INCONSIDERATE CONSIDERATION: CLAIMS MAKING AND THE HIGH-LEVEL NUCLEAR WASTE REPOSITORY AT YUCCA MOUNTAIN

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HIGH-LEVEL NUCLEAR WASTE REPOSITORY AT YUCCA MOUNT
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And hereby certify that, in their opinion, it is worthy of acceptance.
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DEDICATION

This work would not have been possible without the love and support of all those close to me. What follows is a partial list of those who have helped me along the way; those I forgot, you know I love you.

First and foremost, this thesis is dedicated to my fiancée Mallory. You have sacrificed so much to be here with me. I could not have done this without you holding my hand every step of the way. You have always had this uncanny ability to push me when I need pushing and to hold me when I need support. I love you, always.

To my parents, Dennis and Claudia, I would not be here without you (literally). Your unwavering support through good times and bad has helped shape me into the person, and the academic, I am today. Dad, I like to think I got some of your passion for learning and teaching, and some of your ability to think and persuade on your feet. Mom, I like to think I got some of your drive to be as good a person and a scholar as I can possibly be (not to mention you painstakingly taught me how to write). You're my emotional anchor Mom, and I love you.

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GLOSSARY

AIRD -- American Indian Resource Document

AIRFA -- American Indian Religious Freedom Act

AIWS -- American Indian Writers Subgroup

BLM -- Bureau of Land Management

CGTO -- Consolidated Group of Tribes and Organizations

DOE -- Department of Energy

EIS -- Environmental Impact Statement

EO -- Executive Order

EPA -- Environmental Protection Agency

HLNWR -- High-Level Nuclear Waste Repository

ICC -- Indian Claims Commission

ITF -- Intermodal Transfer Station

NAIP -- Native American Interaction Program

NAGPRA -- Native American Grave Protection and Repatriation Act

NEPA -- National Environmental Protection Act

NIMBY – Not In My Back Yard

NTS -- Nevada Test Site

NWPA -- Nuclear Waste Policy Act

NWPAA -- Nuclear Waste Policy Act Amendments

TCP -- Traditional Cultural Properties

YMP -- Yucca Mountain Project

INCONSIDERATE CONSIDERATION: CLAIMS MAKING AND THE HIGH-LEVEL NUCLEAR WASTE REPOSITORY AT YUCCA MOUNTAIN, NEVADA

Jesse P. Van Gerven

Dr. Clarence Lo, Thesis Advisor

ABSTRACT

Adding to the literature regarding environmental racism and environmental decision-making procedures, I perform textual analysis on documented claims made by American Indians during the siting process for the high-level nuclear waste repository at Yucca Mountain, Nevada. I apply Fraser's (2003) theoretical concepts of 'redistribution' and 'recognition' and her normative standard of 'participatory parity' and conclude that the claims made by American Indian participants aimed to increase the level of participatory parity between themselves and the Department of Energy officials. My results suggest that the logic of the paradigm of redistribution is interrelated with the logic of the paradigm of redistribution. These findings indicate that social actors and social movements working toward greater social justice need to utilize the emancipatory aspects of the two paradigms, thus supporting Fraser's (2003) theoretical contentions. Future research needs to address other case studies and the interconnections between other cases to strengthen out theoretical understanding of two-dimensional social justice.

INTRODUCTION

Adding to the literature on environmental racism and environmental decision-making procedures, I analyze the case of American Indian participation in the siting process for a high-level nuclear waste repository (HLNWR) at Yucca Mountain, Nevada to see how claims for redistribution interact with claims for recognition. I designed the research I present here to provide a better understanding of the interactions between these two much discussed paradigms of social justice. I perform textual analysis on two American Indian Resource Documents (AIRDs), transcripts of public hearings, and state sponsored research reports, and identify the four most common types of claims made by American Indian participants, as they are expressed by the writings of the American Indian Writers Subgroup (AIWS) of the Consolidated Group of Tribes and Organizations (CGTO) and other American Indian activists. I use Fraser's (2003) normative standard of "participatory parity" to examine the larger impact of claims made by American Indian activists for redistribution and recognition. I conclude the logic of the paradigm of redistribution is interrelated with the logic of the paradigm of recognition. These conclusions not only provide an empirical application of Fraser's (2003) theoretical framework, but they also extend the literature on environmental racism to include American Indian issues in rural locations and connect these with the literature regarding environmental decision-making procedures.

¹ Nancy Fraser and Axel Honneth, *Redistribution or Recognition? A Political-Philosophical Exchange* (New York, NY 2003)

Social Justice, Redistribution, and Recognition

In modern times, claims for social justice can be conceptualized as being divided into two types, corresponding with two folk paradigms of social justice. According to Fraser (2003), the more familiar and long-standing of these are claims for redistribution, which seek to establish a more equitable distribution of income, wealth, and other resources. Examples include claims for redistribution from the Global North to the Global South, from the rich to the poor, from owners to workers. In recent decades, however, we have increasingly encountered a second type of claim, as represented by the "politics of recognition". Claims for recognition seek to establish cultural patterns of valuation that are "difference friendly"; where assimilation into dominant cultural norms and practices is no longer the price for equal respect. Examples of these include claims for the equal respect of gender, ethnic, "racial", and sexual minorities' distinct perspectives.

Within the field of moral philosophy it remains a question whether or not recognition is a matter of justice or a matter of self-realization.² In moral philosophy, issues of justice are usually understood to concern "the right", and belong on the terrain of "morality". Issues of self-realization, on the other hand, are typically associated with "the good" and thus belong on the terrain of "ethics".³ Therefore, moral philosophically speaking, our understanding of the

² Fraser, *Redistribution or Recognition* pp. 27-30

³ The difference between issues of morality and issues of ethics is mainly one of scope. Norms of morality are usually held to be universally binding in all places and all times,

recognition paradigm turns on whether it is understood to be a matter of justice or self-realization. Fraser (2003) concludes that recognition is properly conceived of as being a matter of justice, and thus on the terrain of morality rather than ethics.⁴ "To view recognition as a matter of justice is to treat it as an issue of *social status*. This means examining institutionalized patterns of cultural value for their effects on the *relative standing* of social actors".⁵ When these patterns situate social actors as peers, able to participate on par with one another, then we can speak of "status equality". However, when these institutionalized patterns of cultural value construct some social actors as inferior, excluded, or simply invisible, then we should speak of "status subordination" and misrecognition.⁶

Politically, the formation of these two general types of claims for social justice is also indicative of deeper divides between groups comprising the political left. This has resulted in the two types of social justice claims often being practically and intellectually disassociated from one another. As Fraser (2003) notes, within feminist social movements activist tendencies that look at the redistribution of income and wealth as the remedy for male domination are becoming increasingly dissociated from tendencies that look to the recognition of gender differences. A similar pattern exists within the academy, where scholars

independent of actors' adherence to specific values. Norms of ethics, on the other hand, depend on specific values that cannot be universalized, and thus are more restricted than norms of morality.

⁴ This conclusion stands in contrast to the theorizing of Charles Taylor and Axel Honneth, two of the most prominent theorists of recognition, who hold that being recognized by another subject is a necessary condition for attaining full, undistorted subjectivity. Taylor and Honneth therefore argue that recognition is a matter of self-realization.

⁵ Fraser, *Redistribution or Recognition* pp. 29, Italics in original

⁶ Fraser, *Redistribution or Recognition* pp. 29, For a more thorough discussion of Fraser's "status model of recognition" see Nancy Fraser, "Rethinking Recognition: Overcoming Displacement and Reification in Cultural Politics", *New Left Review* 3 (May/June 2000): pp. 107-20

who understand gender as an unequal social relation uneasily coexist with scholars who consider gender an identity or cultural code.

Broadly speaking, as folk paradigms of justice, ⁷ redistribution and recognition can be contrasted by four general attributes. First, the two paradigms assume different conceptions of social injustice. Redistribution, with its roots in Fordist era socialism, sees socioeconomic structures as the source of injustices. Recognition, on the other hand, with its roots possibly located in post-colonial civil society, sees social injustice as being rooted in cultural patterns of representation, interpretation, and communication. Second, the paradigms propose different kinds of solutions to social injustice. The paradigm of redistribution seeks to end injustice through economic restructuring of some sort, while the recognition paradigm seeks to achieve this through cultural or symbolic change. Examples of the latter could include upwardly revaluing disrespected identities or recognizing and positively valuing cultural diversity. Third, the paradigms assume different characterizations of the collectives that suffer injustice. While the redistribution paradigm imagines social classes or class like collectives, the recognition paradigm focuses more on Weberian status groups. Finally, and perhaps most importantly, the paradigms operate from different understandings of group differences. The redistribution paradigm sees group differences as the unjust result of past and current economic arrangements, and as such, group differences should be eliminated. The recognition paradigm, on the other hand, sees group differences as either benign, preexisting cultural variations caught-up in an unjust interpretive scheme, or as differences that did not exist

⁷ Rather than as moral philosophical categories

prior to their hierarchical valuation. When group difference is viewed as being the result of unjust interpretations of benign preexisting cultural variation, justice is established by revaluing previously devalued traits, and thus we should celebrate, not eliminate group differences. When group difference is viewed as a direct result of hierarchical valuation, celebration is counterproductive, and thus we need to deconstruct the terms by which group differences are currently expressed.

The practical and intellectual dissociation that results from these paradigmatic differences becomes especially problematic when we recognize that many social divisions are two-dimensional. Fraser (2003) characterizes two-dimensionally subordinated groups as suffering from both maldistribution and misrecognition "...in forms where neither of these injustices is an indirect effect of the other, but where both are primary and co-original". Familiar examples of this are social divisions based on "race" and gender, where neither cultural patterns of valuation or resource distribution can be reduced to the other, but instead, both produce separate, but interdependent, obstacles to social justice. Many less obvious examples, that appear to be solely derived from one paradigm or the other, such as class conflict or the status of homosexuals in society, upon closer examination, also appear to be two-dimensional in that they are rooted at once in the economic structure and the status order of society.

Take for example the status of homosexuals in contemporary society.

Since homosexuals are located across the class structure of society, and since the issue is primarily concerned with status, it may seem as if this is an issue for the

⁸ Fraser *Redistribution or Recognition* pp. 19

"politics of recognition". However, when we consider the effects of differential tax, family, and criminal laws, we can see that economic injustices that originated as by-products of misrecognition in the status order take on an undeniable weight of their own. Understanding this and other examples leads Fraser (2003) to conclude justice today requires both redistribution and recognition, because neither alone is sufficient. The emancipatory aspect of the two paradigms needs to be integrated into a single comprehensive framework, or a "two-dimensional conception of justice". This two-dimensional conception of justice needs to be able to accommodate defensible claims for social equity and defensible claims for the recognition of difference.

