetoric. Rather, it is intended to be a brief introduction that informs a similarly brief analysis of one example of risk communication addressing the drought and water conservation. These sources will serve as the theoretical framework for which I will use to analyze how information is communicated to the inhabitants of Los Angeles County, and the rhetorical choices made by the government, and water agencies.

This theoretical framework will be necessary to understand only some of the ways in which rhetoricians approach issues of risk communication. I will begin with the works of Miller, Aristotle, Cicero, Grabill, Herndl, Grabill and Simmons, and Druschke to situate myself in how the field of rhetoric approaches issues of water, water conservation, and/or other issues concerning the communication of risk, with special attention given to the ancient rhetoric concepts and definitions that continue to influence speaking and writing. There may not be articles that deal directly with issues of water and/or water conservation, but I will broaden my scope by reading works by scholars that can serve as an example for a way to approach this issue in the future, and/or call attention to a gap in research and need for more work by rhetoricians in this type of communication with these specific agencies and government.

This will also help to support that a gap does exist, and that it is centered on not only how this information is relayed to the public, but how changes in behavior are or are not easily monitored because only one area is monitored to determine public reaction and behavior change.

Following the brief literature review will be an analysis of visual communication composed by a Southern California water agency. I will analyze the visual on the different areas it addresses and attempts to communicate the risk associated with the ongoing drought. Amidst analyzing how these visuals communicate with the public I will also attempt to answer the following research questions in my attempt to limit this issue to rhetoric:

1. How does work in environmental rhetorics approach/address the issue of water conservation?

2.How is water conservation communicated throughout California in the context of risk?

Actual scholarly work on water conservation is not present in the brief literature review, but the concepts discussed are applied to the analysis of artifacts. I am focusing the research questions on understanding the scope of environmental rhetoric, tying it to communicating information to the public, or possibly, its influence on policy and/or behavior change. The goal of this paper is to analyze the methods used to communicate the issue of water conservation to the public. The artifacts will be compared against each other. For example, I will analyze the different methods used in communicating with the public based on time of year (seasonal messages), demographics, and socioeconomic status.

Environmental rhetoric, in part, can address the ways, in which environmental issues are discussed, and how this discourse can shape the communication of environmental issues to a public, but also how this communication ultimately impacts policy. Carnegie Mellon University defines environmental rhetoric as the study of the role of the writer or composer in communicating information about the risk, response, and the relationship with nature. These three Rs of environmental rhetoric serve as the foundation and understanding of environmental rhetoric that informs this paper. However, before this definition of environmental rhetoric can inform my analysis of the current efforts to communicate the issues surrounding the drought in California.

The issue of water conservation in the state of California is an on-going discussion since the California Water Wars that took place between 1913 between Los Angeles and ranchers in the Owens Valley area of East California. Water shortages, and the growing population of Los Angeles is an issue that has haunted inhabitants since the city was founded.

As a result the stage for risk, a concept attributed to the work of Beck in *Risk Society: Toward a New Modernity*, has been set since the birth of the city. The potential for a catastrophe and perceived risk of water shortages is constant in Los Angeles County, as is with other areas of Southern California. This issue of water conservation addresses the need to study how a risk was staged, using Beck’s theories, and can bridge the gap between theory and practice. This is not only a result of looking at how the risk was staged, but what has changed as a result of continued low water levels in the state of California. It can serve as a current, and real world example of staging a risk, reacting to the risk, and what the involved parties do as a result of the communication of risk regarding the drought.

The issue of communicating about water conservation in California follows a three-tier system, as set by water levels that determine their reaction and actions taken in the communication of the issue with the public. It is clear that the information shared with the public exemplifies rhetorical choices, but rhetoric does not inform their actions. That is to say, the water companies, agencies and government do not turn to rhetoricians, but to engineers and scientists, in addition to focus groups, to inform their decisions. There exists a gap between what informs their rhetorical choices, and how they measure the reactions, or behavior changes by the public.

