



HOW DO NUCLEAR SCIENTISTS AND ENGINEERS TALK INTERNALLY AMONG THEMSELVES ABOUT THE FUKUSHIMA ENERGY CRISIS?

Haoran Yu (Danielle Endres)
Department of Communication



This project examines how scientists and engineers researching low-carbon energy technologies talk among themselves about the social, political, and cultural implications of their research. It is part of professor Endres' National Science Foundation (NSF) Collaborative Research Project: The Influence of Low-Carbon Energy Technology Scientists and Engineers on the Composition of Energy Policy. That project examines expert-to-expert discussions among scientists and engineers about low-carbon energy technologies, particularly within two distinct but related energy technology sectors: wind, and nuclear.

Within this research project and under the direction of Dr. Endres, I am working on a subproject that examines how nuclear scientists and engineers talk about the implications of the Fukushima disaster on their industry. My research question is: How do nuclear scientists and engineers talk internally among themselves about the Fukushima crisis? I am particularly interested in examining the role that the Fukushima crisis has on the way energy scientists and engineers talk about the future of nuclear technologies in the context of climate change and the need for new energy policy. The significance of this research for this paper is first, since climate change has become an important topic, it is important to see how scientist talk about nuclear energy as a sociopolitical issue in addition to its technical viability; second, there is a gap in rhetoric of science research about how scientists talk among themselves about the sociopolitical aspects of their research that this project fills.

In this research paper, I will analyze a subset of the data collected by the research team. The methods are rhetorical and qualitative. Qualitative research is used to collect the data, which is based on participant observation and interviews with key scientists and engineers at the American Nuclear Society conference. Other members of the research team have collected this data. The data has been entered into NVivo qualitative analysis software. Rhetorical methods, which analyze strategies of persuasive discourse, such as narration, description, exposition, and argumentation will be used to analyze the internal expert-to-expert rhetoric of nuclear energy scientists and engineers. Using a coding scheme called Socio-Political Elements of Energy Development (SPEED) developed by one of the project Co-PIs (Dr. Tarla Rai Peterson), I will examine what sociopolitical aspects are important to scientists and engineers when they talk among themselves about the Fukushima crisis.

Our potential findings are: first, description of the ways scientists are talking about Fukushima is valuable not only because it has not been researched before but also because it will add to scholarship in rhetoric of science about how scientists and engineers combine technical and sociopolitical forms of reasoning. Second, there is potential to contribute to our understanding of the role that scientists and engineers have in the development of energy policy.

This research is part of a larger collaborative research project that involves the PI (Professor Endres), a co-PI (Professor Peterson at UTEP), a post-doc (at UTEP), two graduate students (at Utah), and myself. This project represents an analysis of one part of the larger data set, in which I will be able to perform an analysis that contributes to the larger project. The results of this analysis, once completed, will be



incorporated into the larger research project and hopefully integrated into a collaborative presentation or publication.

I started being a research assistant for Danielle's project in Spring 2015. I presented this project three times during the Spring 2016 semester. I did a poster session for Utah Conference on Undergraduate Research in February, an oral presentation for National Conference on Undergraduate Research and another poster session for the Utah Research Symposium.

Through this project, I learned more about humanities research and learned how to use several different softwares. Additionally, I learned a lot about how to code research, gain intercoder reliability, analyze the coded results, and write up the results in both poster and presentation form. Also, the presentations improve my public speaking skills. Through the presentations, it gives me a lot of valuable feedback from different perspectives.