Environmental Racism and Environmental Decision-Making Procedures

Claims made by political actors in the public sphere regarding environmental racism and environmental decision-making procedures incorporate both types of claims for social justice. There is a growing body of literature regarding the formation, successes, failures, and the future of the environmental justice movement as it relates to the dynamics of environmental racism.⁹

⁹ Church of Christ, *Toxic Waste and Race at Twenty, 1987-2007: Grassroots Struggles to Dismantle Environmental Racism in the United States* (New York, NY 2007); Church of Christ, *Toxic Wastes and Race in the United States* (New York, NY 1987); P. Mohai and R. Saha, "Reassessing Racial and Socioeconomic Disparities in Environmental Justice research", *Demography*, Vol. 43, No. 2, pp. 383-99; Robert Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality*, (Boulder, CO 1990); Robert Bullard, *Race and the Incidence of Environmental Hazards: A Time for Discourse* (Boulder, CO 1992); Robert Bullard, *Confronting Environmental Racism* (Boston, MA 1993); Robert Bullard, *Unequal Protection* (San Francisco, CA 1994); M. Pastor, J. Sadd, and J. Hipp, "Which Came First? Toxic Waste Facilities, Minority Move-In, and Environmental Justice", *Journal of Urban Affairs*, Vol. 23, pp. 1-21; Eric Krieg, "The Two Faces of Toxic Waste: Trends in the Spread of Environmental Hazards", *Sociological*

The dynamics of environmental racism are old, but the term "environmental racism" is relatively new. The term first appeared in a 1987 study by the United Church of Christ's Commission for Racial Justice. ¹⁰ This study concluded that race was a major factor related to the presence of hazardous waste in residential communities throughout the United States. 11 12 With time, this term turned into a national movement, and more studies started examining the relationship between race and environmental conditions. 13 14 One of the most widely sited works in the field is Robert Bullard's (1990) Dumping in Dixie: Race, Class, and Environmental Quality. In this pivotal work, Bullard analyzes data from the Environmental Protection Agency (EPA) and census data from several southern states and concludes that people of color and other low-income people live with a disproportionate share of environmental hazards. Furthermore, Bullard argues that low-income people and people of color are both forced to live in areas of heavy contamination and are also the targets of increased environmental degradation once located there. This literature suggests the

Forum, Vol. 13, No. 1, pp. 3-20; Kenneth Gould, "Response to Eric J. Krieg's The Two Faces of Toxic Waste: Trends in the Spread of Environmental Hazards", *Sociological Forum*, Vol. 13, No. 1, pp. 21-23; Rachel Godsil, "Remedying Environmental Racism", *Michigan Law Review*, Vol. 90, No. 2, pp. 394-427; Luke Cole, "Remedies for Environmental Racism: A View From the Field", *Michigan Law Review*, Vol. 90, No. 7 pp. 1991-1997; Revathi Hines, "African Americans' Struggle for Environmental Justice and the Case of the Sintech Plant: Lessons Learned from a War Waged", *Journal of Black Studies*, Vol. 31, No. 6, pp. 777-789

¹⁰ Hines, pp. 778-9

¹¹ Church of Christ, 2007

¹² Church of Christ 1987

¹³ Mohai and Saha, pp. 383-99

¹⁴ Hines, pp. 777-89

amelioration of environmental racism needs to include recognition of minority and other low-income communities' relations to environmental dangers, and a more equitable distribution of environmental benefits and burdens. Therefore, we can see that victims of environmental racism are "two-dimensionally subordinated groups", who need both the politics of redistribution and the politics of recognition to achieve equality with other groups. ¹⁵

This literature brings to light the dynamics of environmental racism, as understood through the lenses on redistribution and recognition, and draws our attention to the environmental justice movement, but it focuses almost exclusively on the environmental conditions of minority groups in urban areas. ¹⁶ ¹⁷ Little attention has been paid to these dynamics as they play out in rural locations, and in disputes that typically involve the U.S. military. In addition, there is surprisingly little literature addressing environmental racism involving Native American groups. One note-worthy exception to this is the 2004 article "The Treadmill of Destruction: National Sacrifice Areas and Native Americans" by Gregory Hooks and Chad Smith. In this work, Hooks and Smith recast the environmental sociology literature by specifying what they call the "treadmill of destruction", which is driven by the distinct logics of geopolitics that cannot simply be reduced to capitalist accumulation. ¹⁸ Furthermore, the "treadmill of

¹⁵ Fraser, Redistribution or Recognition, pp. 19

¹⁶ Mohai and Saha, pp. 385

¹⁷ Noriko Ishiyama, "Environmental Justice and American Indian Tribal Sovereignty: Case Study of a Land-Use Conflict in Skull Valley, Utah", *Antipode*, Vol. 12, pp. 119-139

¹⁸ Gregory Hooks and Chad Smith "The Treadmill of Destruction: National Sacrifice Areas and Native Americans", *American Sociological Review*, Vol. 69, No. 4, pp. 558-75. The

destruction" typically involves military operations and procedures, and produces environmental inequity that is endured disproportionately by American Indian groups.

A related, growing body of literature focuses on participation and legitimacy associated with environmental decision-making procedures.¹⁹ Increasingly, in the United States and around the world, communities are facing important questions regarding technological development and environmental management. These questions often involve highly technical and specialized knowledge that the general public does not posses, and thus most people are forced to rely on the knowledge of technical and environmental experts.²⁰ But because the outcomes of these decisions will directly impact local communities,

"treadmill of destruction" is then contrasted with the common metaphor the "treadmill of production" that is often employed to discuss the process of resource extraction, production, and disposal associated with the capitalist mode of production. The authors show that unlike other urban, minority populations, many American Indian environmental justice disputes relate to this treadmill of destruction, which operates under the logics of geopolitical demands that cannot be simply reduced to the process of capitalist accumulation. This in part distinguishes American Indian environmental justice disputes from other environmental justice issues involving non-governmental, "private sector" antagonists.

Robert Futrell, "Technical Adversarialism and Participatory Collaboration in the U.S. Chemical Weapons Disposal Program", *Science, Technology, and Human Values*, Vol. 28, No. 4, pp. 451-482; Robert Futrell, "Framing Processes, Cognitive Liberation, and NIMBY Protests in the U.S. Chemical-Weapons Disposal Conflict", *Sociological Inquiry*, Vol. 73, No. 3, pp. 359-386; Earle Dixon and Kathleen Peterson, "Utilization of a Technical Peer Review to Support the Mission of the Nevada Test Site Community and Advisory Board", Waste Management Conference, February 23-27, Tucson, AZ; Gene Rowe and Lynn J. Frewer, "Public Participation Methods: A Framework for Evaluation", *Science, Technology, and Human Values*, Vol. 25, No. 1, pp. 3-29; Susan Hunter and Kevin Leyden, "Beyond NIMBY: Explaining Opposition to Hazardous Waste Facilities", *Policy Studies Journal*, Vol. 23, pp. 601-619; Daniel Fiorino, "Citizen Participation and Environmental Risk: A Survey of Institutional Mechanisms", *Science, Technology, and Human Values*, Vol. 15, No. 2, pp. 226-43; B. R. Barber, Strong Democracy: Participatory Politics for a New Age, (Berkeley, CA 1984)

 $^{^{20}}$ D.A. Bella, A. Mostler, and S.N. Calvo, "Technology and Trust", $\it Journal\ of\ Professional\ Issues$

individuals in these communities want a role in the decision making process.²¹ Thus the problem becomes how to give the citizenry a voice in complex and technical decision making processes. The goal is to ensure the best possible decisions are reached, and to ensure these decisions are viewed as being as legitimate as possible. The difficulty arises from trying to interject democratic ideas of participation and choice into policy frameworks that are shaped by technocratic arguments and complex issues of technology and environment.²²

The High-Level Nuclear Waste Repository at Yucca Mountain, Nevada

The siting process for the HLNWR at Yucca Mountain, Nevada provides an informative case that can be used to advance the above bodies of literature. The decision to site a HLNWR at Yucca Mountain was a complex process that suffered from the problems of trying to interject democratic participation into a processes dominated by technocratic decision-making. This process was complicated even further by the dynamics of environmental racism. Together these features make Yucca Mountain an interesting venue for the application of Fraser's (2003) two-dimensional conception of social justice.

²¹ David Pijawka and Alvin Mushkatel, "Public opposition to the Siting of the High-Level Nuclear Waste Repository: The Importance of Trust", *Policy Studies Review*, Vol. 10, No. 4, pp. 180-94

²² Futrell, "Technical Adversarialism" pp. 455

The need for a permanent nuclear waste storage facility has a long political history with regard to both scientific and institutional issues.²³ Beginning in the 1970s, high-level nuclear waste became an important topic in the debate regarding the future of the nuclear-industrial-complex. High-level nuclear waste consists of spent fuel rods and other highly radioactive materials produced by fission in nuclear reactors.²⁴ Optimistic industry and government engineers assured citizens that the technology needed to safely seal and store high-level nuclear waste in an underground repository was in hand. 25 26 Continued political conflict around the issue resulted in the 1982 Nuclear Waste Policy Act (NWPA), and the subsequent amendments passed in 1987 (NWPAA). The initial NWPA identified nine possible sites for an underground geological repository in six states, the 1987 NWPAA narrowed the field to just one site; Yucca Mountain, Nevada. In effect, this left the state of Nevada holding the site of the nation's only high-level waste repository unless some fatal flaw was discovered in the site characterization process.²⁷ It has been noted that the choice of Yucca Mountain as the site for the nation's first nuclear waste repository was not the result of an

²³ Pijawka pp. 180-94; Gerald Jacob, Site Unseen: The Politics of Siting a Nuclear Waste Repository (Pittsburgh, PA 1990); Kai Erikson, A New Species of Trouble: Explorations in Disaster, Trauma, and Community, (New York, NY 1994); Nevada Agency for Nuclear Projects, A Mountain of Trouble: A Nation at Risk: Report on Impacts of the Proposed Yucca Mountain High-Level Nuclear Waste Management, (Reno, NV 2002); Urban Environmental Research, LLC, Tribal Concerns About the Yucca Mountain Repository: An Ethnographic Investigation of the Moapa Band of Paiutes and the Las Vegas Paiute Colony, (Scottsdale, AZ 2002)

²⁴ Jacob pp. xii

²⁵ Jacob pp. xiii-xv

²⁶ Erikson pp. 203-226

²⁷ Jacob pp. vii

organized and systematic investigation. During the debates over the passage of the original NWPA it was known which states would house a repository and which states would not. For example, the states of Ohio, New York, and Michigan all held suitable (in fact preferable) geological formations, but it was understood that they would not be selected.²⁸

Domestic incidents like Three Mile Island, and international incidents like Chernobyl, have made the dangers associated nuclear energy widely known to the public. Other highly publicized non-nuclear environmental disasters, like Love Cannel, have made people increasingly fearful of toxic and nuclear contamination in their own communities.²⁹ These fears have motivated people and groups to use whatever political power they posses to ensure that these kinds of hazards are not stored anywhere near their homes and communities. This has resulted in the "not in my backyard" (NIMBY) syndrome. 30 31 Given the need for permanent highlevel nuclear waste storage, and this political reality, it appears that the site selection process for the HLNWR focused on locations and communities that could resist the least. In this way, the siting process for the HLNWR at Yucca Mountain, Nevada followed the "path-of-least-resistance". This path led from politically powerful states in the Eastern part of the country (where most of the benefits of nuclear power are experienced) to the politically weak state of Nevada, and from there to the doorstep of American Indians in the Great Basin area.