**A Brief Literature Review of Different Areas of Research and Concern Within Risk Communication and Environmental Rhetoric**

Part of understanding risk communication relies upon fully comprehending what informs and influences that type of communication. To start with the analysis of risk, and the factors that influence and/or inform risk analysis is vital to understanding the goals of communicating any risk. In the 1950s and 1960s risk analysis was born out of the nuclear energy debate. According to Carolyn R. Miller (2003), “risk analysis acquired much of its disciplinary form and by-now-pervasive influence through governmental support and implementation” (165). The government support of risk analysis led to the creation of the “Red Book,” which was a published report detailing the ways in which it would be unwise to separate the process of risk assessment and risk management. This information is equally important to risk communication because research findings found during the assessment stage influence approaches in risk management, which will inevitably incorporate risk communication. Miller’s article focuses on the role of ethos in risk analysis. She treats risk analysis as a discourse due to the “conceptualizing and communicating about a range of issues at the interface of science, technology, public policy, and social values” (166). This interdisciplinary discourse is common in both risk analysis and risk communication. Because of the interdisciplinary nature of risk analysis and risk communication ethos plays an important role in risk analysis and risk communication. Miller writes that “the expertise is an argument from authority, and thus, in rhetorical terms, a signal that ethos is an important mode of appeal” (168). The rhetorical challenges ethos as an authority faces differ from the rhetorical understanding of ethos. These challenges stem from the expertise in the scientific community and the reluctance of scientific inquiry to rely upon expertise.
 In Aristotelian rhetoric ethos is one means used to successfully persuade an audience. It is established by a speaker’s speech. Therefore, it comes from the text and not a preexisting opinion or perception of the speaker. Persuasion through character, for Aristotle, is the use of ethos in rhetoric. This persuasion can be accomplished through the person giving the speech, and “the speech is spoken in such a way as to make the speaker worthy of credence” (38). The most authoritative form of persuasion is the character established in the speech in Aristotelian rhetoric. It is the character that is “distinctive” and “most persuasive” and it is the “deliberate choice directed to an end” (74). It is necessary that the speaker understand not only ethos, but also how to establish his ethos for each audience. This usage of ethos is present in much of the communication of risk about the drought in California.
 This type of ethos is addressed in Miller’s article, but to move forward in understanding other areas of rhetoric and how they influence risk analysis and risk communication one must have a broader sense of ethos because of its constant appearance in risk communication. Cicero understood the ways in which “ethos infuses all aspects of the speaker's craft, including style, delivery and arrangement, and that it cannot clearly be delineated from emotional appeal (p. 6).” Through these actions the trustworthiness, and ethos of the speaker are established. Bobbitt (1991) continues to demonstrate that Cicero’s notion of ethos was deeper than Aristotle’s. Cicero “observed that ethos functions not only in the speech proper, but is also a result of the reputation and personality that the rhetor brings to the speaking situation (p. 6).” Cicero’s deeper understanding of ethos, its importance, and all of the ways ethos is formed continues to inform current approaches to studying, and comprehending ethos. While Miller uses Aristotle’s ethos to guide her work, it is Cicero’s work on ethos that influences the analysis in this paper as I argue that it is seen in the production of the visuals produced by a water agency. While both understandings of the concept of ethos can be applied to the ethos of the visuals (videos), it is the Ciceronian ethos that features more prominently due to the attention it gives to the reputation of the rhetor.
 With a better understanding of the role of ethos in risk analysis and risk communication, construction/constructions of risk analysis it is time to move on to the social factors that influence public perception of risk communication. To be effective in risk communication Grabill and Simmons (1998) argue that technical communicators must use models for communication that account for the social construction of risk. To continue, “decontextualizing risks and failing to consider social factors that influence public perception of risk” (416) accounts for problems of effectively communicating risk. The result of this approach to risk communication is an audience that either does not comprehend the risk, or reject the information presented to them. Grabill and Simmons view these examples of “linear risk communication models” as flawed because they do not account for contextual issues and the audience. Their goal to look for gaps in within the systems of communications serve any researcher that wishes to work in risk communication, as their work helps to better understand the role regulatory agencies whose purpose is to “evaluate and compare remediation options in order to select an appropriate regulatory response to a potential hazard” (416). Acknowledging government agencies and the private sector’s involvement in risk communication is vital to understanding their purpose in communicating risk with the public, as their goal may be influenced by their own positioning on the issue. It must also be noted that their position may reflect a position of power or hierarchy when communicating with the public. Grabill and Simmons discuss the lack of understanding among the audience due to the fact that they don’t often understand risk in the same way that those assessing risk do. This accounts for the pairing of risk assessors and cognitive psychologists to better understand their audience. Again, the result of this can be a reinforcement of power. Grabill and Simmons articulate this as “critical rhetoric.” This critical rhetoric, according to Grabill and Simmons (1998):
 (1) dissolves the separation of risk assessment from risk communication to locate

 epistemology within communicative processes; (2)foregrounds power in risk

 communication as a way to frame ethical audience involvement; and (3) argues for the

 technical communicator as one possessing the research and writing skills

 necessary for the complex process of constructing and communicating risk (p. 417).