 $^{^{28}}$ Jacob pp. xv $\,$

²⁹ A. Szasz, *Ecopopulism: Toxic Waste and the Movement for Environmental Justice*, (Minneapolis, MN 1994)

³⁰ Futrell "Technical Adversarialism", pp. 451-482

³¹ Futrell "Framing Process", pp. 359-386

Shortly after the passage of the NWPAA in 1987, the Department of Energy (DOE), which is the agency responsible for the siting, construction, operation, and maintenance of the HLNWR, instituted the Native American Interaction Program (NAIP). This was an attempt by the DOE to initiate long-term research relating to the inventory and evaluation of American Indian cultural resources in the Yucca Mountain area, not only on tribal lands but beyond the boundaries of reservations as well. 32 33 34 35 In order to prevent the loss of ancestral ties to the land in southern Nevada, 17 American Indian tribes and organizations from the NAIP aligned themselves together to form the Consolidated Group of Tribes and Organizations (CGTO). 36 The CGTO is comprised of officially appointed representatives who are responsible for representing their respective tribal concerns and perspectives. Due to the

³² The official mandate of the NAIP establishes the documentation of American Indian cultural perspectives and resources and environmental management, associated with the YMP, as the focus of the NAIP. This design was meant to comply with DOE Order 1230.2 American Indian Tribal Government Policy, which satisfies the demands for public participation imposed by the Environmental Protection Act on all EIS processes and the requirements established by the AIRFA.

³³ R.W. Stoffle, David Halmo, John Olmsted, Michael Evans, *Native American Cultural Resource Studies at Yucca Mountain, Nevada*, (Ann Arbor, MI 1990)

³⁴ American Indian Writers Subgroup, *American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement: American Indian Resource Document*, (Las Vegas, NV 1998)

³⁵ American Indian Writers Subgroup, American Indian Perspectives on the Proposed Rail Alignment Environmental Impact Statement for the U.S. Department of Energy's Yucca Mountain Project: American Indian Resource Document, (Las Vegas, NV 2005)

³⁶ The CGTO consists of the following tribes and official Indian organizations: *Western Shoshones*; Duckwater Shoshone Tribe, NV, Ely Shoshone Tribe, NV, Yomba Shoshone Tribe, NV, Timbisha Shoshone Tribe, CA, *Owens Valley Paiutes and Shoshones*; Benton Paiute Tribe, CA, Bishop Paiute Tribe, CA, Big Pine Paiute Tribe, CA, Lone Pine Paiute Tribe, CA, Fort Independence Paiute Tribe, CA, *Southern Paiutes*; Kaibab Paiute Tribe, AZ, Paiute Indian Tribe of Utah, Moapa Band of Paiutes, NV, Las Vegas Paiute Tribe, NV, Pahrump Paiute Tribe, NV, Chemehuevi Paiute Tribe, CA, Colorado River Indian Tribes, AZ *Other Official Indian Organizations*; Las Vegas Indian Center, NV

differing political structures of the participating tribes and organizations, determining how various representatives were appointed, and the relative legitimacy of these representatives, is not possible within the confines of this project. However, related to the mandate of the NAIP, the primary objective of the CGTO has been the protection of cultural resources and environmental restoration.³⁷ ³⁸

Participatory Parity

I apply Fraser's (2003) two-dimensional conception of social justice, which integrates defensible claims for social equity and defensible claims for the celebration of social differences based on the standard of "participatory parity", to the four types of claims most often expressed by the AIWS of the CGTO (see methodology section below). "Parity of Participation" is the normative core of Fraser's (2003) two-dimensional conception of justice. According to the norm of participatory parity, justice requires social arrangements that permit all (adult) members of society to interact with one another as peers. This requires that the distribution of material resources be such as to ensure participants' independence and "voice". This *objective condition* of participatory parity precludes social arrangements that institutionalize deprivation, exploitation, and disparities in

³⁷ AIWS 1998 pp. 1-1 -1-3

³⁸ In addition to participating in the YMP, the CGTO has participated in other cultural resource management projects including the Nevada Test Site (NTS) AIRFA Compliance Program, the Underground Weapons Testing Project, and NAGPRA Compliance Program for the NTS Collection, and the Nellis Air Force Base Native American Interaction Program.

wealth, income, and leisure time, which would deny some people the means and opportunities to interact with others as peers. In addition, the *intersubjective condition* requires that institutionalized patterns of cultural value express equal respect for all participants and ensure equal opportunity for achieving social esteem. This second condition precludes institutionalized norms that systematically depreciate some categories of people and the qualities associated with them.³⁹

Utilizing the normative standard of participatory parity enables me to distinguish between justified and unjustified claims made during the siting process for the HLNWR at Yucca Mountain, as they relate to this normative standard. The four most commonly expressed types of claims raised by the AIWS, which are the focus of my study, all address structural and ideological obstacles to the realization of greater participatory parity. The four most commonly expressed types of claims are focused on cultural artifacts and resources, government-to-government relations, monetary/funding issues, and environmental justice. ⁴⁰ I will argue that issues of government-to-government relations and funding are primarily structural obstacles to greater participatory

³⁹ Conspicuously lacking from the Fraser's theorizing on redistribution and recognition, and participatory parity, is a discussion of social power. It seems Fraser's theory implicitly assumes participatory parity cannot be achieved without some leveling of power differentials between participants in decision-making processes. This inference about the relationship between power and participation seems to imply that power is a process that is carried out organizationally. In other words, those who hold power hold it because of their meaningful participation in organizational decision-making, and if others are allowed to meaningfully participate in organizational decision-making, then differentials in power will begin to disappear.

⁴⁰ These four broad categories of American Indian claims encompass the diversity of American Indian claims I encountered in my sample. However, there is a great deal of diversity between claims made within any one of these categories. Some of this diversity is represented below, but some of the diversity in American Indian claims making is excluded due to limitations in time and space.

parity, and issues of cultural artifacts and resources are primarily ideological obstacles, while issues of environmental justice and racism appear to present both structural and ideological obstacles to participatory parity that are especially difficult to overcome. This is especially true considering "...there is no wholly transparent perspicuous sign that accompanies participatory parity, announcing its arrival for all to see". Instead, following Habermas (1987; 1970), Fraser argues that participatory parity needs to be determined dialogically rather than monologically, through the give-and-take of arguments and the sifting through of rival interpretations. In this sense, participatory parity needs to be applied rather than found; it needs to be applied communicatively rather than absolutely, which relates to some of the debates regarding communication and participation within democratic theory. As 44 45

As I have stated, the four types of claims most often expressed by the AIWS in my sample all address obstacles to achieving greater participatory parity. In doing such, I view these claims as attacking different "structural opportunities" or "ins" into the dominant, hegemonic discourse of the Yucca Mountain project,

⁴¹ Fraser *Redistribution or Recognition* pp. 43

 $^{^{42}}$ This seems to be consistent with the implicate assumptions about social power found in Fraser's theory.

⁴³ William Gamson, Myra M. Ferree, Jurgen Gerhards, and Dieter Rucht, *Shaping Abortion Discourse: Democracy and the Public Sphere in Germany and the United States*, (Cambridge, UK 2002)

⁴⁴ Jurgen Habermas, *The Theory of Communicative Action Volume Two: Lifeworld and System: A critique of Functionalist Reasoning*, (Boston, MA 1987)

⁴⁵ Jugen Habermas, *Toward a Rational Society: Student Protest Science and Politics*, (Boston, MA 1970)

which is established and controlled by the DOE. ⁴⁶ I characterize the process as an "attack" because once these weak-points are identified, the American Indian's claims seek to expand the entry point by broadening the definitions and conceptualizations used to communicate about the Yucca Mountain project. In this case, the "structural opportunities" or "ins" that are associated with the weak-points in the DOE's discourse surrounding the Yucca Mountain project seem to be primarily opened by legislative action. For example, the Native American Graves Protection and Repatriation Act (NAGPRA) and the American Indian Religious Freedom Act (AIRFA) require the DOE to evaluate and protect American Indian cultural artifacts, as well as other cultural resources related to their religious freedom. This legislation created an opening into the DOE's control over the HLNWR siting process and the discourse that enabled it, and American Indian claims have sought to expand the discourse of cultural recognition within this opening.

As I will discuss in the analysis section, American Indian claims making, as expressed by the writings of the AIWS and the claims of other American Indian activists, and my application of the normative standard of "participatory parity" shows how the four most commonly expressed types of claims made by American Indian participants aimed to increase the level of participatory parity. I will also demonstrate the process by which claims made by representatives of the DOE aim to maintain the current relationship between participants. In addition, my analysis of American Indian claims making, and the legislatively created

⁴⁶ Jacob pp. 96-109; Nevada Agency for Nuclear Projects; Urban Environmental Research pp. 9-13; AIWS 1998 pp. 2-4 - 2-9

vulnerabilities in the DOE's hegemonic discourse surrounding the Yucca Mountain project, shows the respective logics of the social justice paradigms of redistribution and recognition are mutually intertwined. This highlights how the logics of the two paradigms interact with each other, determining the content of the claims made in an effort to increase participatory parity.

METHODOLOGY

In order to conduct this research I preformed textual analysis on two

American Indian Resource Documents (AIRD), which are associated with the

DOE's Environmental Impact Statement (EIS) for the HLNWR at Yucca

Mountain and the "rail-corridor" project being designed to facilitate the shipment

of high-level nuclear waste and spent nuclear fuel to the repository. These AIRDs

were produced by the American Indian Writers Subgroup (AIWS) of the

CGTO,⁴⁷ and provide summaries of the opinions expressed by the CGTO

throughout their participation in the NAIP. Although the AIRDs were produced in

response to the DOE's "Repository EIS" and the "Rail Corridor EIS", the opinions

expressed by the CGTO through the AIWS are not limited to the EISs. The

AIRDs also integrate relevant recommendations and insights from Indian people

⁴⁷ The AIWS is comprised of eight individuals representing the Western Shoshones, the Owens Valley Paiutes and Shoshones, and the Southern Paiutes. The Western Shoshone representatives are Maurice Frank of the Yomba Shoshone Tribe and Jerry Charles of the Ely Shoshone Tribe. The Owens Valley Paiute and Shoshone representatives are Neddeen Naylor of the Lone Pine Indian Tribe and Gaylene Moose of the Big Pine Indian Tribe. The Southern Paiute representatives are Betty Cornelius of the Colorado River Indian Tribes and Cynthia Osife of the Kaibab Paiute Tribe. The Indian organization representative is Don Cloquet of the Las Vegas Indian Center. The coordinator of the group is Richard Arnold of the Pahrump Paiute Indian Tribe and the Las Vegas Indian Center.

throughout their dealings with the DOE and other federal agencies. Additionally, I preformed textual analysis on transcripts of public hearings associated with the Yucca Mountain project (YMP) that occurred between 1992 and 2003, 49 as well as on research reports sponsored by and prepared for the State of Nevada. So

Textual analysis is a technique for gathering information about how human beings make sense of the world. This is done by interpreting texts in order to obtain an understanding of the ways in which different peoples in different times construct meaning. Textual analysis is a methodology, but it is not a standardized procedure or recipe that anyone can pick-up and arrive at the same conclusions every time. Consequently, as a qualitative method, the conclusions derived from textual analysis may suffer from problems of reliability and validity, as viewed from a quantitative perspective. In terms of reliability, another researcher using a different theoretical lens might reach different interpretations of, and conclusions concerning, the claims-making activities of American Indians

⁴⁸ AIWS 1998 pp. 1-1

⁴⁹ Only a fraction of the public hearings held relating to the YMP were transcribed, and of those, only a fraction have been archived. Appendix B in the 1998 AIRD provides transcripts of 10 public hearings and Tribal Update meetings ranging from April of 1992 - September of 1997. Eureka County, Nevada has electronically archived portions of public hearings held in that county related to the Repository EIS, which I was able to analyze along with four transcripts of public hearings provided to me by a Greg Fasano, who is a private contractor employed by the DOE.

⁵⁰ Although these reports did not contain primary American Indian claims, they provided me with much useful background information related to the YMP and the state of Nevada.

⁵¹ Alan McKee, *Textual Analysis: A Beginner's Guide*, (Thousand Oaks, CA 2003)

⁵² According to McKee (2003) a text is anything that human's make meaning from. Therefore, anything we can interpret the meaning of – a book, television program, piece of furniture, or in this case official documents and hearing transcripts – is treated as a text.

in the YMP after performing textual analysis on the same documents. This is because researchers draw on their own theoretical perspectives and knowledge of the text producing cultures when creating interpretations and reaching conclusions. However, the validity of conclusions reached through the method of textual analysis, and my conclusions presented here, are supported by the closeness of fit between what is expected theoretically and what is found in the textual analysis. In this case, my interpretations of the claims made by American Indian participants in the YMP demonstrate the interrelated logics of the paradigms of redistribution and recognition, which supports Fraser's (2003) theory and provides validity to my conclusions.

After a great deal of research and investigation, I identified the data sources listed above as the best sources of American Indian claims making regarding the YMP.⁵³ These data sources provided me with examples of American Indian claims making, as made by American Indians themselves, which were not possible to find in the media coverage of the issue. From my investigation into the media coverage of the YMP, it appears that American Indian views and perspectives are marginalized to the point of invisibility. It was

⁵³ My searches of the government document repository at the University of Missouri revealed a great deal of information about the state of Nevada's and various Nevada county's dealings with the DOE related to the YMP, but unfortunately did not reveal any documentation of American Indian claims making related to the YMP. Similarly, my searches of the DOE's electronic resources provided me with volumes of technical documentation of the YMP, including many geology, hydrology, and airflow studies, but did not provide any documentation of primary American Indian claims.

therefore unfortunately necessary for me to turn to government-sponsored sources of data ⁵⁴

Once I identified the body of material I was going to analyze, and preformed a close reading of the texts, I found that almost all the claims fell into four categories: American Indian cultural artifacts and resources, government-to-government relations, funding/compensation issues, and environmental justice. My primary objective at this stage of the research was to let my analysis be guided by the data, as seen through Fraser's (2003) theoretical lens, which was consistent with my interest in studying American Indian claims making as made by American Indians.

Textual analysis allowed me to document specific features and similarities in the American Indian's claims, which enabled me to apply the concepts of "redistribution" and "recognition" and the normative standard of "participatory parity". ⁵⁵ Textual analysis of American Indian claims further allowed me to determine the logic of the paradigm of redistribution is interrelated with the logic of the paradigm of recognition, although the two hold different implicit understandings of the value of social difference. If my sample contained many claims that fit neither the concepts of redistribution, recognition, or participatory

⁵⁴ This limitation was unfortunate because I found myself in a position of having to rely on the federal government to provide me access to the voices of American Indian participants in the YMP. This is problematic because it is the policies and practices of agencies of the federal government that have marginalized American Indian voices into practical silence. The scarce availability of American Indian claims related to the YMP is indicative of their relatively powerless position in the process, and the need for greater participatory parity.

⁵⁵ Fraser Redistribution or Recognition

parity, then I would have reported this discovery. However, my sample contained very few outlier claims. ⁵⁶

The ultimate goal of my textual analysis was to gain an understanding of American Indian claims making as it relates to the YMP. Joel Best (2001) defines claims making as the use of rhetoric to define social problems and promote policy solutions for them. As will be discussed in greater detail below, this definition implies claims making involves both a diagnostic and a prognostic process that can be utilized by social movement organizations and actors. The literature regarding claims-making activities focuses on the contexts in which claims are formed and disseminated, and the discursive meaning of the claims for both those who create them and those who receive them.⁵⁷ Because the focus of this study is the relation between different types of American Indian claims making activities, as they relate to redistribution and recognition, I focus on the discursive meanings of American Indian claims as interpreted through my analytical framework. For this reason, I did not include data that consisted of second-hand claims that summarized or repeated the claims making activities of American Indians.

Reflexively speaking, I became interested in the siting process for the HLNWR at Yucca Mountain in 2002 while studying environmental sociology and the environmental justice movement at Colorado State University. I have spent much of my childhood and early adult life traveling the American Southwest,

⁵⁶ For example, out of 193 claims in my sample, 4 concerned Western Shoshone treaty rights, and 4 concerned general issues of indigenous peoples internationally (see note 59). These claims were not included in my analysis, but they were made so infrequently, their omission does not detract from the validity of my conclusions.

⁵⁷ Joel Best, editor, *How Claims Spread: Cross-National Diffusion of Social Problems*, (New York, NY 2001); Joel Best, editor, *Images of Issues: Typifying Contemporary Social Problems*, (New York, NY 1989)

visiting numerous American Indian reservations in that part of the country. As I learned more about environmental justice issues generally, and the YMP specifically, it seemed to me that the dynamics of environmental racism were not the same for many American Indian communities as they were for other minority and low-income populations. As I began research in this area, I discovered that the literature concerning American Indian environmental justice issues was woefully lacking. Additionally, as I began looking into the YMP I found information concerning American Indian participation in the project was extremely difficult to uncover. As I learned more about the project it became clear that the decision to site a repository at Yucca Mountain was not based on the best available scientific evaluation of site suitability. Instead, it became clear that the Yucca Mountain decision was based on political necessity and opportunity, and the DOE was carrying it out in a dishonest, coercive fashion. It seemed apparent to me that the scarce availability of documentation of American Indian perspectives and participation in the project was indicative of the DOE's coercive handling of the project. What follows is my attempt to shed light on the American Indian claims that have been made concerning the YMP, including the discursive and institutional context in which they are made. I believe my social location actually lead me to be more sensitive and understanding of American Indian claims, and more willing to do whatever I could to ensure their claims were recorded fairly and accurately. In this way, the research I am presenting here is strengthened by my position. My goal is that this and future research will ultimately increase the level of transparency involved in the YMP, reducing the

DOE's coercive control of the project, and ultimately resulting in greater environmental justice for American Indians with ties to the project area.

ANALYSIS

My textual analysis of two AIRDs, transcripts of public hearings, and

State sponsored research reports lead me to identify four separate, though
interrelated, types of claims, or discourses, that are repeatedly expressed by

American Indian participants. These four types of claims, or discourses, focus
on American Indian cultural artifacts and resources, government-to-government
relations, funding/compensation issues, environmental justice and racism.

These claims, or discursive arenas, correspond with problems in the DOE's
hegemonic control over the YMP created through legislative mandates and

⁵⁸ Due to the time and monetary restraints placed on the creation of a master's thesis, I coded the data individually, rather than using several coders to produce intercoder reliability measures. This is justified based on the deep theoretical analysis I perform, which requires that I carefully consider the code assignment as part of the analysis itself.

⁵⁹ My sample consisted of 193 claims; 172 were made by either the AIWS or other American Indian participants in the YMP, and 21 were made by representatives of the DOE or in the "Repository EIS". This heavy emphasis on American Indian claims is consistent with my theoretical orientation discussed above. I coded 90 of the 193 claims as regarding American Indian cultural artifacts and resources; 77 made by American Indians and 13 being made by the DOE. I suspect the reason 46.6% of the claims in my sample dealt with cultural artifacts and resources has to do with the mandates of the NAIP and the CGTO (See note 32). I coded 37 claims as relating to government-to-government relations; 35 made by American Indians and 2 made by the DOE. I coded 31 claims as related to funding/compensation issues; 28 from American Indians and 3 from the DOE. Finally, I coded 27 environmental justice claims; 24 from American Indian participants and 3 from the DOE. My sample contained 8 additional American Indian claims; 4 pertaining to "treaty rights" and 4 pertaining to "international indigenous issues". These claims appeared too infrequently to be fully included in my analysis. The DOE's claims were not only included to provide examples of the opposition faced by American Indian participants in the YMP, but were also included to show the discursive context in which American Indian claims were made.

Executive Order. American Indian claims regarding cultural artifacts and resources focus on expanding the definitions of American Indian cultural artifacts and resources used by the DOE to include an interconnected, holistic view of these artifacts and resources. American Indian claims for government-to-government relations aim to reaffirm the sovereignty of American Indian nations, such as the Western Shoshone Nation, as established through congressionally ratified treaties, such as the 1863 Treaty of Ruby Valley. American Indian claims regarding funding/compensation are directed towards achieving greater funding for American Indian evaluation of, and participation in, the YMP, as well as towards achieving greater compensation for past, present, and future damages to American Indian cultural, historic, and environmental resources. Finally, environmental justice claims made by American Indians seek to redefine Great Basin American Indian groups as having "affected Indian tribe status" pursuant to the NWPA and Executive Order 12898 (see environmental justice section below).

American Indian Cultural Artifacts and Resources

The primary concern of the CGTO has been the protection of American Indian cultural resources and environmental restoration, as required of the DOE by the American Indian Religious Freedom Act of 1996 (AIRFA) and other legislation. The AIRFA specifically reaffirms the First Amendment of the United States Constitution rights of American Indians to have access to lands and other

resources that are essential to the practice of their traditional religion. ⁶⁰ In this case, the DOE recognizes American Indian cultural artifacts as ancestral burials, pictographs (rock art), and other archaeological sites and artifacts, but the DOE views each in isolation from one another. This practice extends to the DOE's conceptualization of American Indian cultural resources, where analysis of potential risks to the air, water, plant and animal life are conducted separately, ignoring the holistic conceptualizations expressed in American Indian claims:

American Indians believe that we have the responsibility to protect with care and teach the young the relationship of the existence of a non-destructive life on Mother Earth. This belief is the foundation of our holistic view of the cultural resources, i.e., water, animals, plants, air, geology, sacred sites [traditional cultural properties] TCPs, and artifacts. Everything is considered to be inter-related and dependent on each other to sustain existence. Indian people believe that through proper respect and understanding, this complex relationship can be better understood and allow for existing and future generations to be better prepared for the care of these things. ⁶¹

The "holistic view of cultural resources", expressed above in the 1998 AIRD, stands in stark contrast to the DOE's method of operation concerning the assessment of American Indian cultural artifacts and resources, as critiqued by American Indian participants in the 1998 AIRD:

Conversely, it is common archaeological practice to look at areas as distinct sites. Thus a rock shelter, a camping area, or a spring surrounded by broken pottery can be located within a few hundred yards or farther from one another and be assigned three different site numbers. When Indian people are asked to interpret the separate elements of a site, they consider that additional areas may

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⁶⁰ AIWS 1998 pp. 1-7

⁶¹ AIWS 1998 pp. 2-9

be inter-related and therefore, would prefer to define them as a single site. 62

This disconnect between the "isolated view" of American Indian cultural artifacts and resources held by the DOE and their archaeologists, and the "holistic view" of American Indian cultural artifacts and resources held by American Indian participants in the YMP represents a clear obstacle to participatory parity in the YMP. The intersubjective condition for participatory parity is not met in this case due to cultural patterns of valuation expressed by the DOE that depreciate and undermine the perspectives and knowledge of American Indians