The overall issue with the linear models of communication is power. The communicators housed within institutions that may or may have a part in the creation of risk are invested in the communication of risk not just for the sake of the public, but to serve their own needs. In these examples, Grabill and Simmons (1998) want to “prevent such exercises of power” that place the “risk/technical communication and communicators involved in a relation of power that can dominate and oppress” (p. 436). Grabill and Simmons suggest that to counter these issues of power technical and risk communicators must “bring about more participatory and ethical decision making processes” and to avoid labeling clients as the risk makers, and imagine them as the public. This approach may help to produce a view of citizens as active participants of the process, therefore their knowledge would be vital to streamlining and improving the communication process. Risk communication will obviously approach an issue of risk with the audience in mind, but if their first responsibility is to their client, the risk makers, it is likely that their audience will not been viewed as potential producers of information, thus resulting in the reinforcement of power institutions.

In “Action Research and Wicked Environmental Problems: Exploring Appropriate Roles for Researchers in Professional Communication” by Stuart Blythe, Jeffrey Grabill, and Kirk Riley (2008) argue that the goal of action research should be to “identify and support strategies used by community members rather than to educate the public” (p. 272). Action research is defined as “contextual, local and requires intervention, not simply description” (p. 272). Action researchers also must not “intrumentalize” (p. 273) the public, and projects utilizing action research need to be committed to social justice and “the relationship between researchers and participants” (273). The ultimate goal of action research is to produce knowledge not just for the scholarly community. There must exist an attempt at engaging with the citizens if there is hope of actually achieving engagement with them. Researchers need to be aware of the potential for distrust amongst government agencies based on the relationship between the government and its citizens. To do this activities that promote invention should be used, and the rhetorical performances must be understood to be as powerful as writing and speaking. These rhetorical performances offer insight into “institutional and community dynamics” with a push toward engaging citizens in the process of communication by allowing them to “invent new knowledge and communicate professionally (p. 294).

Understanding the roles of risk analysis and risk assessment is important to gaining more insight into what influences risk communication. Approaching the role of power and the goal of the client, or risk maker, helps to better situate the technical communicators and understand their own position. This understanding helps the risk/technical communicators remain aware of the perception the audience has of them. However, much like the importance of understanding what information found by way of risk analysis and assessment, risk communicators must also be aware of the social constructions of risk. Ulbrict Beck’s book *Risk society: Towards a new modernity* assists in furthering the understanding of what makes something a risk, and what process accounts for our reactions to risk. According to Beck (1992) risk is a “mediating issue in terms of the division of labor between science, politics, and the economy in highly innovative societies (p. 6).” Risk is integrated into our daily lives to varying degrees. The important concepts that inform the analysis to follow this brief review of literature is that risk is staged. This staging of risk accounts for ambivalence. This ambivalence is in understanding the risk and the implications of any danger associated with risk, but believing it to be unstoppable. This acceptance of such risk, or risky events, leads to non-action. Non-action is dangerous not only because it may lead to the very event that is seen as inevitable. If a public is exposed to the same risk over and over again, then their reaction will not likely be one of engagement and interest. For the purpose of this literature review it must also be noted that Beck is explicit in warning against using previous solutions to solve similar problems at different times. The communication about the drought in California is a prime example of using similar methods of communication to solve an on-going problem.
 Incorporating some of the basic themes and concepts of Beck’s book allows for the analysis to account for many influencing factors of risk and risk communication. Environmental rhetoric must also be inform this analysis not simply because it is an environmental issue, but because the concepts and methods used within environmental rhetoric. Caroline Druschke (2014) urges that rhetoricians in environmental rhetoric must address a “deep communication” that goes beyond delivery, and situates itself within engagement and deliberation so that the audience is part of the process. Her call to rhetoricians also asks that we take a transdisciplinary approach. This can be achieved not only by focusing on what rhetoricians can offer science, but the viewing of “our work as necessary and integral part of the engaged practice of science itself” (p. 2). This approach to environmental rhetoric can expand to risk communication due to the interdisciplinary nature of risk communication. For the purpose of this paper and its concluding analysis the measurement of “deep communication” will rely upon Herndl and Licona’s work on agency. In “Agency Redefined: An Opportunity in Space and Time” (2007) Herndl and Licona argue that agency in technical communication does not come from the individual, but from their social relationships and rhetorical performance. “Constrained agency emerges at the intersection of agentive opportunities and the regulatory power of authority,” and this regulatory power that influences and/or constrains agency in risk communication and/or environmental rhetoric can be represented by the risk makers, and/or government agencies that produce risk analysis and assessment that results in the call for risk communication. The on-going conversation of effectively communicating risk to a public audience encompasses more than the factors and issues encountered discussed above.
 However, this review of literature is intended to merely be an overall glimpse at the numerous factors attributed to the influence and informing of communicators of risk, and as a result their intended audience. Moving from understanding risk analysis and assessment as the precursor to risk analysis to the role of ethos in scientific findings, and how it differs from the strictly rhetorical understanding of ethos informs the analysis of visuals as a means to comprehend some of the rhetorical choices made, or ignoring of the benefits of rhetorical appeals in the communication of water agencies to the public regarding the water drought in California. To analyze the visuals beyond the influencing information and approach to information the work of Grabill, Grabill and Simmons, Druschke, and Herndl and Licona allow for a very rhetorical lens to be applied to the communication models used by water agencies. The purpose of this analysis is to simply identify when and where elements of the material communicated to the public and how it may or may not be effective in influencing policy and/or behavior change by incorporating elements of the scholars work in risk communication, technical communication, and environmental rhetoric. For the purpose of this paper environmental rhetoric is defined as “how people think and talk about the environment” and how those conversations shape our relationship with “nature, the presence of risk, and the need for response. (Carnegie Mellon University). The following analysis will cite and mark indications of when concepts discussed in the brief literature review above are present in the communication with the public, or are lacking in specific rhetorical appeals beyond the functional.

**Analysis of a Water Conservation Commercial**

The issue of water conservation in California follows a three-tier system, as set by water levels that determine their reaction and actions taken in the communication of the issue with the public. The first tier calls for constant discussion of water conservation. This is an example of how the stage for risk, in this case a water shortage, is always set. This is an issue for which there is no reliable long-term solution; therefore communication between the government, water agencies and the public is nonstop. It is clear that the information shared with the public exemplifies rhetorical choices, but rhetoric does not appear to implicitly inform their actions. That is to say, the water companies, agencies and government do not turn to rhetoricians, but to engineers and scientists, in addition to focus groups, to inform their communication choices.

There exists a gap between what informs their rhetorical choices, and how they measure the reactions, or behavior changes by the public. In my attempt to limit this issue to rhetoric, I am focusing the research questions on understanding the scope of environmental rhetoric, tying it to communicating information to the public, or possibly, its influence on policy and/or behavior change. The analysis of a 38-second commercial produced by a water company will be analyzed. This commercial was chosen because of the numerous versions of the same visual distributed throughout local media that exist in different languages. To analyze whether or not this visual attempts to engage and promote deliberation with the public, as urged by Druschke I will discuss themes, and rhetorical appeals made by the composers of the commercial in addition to attempting to break down the institution of power behind the example of risk communication.
 An example of this is Metropolitan Water District (MWD) of Southern California’s “Turn” commercial that airs locally in Southern California. The 38-second commercial features several close-ups of hands turning the knob on a faucet to stop water usage. Actors in this water conservation commercial reflect the ethnically diverse population of Los Angeles. This visual is produced and delivered to the public by a water agency that can be categorized as a risk maker. This water agency sells water to the public and those in agriculture throughout the state. The current drought in California calls for heightened awareness of methods to conserve water. However, current water levels restrict the sale of water by such agencies as MWD, and others throughout the state. There inherently exists an institution of power behind this commercial. Water conservation serves the public, but it also serves the water agencies. As the drought continues so do their restrictions on the sale of water. The first issue this attempt at risk communication faces, however, is not MWD’s identification as risk maker, but the staging of risk in California when addresses issues of water and water conservation.
 Due to the long history of water wars, water crisis, and seasonal droughts in the state of California the stage for risk is always set. As previously discussed in this paper this accounts for a certain level of ambivalence by the public, and more importantly may account for the state’s continued use of their three-tier system of communication. The second and third tier of this system are based on reactions of the public. However, surveys or other forms of dialogue do not measure these reactions with the public. Rather, they are measured by the public’s water use. If levels do not drop after ad campaigns are released, it is assumed that the communication was ineffective. The communication of risk and solutions to perceived risks of the second tier are replaced by penalization of citizens using too much water. What determines too much water is unknown as this point, as is information regarding which areas are fined more frequently than others.