If participatory parity is to be achieved, where both sides can interact with one another as peers, then the "holistic view" of American Indians concerning their cultural artifacts and resources need to be positively revalued by the DOE, instead of being continually viewed as inferior to the DOE's "isolated view". However, getting the DOE to positively revalue American Indian perspectives has proven to be extremely difficult in this case. Part of the problem appears to be that the "world views" held by American Indians and the DOE are so radically different that the two groups end up "talking past" each other. An exchange that took place between an American Indian participant and a DOE representative in a public hearing in 2003 exemplifies this problem.⁶³ The American Indian activist commented:

In our ways there are four sacred elements, the Earth, the water, fire (the sun), and air. When we look at the Yucca Mountain project with these elements in mind, we see the absurdity of your

 $^{^{62}}$ AIWS 1998 pp. 2-9 - 2-10 63 The hearing in 2003 was held to discuss the then most recent draft of the "Repository" EIS", and took place in Eureka County, NV, which is located North of the YMP area.

proposal to store high-level nuclear waste at Yucca Mountain. It is in violation of the natural laws as set forth by our creator...Mother Earth is sacred, she should not have poisons injected into her. The earth is alive-earthquakes are a reality and Yucca Mountain is a very geologically active area, it is laced with faults. It is foolish to think that the mountain can contain this waste for thousands of years, water and air both flow through the mountain. The mountain breaths. That is why the DOE now says it will engineer a facility to contain the waste itself. This is even more foolish, we haven't been able to write for the amount of time this stuff will be toxic. To suggest we can build a facility that will contain it for that long is ridiculous.⁶⁴

The DOE representative then responded with a very long, detailed description of the statistical risk analysis procedures employed by the DOE during the HLNWR siting process, some of which is reprinted as follows:

The EIS does contain analysis of impacts that could arise from natural catastrophic events such as earthquakes and volcanic activity. While the DOE cannot predict such events exactly, it can incorporate them statistically into risk analysis...For probabilistic analyses such as that preformed to evaluate potential impacts from igneous disruption events in the EIS, a Monte Carlo method was used whereby a number of realizations using different sets of input parameters are added together to give the total probability-weighted dose. For the final EIS, 5,000 realizations were completed and the results are provided graphically...displays of the probability-weighted annual dose do not allow direct interpretation of the conditional annual dose...A sensitivity calculation was performed to provide results for this conditional case, and conditional mean annual dose histories were calculated for eruptive events at 100, 500, 1,000, and 5,000 years. 65

The disconnect between the world view of the DOE representative and the world view of the American Indian participant, as reflected in their respective claims on the issue, was not lost on the American Indian participants in the hearing:

⁶⁴ Eureka County, NV, "Summary of DOE's Yucca Mountain Final EIS: Comment-Response Document", (Las Vegas, NV 2003)

⁶⁵ Eureka County pp. 120-1

DOE's response to this comment only serves to highlight the disconnect between DOE's professed commitment to honor the concerns of the Native American community, and the lack of seriousness with which it actually addresses these concerns. This Native American commenter has expressed concern over the larger picture, questioning DOE's proposal in relation to the grand scheme of nature and time and asking DOE to grasp the true implications of its actions. Yet DOE has responded by merely outlining the minute, esoteric calculations of the probability and risk with which it purports to be able to predict the future. DOE has not included in its analysis the extent of the disruption to the holistic interrelation of all the impacted aspects of the greater ecology, nor the potential damage to the traditional and spiritual vitality of the land.⁶⁶

The different understandings of American Indian cultural artifacts and resources held by the DOE and American Indian participants in the YMP present an obstacle to achieving participatory parity in this case. On the one hand, the DOE recognizes American Indian cultural artifacts and resources to be directly observable, objective entities, which can be evaluated in isolation from each other. Consequently, the DOE sees no problem with conducting hydrological studies separately from airflow studies, or with conducting surveys of American Indian plant consumption separately from surveys of archaeological sites and artifacts. American Indian participants, on the other hand, recognize their cultural artifacts and resources are necessarily interconnected with one another, and hold that any attempt to study these resources and artifacts in isolation from each other necessarily neglects the larger interconnected meanings.

Claims regarding American Indian cultural artifacts and resources primarily, though not entirely, involve the "politics of recognition". ⁶⁷ As the

⁶⁷ Fraser 2003 Redistribution or Recognition

⁶⁶ Eureka County pp. 123

above examples illustrate, the American Indian claims for recognition seek to positively revalue their previously devalued perspectives and worldviews, and thus work towards greater participatory parity. The DOE's claims regarding this issue, on the other hand, seek to maintain the current level of value associated with the involved perspectives, which works to continue the current level of participatory parity. A related issue, in this case, to the politics of recognition is the process of racial formation. Omi and Winant's (1994) conception of racial formation is primarily concerned with demonstrating how "racial projects" link social structure and social signification. For example, the authors argue "...it is not possible to represent race discursively without simultaneously locating it...in a social structural [and historical] context. Nor is it possible to organize, maintain, or transform social structures without simultaneously engaging...in racial signification. Racial formation, therefore, is a kind of synthesis..."68 This process is evident in the claims made by American Indian participants in the YMP as expressed in the 1998 AIRD:

...metallic objects or other historical artifacts might be found by archaeologists. It is usually concluded that these items were used exclusively by Euroamericans without any regard or consideration to use or adaptation by Indian people...Archaeologists... believe that scientific evidence supports the notion that Indian people were highly mobile groups of aboriginal hunter-gatherers who occupied the Yucca Mountain area and were followed by Euroamericans who used the area for purposes of travel and transportation, prospecting, surveying, and possibly ranching. This opinion appears to portray Indian people as roaming aimlessly across the desert without consideration to the early historic accounts of Indian farming activities prior to European contact and active

⁶⁸ Michael Omi and Howard Winant, *Racial Formation in the United States From the 1960s to the 1990s*, (New York, NY 1994)

participation in travel, transportation, prospecting, surveying, and ranching.⁶⁹

This argument shows that the politics of recognition in the YMP is not a new process involving Euroamericans and American Indians, but rather is a continuation of past racial formations and significations. In addition, the above claim highlights the historical nature of the obstacle to participatory parity that divergent understands of American Indian cultural artifacts and resources present in this case.

Government-To-Government Relations

American Indian participants in the YMP frequently claim the DOE's

American Indian consultation procedures are inadequate because the DOE fails to
engage in government-to-government relations with American Indian tribes.

American Indian tribes are sovereign nations who acknowledge the sovereignty of
the U.S. government, and demand the U.S. government, in return, recognize tribal
sovereignty. In 1994 President Clinton signed Executive Orders 12866 and
12875 to show his commitment to "...building a more effective day-to-day
working relationship reflecting respect for the rights of self-government due the
sovereign tribal rights governments". Similar to issues of American Indian
cultural artifact and resource protection, the issue of government-to-government

⁶⁹ AIWS 1998 pp. 2-10

⁷⁰ AIWS 1998

⁷¹ AIWS 1998 pp. 5-1

relations is primarily one concerned with the "politics of recognition". The However, as with the issues of American Indian cultural artifacts and resources, there are issues of distribution involved in claims for government-to-government relations that cannot simply be reduced to issues of recognition.

Generally, American Indian participants in the YMP insist government officials implement comprehensive consultation policies that take into consideration the cultural, social, and political diversity of the American Indian population, as well as the needs and concerns associated with this population.⁷³ However, achieving this level of recognition has proven difficult, as expressed by the AIWS in the 1998 AIRD:

Formal government-to-government consultation with tribal governments requires diplomacy. U.S. government officials who are in charge of maintaining friendly and productive day-to-day relations with foreign countries, such as Japan, Mexico, or Germany, must acquire knowledge on the languages, culture, and politics of those countries in order to best represent the interests of the United States of America...Yet, there is little or no interest among government officials to educate themselves as to how American Indians living in their own country, organize themselves culturally and politically. How, we ask, are federal agencies and state officials going to succeed in following President Clinton's mandate if they do not work at improving their knowledge of American Indian ways of life?⁷⁴

American Indian participants in the YMP repeatedly express their belief that the DOE, as the federal agency responsible for the implementation of the YMP, has not consulted with Tribal Governments as sovereign powers at any point in the

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⁷⁴ AIWS 1998 pp. 5-1

⁷² Fraser Redistribution or Recognition

⁷³ AIWS 1998

process. The CGTO, which created the AIWS, who drafted the AIRD, does not constitute a representative governmental body. Rather the CGTO was created through the NAIP, which was implemented by the DOE in 1987, and continues to operate because American Indian participants felt having marginal influence was preferable to having no influence at all. Their participation in the NAIP, and the CGTO, was never intended to be a substitute for actual diplomatic consultation procedures, nor is it representative of all American Indian perspectives, as expressed by an American Indian activist in 2003 in the context of a public hearing regarding a draft of the "Repository EIS":

The work of the "Consolidated Group of Tribes and Organizations" [CGTO] while important, does not constitute "consultation." It is our understanding that the members of this group have consistently expressed opposition to the Yucca Mountain project [YMP]. Yucca Mountain lies within the territory of the Western Shoshone Nations, yet the northern communities of the Nation have been left out and ignored by the DOE in its evaluation of impacts and cultural concerns.

This claim not only reflects some American Indian perceptions of the DOE's treatment of the input given by the CGTO, but also raises issues of legitimacy and representation associated with the CGTO. The official, oppositional position of the CGTO regarding the YMP alluded to above reads:

The 16 (later increased to 17) Native American tribes involved in the Nevada Nuclear Waste Storage Investigations project (currently referred to as the YMP) strongly oppose the placement of a high-level radioactive waste disposal facility at the Yucca Mountain site due to the fact that the site is within the ancestral territories of certain Native American tribes or organizations, and due to possible hazardous ramifications such a facility may pose to

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⁷⁵ AIWS 1998

⁷⁶ Eureka County pp. 112

the health and welfare of all people through contamination by any means.⁷⁷

The DOE, for their part, as expressed in the claims made by DOE representatives, claims that it indeed is establishing government-to-government relations. But the DOE means by this not heeding the opposition of the tribes, but rather merely listening to the concerns and doing nothing. This not only ignores and misconstrues the above oppositional position taken by the CGTO, but also somehow considers this act of ignoring and misconstruing the CGTO's position as establishing satisfactory government-to-government relations. For example, a DOE representative made the following claim regarding American Indian consultation procedures at a public hearing in 2003:

DOE has consulted, and will continue to consult, with tribal governments as sovereign entities that possess authority and responsibility for Native American territory...Beginning with the Native American Interaction program in 1987, DOE has consulted with Native Americans on tribal concerns about the Yucca Mountain Project...In all cases, project decisions will incorporate input from affected tribes.⁷⁸

Unfortunately, from the American Indian's point of view, the NWPA recognizes affected Indian Tribes as any tribe whose reservation is the site of a repository of this sort, or any tribe whose federally defined usage rights to lands outside the reservation may be adversely affected by such a facility.⁷⁹ To date, there are no federally recognized "affected Indian Tribes" associated with the YMP.⁸⁰ The