This linear communication model does not always account for contextual and repeated messages sent to the public. It may however, in the case of the “Turn” commercial attempt to appeal to the participatory nature of their audience. Each actor, person acting out a motion, in the commercial plays a role in water conservation by turning the knob. This gives the public the perception of agency, however as Herndl and Licona warned, this agency only exists within the preexisting power structure. The greater good of conserving water is presented to the audience, but when taking into account the position of the water agency this agency exemplified by actors is restrained and heavily influenced by the institution of power. The public, in this particular commercial, is presented with the power to help solve the water drought, despite this solution having very little longevity. Longevity here is determined by the reliance of Californians on seasonal rain to supply them with water.

On the surface level this commercial often times reinforces concepts scholars in risk communication, and environmental rhetoric warn their fellow communicators to avoid. However, there is an attempt to appeal to larger audience. The effectiveness of this is difficult to measure, due to limited information pertaining to the number of views of each commercial. The 38-second commercial was first produced in English, with a narrator speaking English over the numerous examples of people of different ages, gender, and ethnicities turning the knob to stop the flow of water. Other versions of the commercial were released to the public via MWD’s YouTube channel, and aired on local Spanish, Korean, Vietnamese, and Chinese television stations. This attempt at casting a wider net speaks to MWD’s knowledge of the diverse linguistic practices within Los Angeles County and its citizens. However, due to the length of the commercial the narrations not in English are spoken much faster than the original English version, and in some cases the non-English version is shorter in length.

This causes concern as to whether or not the goal of this type of communication that clearly addresses an environmental issue takes into account any of the main concepts of environmental rhetoric. With a short commercial made shorter when narrations are not in English can this visual be classified as attempting to engage and deliberate with the public? Is it merely another example of a linear model of communication based on preexisting hierarchy? An environmental rhetorics approach to this type of communication would not likely use this linear model of communication. Without room for engagement by the intended audience agency is restricted, and the public may ignore risks of water shortages. Simply put, without a visual that truly attempts to understand the relationship between nature and the audience coupled with the constant staging of risk in the form of a water shortage that has yet to come these visuals are more than likely to be ineffective in producing a change in policy or behavior by the public.

Water conservation is presented to the public as something in which they are in control of without addressing the other factors that cause seasonal droughts in California over the previous 100 years. This surface level attempt at engagement communicates the risk as something preventable with the right course of action. Solutions are given, not discussed. The work of the risk assessors and managers is done without incorporating the public. Solutions are given to the public, and if rhetoricians are involved in the composing of material to be distributed to the public, it is likely that solutions would be given to them as well. The visuals do reflect rhetorical choices, as do many modes of communication. The use of pathos is heavily present in the commercials. People are seen happily turning the knob, and participating in everyday activities that incorporate use of water. Therefore, in showing each actor happily shortening their water use there is an attempt to display that the actions of one impact many and pleasure can be derived from using less water. It should also be noted that these commercials began airing in the Spring, and continued airing on local networks throughout the Summer.

Ethos, naturally, comes from the position of MWD as a water agency and perceived credible expert on water conservation. The logic is simple. Use less water, and be part of the solution not the problem. This is all reflects the linear model of communication used by government and water agencies in California. Their three-tier system relies upon measuring the water levels as indication of successful communication. What the visual in risk communication lacks is an attempt at work together in transdicsiplinary. The engineers and scientists that inform the risk analysis, assessment, and management ought be coupled with risk and technical communicators because they share a common goal, despite their status as part of the institution of power or risk maker.

**Conclusion**

This brief analysis of one form of risk communication concerning the water drought in California certainly does not, nor can it, be indicative of all communication from government and water agencies to the citizens of California. However, it should be noted that the three-tier system of communication influences what types of actions are taken by the institutions of power that are government and water agencies. This system relies upon water usages by citizens to dictate which level of action must be taken in addressing the risk of a water shortage during a drought. Therefore, while this brief analysis of only one type of communication used to address risk must not be treated as the authority on the issue, it does add to the claim of this paper that more work need be done in this area of risk communication. A larger project analyzing several types of communication between agencies and the public might result in a larger role of participation for rhetoricians, which based on the review of literature and overview of some of the prominent concerns and areas of research such inclusion should only result in stronger communication and participation between the government and water agencies and the public.

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