⁷⁷ AIWS 1998 pp. 1-2

⁷⁸ Eureka County pp. 113

⁷⁹ AIWS 1998; Eureka County 2003

⁸⁰ Urban Environmental Research 2002

repository will not be located within the boundaries of any reservation, and due to a long, complicated legal proceeding before the Indian Claims Commission (ICC) the Western Shoshones no longer have a defensible claim for usage rights to the land that will house the repository.⁸¹

In addition to the obstacle to participatory parity presented by the DOE's misrecognition of sovereign tribal governments, the consultation procedures that are in place leave doubts in the minds of American Indian participants:

...it is doubtful that this mere expression of commitment is satisfactory to the Native Americans concerned about the repository project. Only actions taken by the DOE can give meaning to its stated commitment, and thus far, DOE's actions appear to have left the Native American community unsatisfied and playing only a small and easily dismissed role in the process...It is crucial for DOE to not only legally perform such consultation to the full extent required...but also to take into account the results of these consultations when making decisions about the Yucca Mountain project. 82

From this claim, made by an American Indian participant in a public hearing in 2003, we can see that the issue of government-to-government relations presents a complicated obstacle to achieving participatory parity in this case. In one sense, the claims made by American Indian activists that seek to have the DOE positively reinterpret their understanding of American Indian tribal sovereignty

Need to Look Back as well as Up", Presented at the annual meeting of the Midwest Sociological Society. Chicago, IL; Richard Clemmer, "The Legal Effect of Judgment: Indian Land Claims, Ecological Anthropology, Social Impact Assessment, and the Public Domain", *Human Organization*: Fall 2004, Vol. 63: 3, pages 334-346; John O'Connell, "Constructive Conquest in the Courts: A Legal History of the Western Shoshone Lands Struggle – 1861 to 1991", *Natural Resources Journal*: Vol. 42, pages 765-799; Caroline Orlando, "Aboriginal Title Claims in the Indian Claims Commission: *United States V. Dann* and its Due Process Implications", *Boston College Environmental Affairs Law Review*: Vol. 13:241, pages 241-280; Elmer Rusco, "Historic Change in Western Shoshone Country: The Establishment of the Western Shoshone National Council and Traditionalist Land Claims", *American Indian Quarterly*: Vol. 16:3, pages 337-361

⁸² Eureka County pp. 113-4

belong to the paradigm of recognition, and aim to increase the intersubjective component of participatory parity. In this same sense, the claims made by DOE representatives that seek to legitimize and maintain the current interpretation of American Indian tribal sovereignty held by the DOE continue the disparity between participants in the American Indian consultation procedures associated with the YMP.

However, in another sense, this issue of government-to-government relations highlights the necessity of establishing participatory parity dialogically rather than monologically. 83 In order to establish something like participatory parity dialogically there must be true communicative dialog, which involves active speaking and listening. More specifically, a dialogical process requires not only the opportunity for all parties to share their views, but also the opportunity for all parties to actually be heard by others in the process. ⁸⁴ This requires that the DOE not only "document" and "consider" American Indian views, perspectives, and concerns, but also utilize the knowledge gained from such a process when making policy decision concerning the YMP. Such communicatively interaction between the DOE and American Indian participants would not only improve the chances of successful policy implementation, from the DOE's point of view, it would also lead to grater participatory parity, and thus more legitimate policy implementation from the American Indian's perspective.

⁸³ Fraser Redistribution or Recognition

⁸⁴ Habermas *Theory of Communicative Action*

Funding

While claims regarding American Indian cultural artifacts and resources and government-to-government relations are predominantly, though not entirely, related to the paradigm of recognition, claims regarding funding and financial compensation issues are primarily, though again not entirely, related to the paradigm of redistribution. American Indian claims for funding and financial compensation address the "objective condition" for participatory parity and seek to eliminate the structural, socioeconomic barriers that prevent American Indian participants from achieving equality in the YMP proceedings.

The CGTO has requested funding from the DOE on numerous occasions for project oversight and to conduct the necessary studies to determine the impacts to tribal communities...Federally recognized tribes are concerned about the lack of preparation, personnel, and equipment needed to respond to accidents and emergencies on or near their respective reservations. 85

This claim made by the AIWS in the 1998 AIRD addresses funding issues associated with YMP oversight and emergency response preparation, which are two commonly expressed areas of concern for American Indian participants.

Claims concerning emergency response preparation reflect American

Indian tribal government's and American Indian participant's fears of not being

able to respond to an accident or spill involving high-level nuclear waste or spent

nuclear fuel in the vicinity of their homes and reservations. An accident or spill

⁸⁵ AIWS 1998 pp. 4-8

of this sort represents a worst-case-scenario for American Indians residing along the proposed transportation corridors, and their desire to be prepared for such an incident is reflected in the claim made by an American Indian participant at a public hearing in 2000 concerning a supplement to a draft of the "Repository EIS":

I especially brought to the attention of the tribes the matter of emergency response and preparedness and how we, as tribes, are unprepared at this time and how the federal government and other agencies can look upon the tribes to assume that responsibility. And as we stated, we lack training. We lack staff. We lack equipment. We lack funds to be prepared for any kind of spills near us...Should there be a spill along the way, then our people are not going to be prepared to take care of that, although the general public will look upon us as assuming that responsibility.

The extent of American Indian responsibility for responding to an accident or spill, as understood by the federal government or the general public, is unclear, however, American Indian perceptions of being dangerously unprepared and under funded reflects an objective obstacle to participatory parity that could be mollified with an adequate distribution of funds for emergency preparation.

Considering tens of millions of dollars are being spent on the suitability of Yucca Mountain as the location for the HLNWR, I would argue adequate funding should be provided to ensure Yucca Mountain's closest neighbors feel safe and prepared for any kind of dangerous incident resulting from the YMP.

When asked to address the issues of American Indian tribal emergency response preparation and funding at a public hearing over the "Repository EIS" in

⁸⁶ Desert Research Institute, "Native American EIS Tribal Update Meeting", (Las Vegas, NV 2002)

2003 a DOE representative dismissingly repeated the relevant portions of the NWPA and changed the subject to liability coverage.

The NWPA recognizes the role of tribal governments. Section 180(c) of the Act requires the Secretary of Energy to provide technical and financial assistance and funds to states and Native American tribes for training public safety officials of appropriate units of local government and tribes through whose jurisdictions DOE would transport spent nuclear fuel or high-level radioactive waste...The Price-Anderson Act provides liability coverage for...DOE activities by establishing a system of private insurance and Federal indemnification that generally ensures...\$9.45 billion is available to compensate for damages suffered...

This avoidance of the issue and subsequent redirection of the discussion did not go unnoticed by the American Indian participants in the meeting, as expressed by the claim made immediately following the DOE representative's claim:

DOE's response to this comment is appreciated. However, the extent of the training and exact amounts of funding that will be provided to tribal governments - or any affected unit of government - for emergency response has yet to be disclosed.⁸⁸

The commenter went on to note the Price-Anderson Act provides no liability coverage unless there is an unanticipated release of radioactivity, and even then, potential victims would have to sue the DOE in court, and prove their injuries were the result of said release, which would be expensive and difficult to achieve.

Closely related to issues of funding for American Indian preparation for potential emergency response scenarios are issues of funding for American Indian scientific evaluation of the YMP. American Indians, as expressed by the claims made by American Indian participants in the YMP, feel their involvement in the

⁸⁷ Eureka County pp. 127-8

⁸⁸ Eureka County pp. 128

project has been unfairly limited to evaluating and protecting their cultural artifacts and resources. One stated reason for this limitation is the lack of funding and assistance provide to American Indians by the federal government and the DOE for acquiring their own scientific experts and knowledge to evaluate the technological aspects of the YMP. The issue is summarized nicely by an exchange that took place at a Tribal Update Meeting in 1992.⁸⁹ In this meeting an American Indian participant commented:

Funding should be provided to tribes and Indian organizations for training, information gathering, and other YMP related activities. This recommendation does not preclude any group from applying for 'affected status'. 90

A DOE representative then responded:

Currently, the YMP Native American/Cultural Resource Program is primarily focused on the protection of cultural resources in the Yucca Mountain area. Funding for activities beyond the current scope of work is not available at the present time. However, this issue is continually being addressed and the recommendation will be kept in mind as future discussions on this subject take place. ⁹¹

My analysis of the documents included in the sample for this study has failed to determine if the DOE's position on this matter has changed since 1992, which was during the early years of the YMP. However, the lack of documentation regarding increased funding for "activities beyond the current scope of work" and continued American Indian claims for increased funding for these kinds of

⁸⁹ This meeting is the earliest contained in my sample. I obtained the transcripts from Appendix B in the 1998 AIRD. This meeting is one of the first meetings held to update the representatives of the participating tribes in the CGTO. The purpose of this meeting was to update representatives on the research conducted for the initial "Repository EIS".

⁹⁰ AIRD 1998 pp. B-14

⁹¹ AIRD 1998 pp. B-14

activities suggests that the DOE's position has not changed over the past fifteen years. For example, an American Indian participant in a 2001 public hearing over a draft of the "Repository EIS" made the following claim:

I do think that tribes do need funding to get their expertise on the manner that all this [EIS] document is written. It's highly -- how should I put this -- to the common person it's -- loss for words. Anyway, the way the documentation is written we need expertise to go through it and dissect it and give their opinions to the tribal councils and go from there. Without funding, this will never be done. ⁹²

Another American Indian participant at the same public hearing echoed the above commenter's sentiments by claiming:

...there should be funding for the tribes in order to go through the technical documents. The State of Nevada has been funding counties in the area, has this funding and certainly sovereign tribal nations are on a level or above a level with counties and should also receive this funding in order to go through all these documents...One thing NEPA [National Environmental Protection Act] states is these documents [EIS] should be written in clear language so the average person can understand...The way this [EIS] is written...it's basically raw data and raw data isn't appropriate for these documents... 93

As will be addressed in the discussion section, this claim made regarding funding for American Indian scientific expertise and knowledge highlights the interconnections between redistribution and recognition in American Indian claims making regarding the YMP. The above claims show that issues of funding for American Indian scientific evaluation of the YMP cannot be meaningfully abstracted away from other types of claims, such as those regarding government-

⁹² Laurie Webb & Associates, "Hearing on the Supplement to the Draft Environmental Impact Statement Yucca Mountain Project", (Las Vegas, NV 2001) pp. 19-20

⁹³ Laurie Webb & Associates 2001 pp. 19-20

to-government relations. This bridges the gap between claims that appear to be primarily related to the paradigm of recognition with claims that appear to be primarily related to the paradigm of distribution, thus supporting Fraser's (2003) argument that the logics of the two paradigms are interrelated.

For now, however, I will argue that in ways similar to the issues discussed above, American Indian claims regarding funding for emergency response and the acquisition of scientific experts and knowledge aim to increase the level of parity between themselves and the DOE, while the claims made by DOE representatives regarding these issues are directed at maintaining the current level of parity between participants in the YMP. While claims about American Indian cultural artifact and resource protection and government-to-government relations primarily, though not entirely, addressed the intersubjective component of participatory parity, and thus were mainly associated with the paradigm of recognition, claims for funding mainly, though again not entirely, address the objective condition for parity among participants, and thus are primarily associated with the paradigm of distribution. For example, American Indian claims for increased funding for emergency response preparation and claims for increased funding for scientific expertise seek to break thorough the structural, economic conditions that leave them playing a marginal and easily dismissed role in the YMP. Increased federal funding in both of these areas would increasingly allow American Indian tribes and participants to interact with county and state governmental units on equal terms. The claims made by DOE representatives on this matter seek to avoid the kind of economic redistribution that would result in

this kind of parity between participants in the YMP. Redirecting the discussion when the issue is raised, and esoterically repeating the relevant legislation, serves to ensure issues of increased funding for "activities beyond the current scope of work" are not meaningfully discussed.

Environmental Justice

Claims concerning environmental justice are perhaps the most complicated of the four types of claims that I identify. American Indian claims concerning environmental justice issues do not primarily stem the paradigm of recognition or the paradigm of redistribution alone, but rather, stem from both simultaneously. Claims regarding American Indian cultural artifact and resource protection and government-to-government relations derive primarily, though not entirely, from the paradigm of recognition. Similarly, claims regarding funding issues are derived primarily, though again not entirely, from the paradigm of redistribution. This is not the case with American Indian claims concerning issues of environmental justice. American Indian claims for environmental justice simultaneously rely on recognition of American Indian's unique position related to the YMP, and upon a just distribution of environmental hazards and burdens based on this recognition.

On February 11, 1994 President Clinton signed EO 12898 which mandated each federal agency achieve environmental justice by identifying and addressing disproportionately high and adverse human health or environmental

effects of its programs, policies and activities on minority and low-income populations. Hore specifically, federal agencies, such as the DOE, were instructed to (1) promote enforcement of all health and environmental statutes in areas with minority and low-income populations, (2) ensure greater public participation in decision making, (3) improve research and data collection relating to the health and environment of minority and low-income populations, and (4) identify differential patterns of consumption of natural resources among minority and low-income populations. However, as expressed in AIRD written by the AIWS, these requirements have not been fulfilled:

The YMP has not shared its design and implementation strategy for Environmental Justice with the CGTO, nor has it identified and analyzed subsistence consumption patterns of natural resources by Indian people...Since the EO specifically addresses equity to Indian people and low-income populations, it is critical that the DOE immediately address the concerns of Indian tribes and communities...⁹⁶

The process of American Indian claims making associated with the YMP has led to the identification of more specific concerns related to environmental justice for American Indian communities, which seek to expand current conceptualizations of environmental justice policy. This is demonstrated in the following claim taken from the 1998 AIRD:

The CGTO has other concerns that fall within the context of EO 12898. More specifically, the issue of subsistence consumption which requires the DOE to collect, maintain, and analyze information on consumption patterns such as those of Indian

⁹⁵ AIWS 1998

⁹⁴ AIWS 1998

⁹⁶ AIWS 1998 pp. 2-19

populations who rely principally on fish and/or wildlife for existence. Most importantly, the EO mandates each federal agency to apply equally their environmental justice strategy to Native American programs and assume the financial costs necessary for compliance. ⁹⁷

The above claim not only highlights the connections between claims for recognition and claims for redistribution that are formed during the process of public dialog, but also demonstrates American Indian's fears of irreparable damage to their culture because of the YMP. As expressed by the claims of the AIWS, the potential for holy land violation and cultural survival-access violations are of special concern to the CGTO:

There is no question that the holy lands of Indian peoples have been, continue to be, and will be [negatively] impacted by government actions. There is no question that only Indian people have lost cultural traditions because they have been denied free access to many places on federal lands where ceremonies have or need to occur, where plants need to be gathered, and where animals need to be hunted in a traditional way. ⁹⁸

American Indian concerns regarding irreversible damage to their cultural lifeways are not limited to these micro-level issues of holy land and cultural survival-access violations, but rather, also include concerns regarding disruption to macro-level intertribal relations.

The process of fragmentation of Indian nations into small, increasingly isolated communities began with Euroamerican settlement and continued with the right-of-way reservation of YMP lands. The loss of cohesion has lowered the ability of Indian people to (1) negotiate, (2) resolve conflicts, (3) keep peace, and (4) share resources. Certain areas of the YMP study region were traditionally where all activities promoting community cohesion and political integration took place. When Indian people were

⁹⁸ AIWS 1998 pp. 2-19

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⁹⁷ AIWS 1998 pp. 2-18

denied free access to these places, they lost a central place shared by the three ethnic groups. Without this central place, the three ethnic groups did not meet as often. Eventually, the lack of contact weakened interethnic relations and contributed to an overall loss of political power and skills among the groups.⁹⁹

This claim clearly shows how the process of claims making regarding the YMP is a continuation of past processes involving Great Basin American Indian groups and Euroamerican outsiders. In addition, this claim provides an example of the complexity of claims making concerning environmental justice issues and the YMP. More specifically, it shows how past processes of racial formation ¹⁰⁰ involving misrecognition of American Indian political organizations has led to an unjust distribution of environmental burdens and constraints.

The DOE's position regarding environmental justice for American Indians associated with the YMP, as expressed in the claims made by DOE representatives, frames the issue in terms of statistical probabilities, which neglects the cultural concerns raised by American Indian participants. An exchange that took place between a DOE representative and an American Indian participant in a public hearing in 2003 exemplifies the different understandings of environmental justice in this case. An American Indian participant commented:

In this cultural concept, when you're taking this down to Yucca Mountain, the transportation, we are talking about genocide. And we [Western Shoshones] have long been participants in this...And the radiation that comes from this transportation, we will be the long-term participants in that, and the people that live here will be also. But the animals that live there will bring it back to us, and

⁹⁹ AIWS 1998 pp. 2-23

¹⁰⁰ Omi and Winant

we'll have double jeopardy because that's part of our traditional foods (Eureka Co., 2003: 125-6). 101

To which a DOE representative responded:

The public health effects from incident-free transportation of radioactive materials is dependant on four factors: the radiation rate at the surface of the cask, the distance from the passing cask to the individual, the duration of each exposure, and the number of shipments which pass by the individual. None of these factors vary from individual-to-individual within segments of the general population, and therefore the public effects of transporting radioactive materials would be the same for Western Shoshones as it would be for individuals in any other segment of the general population. ¹⁰²

The DOE apparently rests content that the Shoshones (given the same radiation exposure) are not unusually susceptible to radiation sickness (unlike the black population which is unusually prone to getting sickle cell anemia.) Not only does the DOE representative's claim not address the cultural component of the claim made by the American Indian participant concerning environmental justice, but it also contains a clear logical fallacy that circumvents the intention of EO 12898. The DOE representative states that none of the four factors that determine the public health effects of transporting radioactive materials vary from individual-to-individual within segments of the population, but says nothing about the variation between one segment of the population and another segment of the population. For example, the DOE representative's claim says nothing about the differential exposure possibilities between Western Shoshone's of the Great Basin area and the relatively affluent residents if Kirkwood, Missouri, who are equally susceptible to radiation sickness as the Shoshones and who also live adjacent to a

¹⁰¹ Eureka County pp. 125-6

¹⁰² Eureka County pp. 126

rail line, but will experience fewer trans-shipments compared to the Shoshone, upon which all the shipments will converge. As segments of the general population, the Western Shoshones, due to their proximate location to Yucca Mountain, will be impacted by the four factors that determine the public health effects of radioactive waste transportation to a greater degree than populations in other locations. Therefore, it is incorrect to conclude that the public effects of transporting radioactive materials to Yucca Mountain will be the same for Western Shoshone individuals as for other individuals in other segments of the population. In addition, EO 12898 specifically addresses minority and low-income *populations*, not *individuals* within segments of the population. DOE's attempt to refocus environmental justice discussions on individuals rather than on populations represents a fallacious attempt to ignore environmental justice mandates.

The DOE's conceptualization of environmental justice issues associated with American Indians regarding the YMP is not only evident in the claims made by DOE representatives in public hearings, but is also evident in the draft "Repository EIS" itself. Section J.3.6.4 of the "Repository EIS" says:

In addition to the nearly random nature of accidents that would involve the transportation of materials and people, the probability of such an accident would be small in any location, minimizing the risk at a specific location. Furthermore, because the potential accidents would be nearly random, impacts to minorities in low-income populations and to Native Americans along the routes in Nevada would be unlikely to be disproportionately high and adverse. ¹⁰³

 $^{^{103}}$ Desert Research Institute, "Native American EIS Tribal Update Meeting", (Las Vegas, NV 2000) pp. 27-8

This argument made in the Yucca Mountain EIS again exhibits fallacious reasoning by arguing that the potential for accidents would be nearly random (along transportation routes), which obfuscates the fact that the potential for accidents is much, much greater for the Shoshone, who live at the hub of the routes than at locations along a single transportation route. The apparent flaws in the DOE's reasoning did not escape the attention of American Indian participants, as shown in their claims made during a public hearing in 2003:

Initially, the EIS seems to take what it characterizes as "Native American Viewpoints" and separate this out from its interpretation of what it means to address environmental justice in minority communities. This appears to be the result of the DOE's misunderstanding of the significance of the cultural and environmental impacts occasioned by the decision to place a repository in Yucca Mountain. The Western Shoshone will be more profoundly impacted, both culturally and environmentally...than perhaps any other minority group in the nation...According to the EIS, "no disproportionately high and adverse impacts would result from the Proposed Action [construction of the HLNWR]". This is perhaps the most outrageous statement contained in the document. It reflects either complete ignorance with respect to the concept of environmental justice, or a complete lack of respect for the cultural ties of the Western Shoshone. 104

As is the case with the other "discursive arenas" or "types of claims" I examine above, the claims made by American Indian participants in the YMP regarding environmental justice are geared towards achieving greater participatory parity between actors in the process. Claims made by representatives of the DOE addressing environmental justice, on the other hand, seek to continue the current level of parity between participants in the YMP.

Specifically, the DOE, as expressed by the claims made by DOE representatives

¹⁰⁴ Eureka County pp. 131

and the Yucca Mountain EIS, attempts to reframe the issue of environmental justice around statistical evaluations of public health effects of the project on individuals, rather than on the health effects of segments of the population. This rearticulation of the environmental justice discussion ignores the cultural concerns raised by American Indian participants, as well as circumvents the intention of the relevant environmental justice mandates, which addresses populations rather than individuals.

In addition to these issues of framing and counterframing the discussion of environmental justice, American Indian claims making on this subject brings to light the ways in which this process is a continuation of past racial formation projects. The continuation of past and present racial formation processes is demonstrated in the claims made by American Indian participants in the YMP. This is accomplished through the interplay of claims for recognition and claims for redistribution that are at the heart of American Indian claims for environmental justice. This process will be the subject of the following discussion.

DISCUSSION

My analysis to this point has been restricted to American Indian claims regarding American Indian cultural artifacts and resources, government-to-government relations, funding, and environmental justice made during the course of the YMP. I have applied Fraser's (2003) normative standard of participatory

¹⁰⁵ Omi and Winant

parity to the claims made by American Indian participants and DOE representatives, and concluded that in each area the claims made by American Indian participants seek to increase the level of parity between participants in the YMP, thus increasing participatory parity, while those made by DOE representatives are directed at maintaining the current level of parity among participants. In doing so, I have abstracted from the data to create idealized types of American Indian claims related to the above categories. Abstractions, or "ideal types", of this sort have a well-established history in sociology and other social sciences, and are often developed to aid in identifying patterns and order in complex social processes.

In the present case, creating ideal typical categories of American Indian claims allows me to investigate how claims related to the folk social justice paradigms of redistribution and recognition are formed during the YMP, and how these different paradigmatic claims stand-up to the normative standard of participatory parity. The problem with focusing solely on claim formation within ideal typical categories is it obscures how the different types of claims interact with one another, and how the content of one type of claim may influence the content of another type of claim. Expanding the conceptual focus of this study to include the interactions between different types of claims not only allows me to provide empirical support for Fraser's (2003) contention that the logics of the paradigms of redistribution and recognition are consistent, but also enables me to avoid the misunderstandings that plague the DOE's interactions with American Indian participants in the YMP. More specifically, the DOE's response to

¹⁰⁶ Fraser Redistribution or Recognition

American Indian claims making consistently reflects the department's "isolated view" of all relevant issues to the YMP, which requires the consideration of any concern be done in isolation from other concerns. This stands in stark contrast to the "holistic view" of these issues expressed in American Indian claims.

American Indian claims repeatedly implore the DOE to recognize and meaningfully consider the interrelated components of these issues as expressed by American Indian participants. Identifying the most commonly expressed types of claims and exploring how they relate to the normative standard of participatory parity requires that I view each type individually (isolated view), but analyzing how the different types of claims interact and affect each other (holistic view) allows me to analyze the interconnectedness that exists between the different types of claims.

American Indian claims regarding cultural artifacts and resources and claims for government-to-government relations are predominantly, though not entirely, related to the paradigm of recognition, while claims for increased funding for American Indians are predominantly, though again not entirely, related to the paradigm of redistribution. In addition, I have noted that American Indian claims for environmental justice are neither predominantly associated with either one paradigm or the other, but rather, are simultaneously anchored in both. This conclusion, however, provides only a partial understanding of the process. For example, claims for a just distribution of funding for American Indian participants in the YMP are often expressed, or made, along with claims for recognition of American Indian cultural artifacts and resources.

...the President has just [in 2000] proclaimed close to our area two national monuments; one is the Grand Staircase National Monument, and the other one is Grand Canyon, a national monument. As these are developed, there will be more visitors. There will be more tourists. We will have more visitors from other countries. And tribes are expected to assume full responsibility for their safety when it comes to the use of our highways, our rail systems, and transportation of the waste products that are being sent to Yucca Mountain. ¹⁰⁷

The above claim made by an American Indian participant in a public hearing in 2000 concerning a draft of the "Repository EIS" shows how different types of claims are made together, each influencing the content of the other. The Grand Staircase and the Grand Canyon are important both spiritually and culturally to many American Indians in the southwest, and the development of these areas into national parks creates the possibility of further cultural and spiritual alienation. Implicit in this claim is a call for increased recognition of the cultural and religious importance of these areas to American Indian peoples, who may be adversely affected by these developments. However, the recognition component of this claim is also used to frame the claim for a more just distribution of funding for American Indian emergency response. Based on the recognition of American Indian's perceptions of responsibility for these areas, they make claims directed at a redistribution of funds for emergency response preparation. This not only shows the logics of redistribution and recognition are compatible, supporting Fraser's (2003) argument, but also shows how the content of one type of claim can influence the content of another type of claim as they are made by political actors.

¹⁰⁷ Desert Research Institute pp. 17-8

Examples of this kind of interaction between different types of claims made by American Indian participants in the YMP exist between all four types of claims I identify as the most frequently expressed in the process. This is especially true for claims regarding environmental justice issues. As I argue above, American Indian claims for environmental justice are simultaneously anchored in both the paradigm of redistribution and the paradigm of recognition. Consequently, American Indian claims for environmental justice provide insightful examples of how different types of claims influence one another, and how the logics of the two paradigms of social justice relate in the public sphere.

...the AIWS and the CGTO are limited to the level of their respective comments due to the lack of consultation associated with the EO [EO 12898]. However, the AIWS and the CGTO can express their concerns and impacts to several Indian reservations and tribal communities that may be directly impacted by the proposed shipments and the construction of an ITF [Intermodal Transfer Facility]. Most of the tribes have limited resources to adequately respond to any emergency related to transportation shipments of high-level waste and spent nuclear fuel. None of the communities are in a position nor do they desire to relocate from their aboriginal lands; the anticipated impacts will be far-reaching and long-lasting. ¹⁰⁸

This claim taken from the 1998 AIRD incorporates many of the issues associated with the different types of American Indian claims that I have identified. More specifically, this claim ties issues of government-to-government relations, funding, and American Indian cultural artifacts and resources together with environmental justice issues. With respect to EO 12898, which required all federal agencies to comply with environmental justice standards, the above claim suggests that American Indian participant's involvement in the YMP has been

¹⁰⁸ AIWS 1998 pp. 2-19

limited because of improper consultation procedures lacking government-togovernment relations. EO 12898 requires the increased participation of minority and low-income communities in environmental decision-making processes. However, the above claim argues that this participation is hindered by the DOE's refusal to recognize American Indian tribal sovereignty. In addition, the above claim highlights how an unjust distribution of money results in limiting American Indian participation, again related to the environmental justice EO 12898. American Indian claims during the YMP repeatedly express their perceptions of being underfunded for both scientific evaluation projects and emergency response. Finally, the above claim shows how all these issues are intimately bound-up with American Indian's perceptions of their cultural resources. Despite the misrecognition of their tribal sovereignty and the maldistribution of monetary resources, American Indian claims during the YMP continually insist that relocation is not an option, and their cultural and spiritual connections to this land cannot be broken.

It is clear that Fraser's (2003) normative standard of participatory parity is an appropriate standard for evaluating claims made regarding environmental justice issues and environmental decision making procedures. EO 12898 mandates increased participation of minority and low-income populations in environmental decision-making procedures, and thus, the level of parity among participants is an appropriate measure of environmental justice claims.

Additionally, environmental justice claims, in this case, through a synthesis of redistribution and recognition, show the logics of the respective paradigms are

compatible, and in fact, can be employed together in actual claims making behavior. In this way, we can see how the content of one type of claim may influence the content of another type of claim, which sheds light on the claims making process itself. For example, the above claim demonstrates how claims regarding the maldistribution of funds for emergency response can be framed by claims for recognition of tribal sovereignty. Despite the apparent intellectual and practical division that exists between the paradigms of redistribution and recognition, ¹⁰⁹ in this case, an analysis of the claims making process reveals the two paradigms can work together in an effort to advance a more just social arrangement.

The research I have presented here is constrained by at least two limiting conditions. First, data acquisition proved to be extremely difficult. Because the focus of this study was American Indian claims making during the YMP, I needed examples of American Indian claims making to analyze. I did not want to rely on second-hand descriptions of American Indian claims making that might be found in the public record. Consequently, despite the voluminous amount print, radio, and television media coverage of the YMP, I did not utilize these as sources of data for this project. The reason being, American Indian claims seldomly, if ever, appeared in these sources. When they did, they were not American Indian claims as expressed by American Indians, but were rather summaries of the American Indian's position as expressed by either journalists or government officials. Therefore, it was necessary for me to turn to governmental

¹⁰⁹ Fraser Redistribution or Recognition

sources for data, which included transcripts of YMP public hearings and the two AIRDs.

This limitation is closely related to the second, which is, I conducted this study from Central Missouri, roughly 1,500 miles from Yucca Mountain. My geographic location possibly further limited the data available to me, and further reinforced my reliance on governmental documentation. As a consequence, I was unable to identify and incorporate into my analysis the diversity of groups and individuals that comprise the DOE and American Indian participants. 110 111

The nature of this topic, and the nature of this study, including its limitations, opens many avenues for future research. For instance, future research needs to be conducted in Central Nevada, where the process of claims making regarding the YMP is taking place. Through the scientific methods of participant-observation and formal interviews, much more could be learned about the process of American India claims making as it relates to the paradigms of redistribution and recognition and the normative standard of participatory parity (Fraser, 2003).

¹¹⁰ For a thorough "network analysis" of the nuclear-industrial-complex, including the DOE, through 1990 see Jacob, Gerald. 1990 *Site Unseen: The Politics of Siting a Nuclear Waste Repository*. Pittsburgh: University of Pittsburgh Press.

¹¹¹ For example, debates over the 2003 Western Shoshone Claims Distribution Act revealed that many of the "traditional" activists, who opposed distribution of the reward issued to the Shoshones by the ICC in 1979, also has large cattle interests. Some of the "traditionals" were involved in various disputes with the Bureau of Land Management (BLM) over grazing fees on public lands, and the distribution of the award would end their claims of aboriginal land title. Other Shoshones, without cattle interests or disputes with the BLM, wanted to see the funds distributed, because it would amount to roughly \$22,000 per person. This not only shows that American Indian perspectives are complex and dynamic, but also highlights some of the problems with taking only a "redistribution" or only a "recognition" approach to issues of social justice. In the case of the Claims Distribution Act, distribution without recognition and recognition without redistribution would lead to undesirable results for some Shoshones. This further demonstrates the emancipatory aspect of Fraser's two-dimensional conception of social justice are the usefulness of her standard of "participatory parity".

Studies conducted in this way could escape the limitations of relying solely on government documentation to uncover the voices of people the government is actively attempting to marginalize.

REFERENCES

- American Indian Writers Subgroup 2005 American Indian Perspectives on the Proposed Rail Alignment Environmental Impact Statement for the U.S. Department of Energy's Yucca Mountain Project: American Indian Resource Document. U.S. Department of Energy. Las Vegas, NV. ------ 1998 American Indian Perspectives on the Yucca Mountain Site Characterization Project and the Repository Environmental Impact Statement: American Indian Resource Document. U.S. Department of Energy. Las Vegas, NV. Barber, B.R. 1984 Strong Democracy: Participatory Politics for a New Age. Berkeley: University of California Press. Best, Joel. editor 2001 How Claims Spread: Cross-National Diffusion of Social Problems. New York: Aldine de Gruyter. Best, Joel. editor 1989 Images of Issues: Typifying Contemporary Social Problems. New York: Aldine de Gruyter. Bella, D.A., A. Mostler, and S.N. Calvo 1988 "Technology and Trust" Journal of Professional Issues. Bullard, Robert. 1994 Unequal Protection. San Francisco: Sierra Club Books. ----- 1993 Confronting Environmental Racism. Boston: South End. ----- 1992 Race and the Incidence of Environmental Hazards: A Time for Discourse. Boulder, CO: Westview Press. ----- 1990 Dumping in Dixie: Race, Class, and Environmental Quality. Boulder, CO: Westview Press. Church of Christ 2007 Toxic Waste and Race at Twenty, 1987-2007: Grassroots Struggles to Dismantle Environmental Racism in the United States. New York: United Church of Christ. ----- 1987 Toxic Wastes and Race in the United States. New York: United Church of Christ. Clemmer, Richard O. 2004 "The Legal Effect of Judgment: Indian Land Claims,
 - 59

Human Organization: Fall 2004, Vol. 63: 3, pages 334-346.

Ecological Anthropology, Social Impact Assessment, and the Public Domain".

- Cole, Luke. 1992 "Remedies for Environmental Racism: A View from the Field". Michigan Law Review, Vol. 90, No. 7 pp. 1991-1997.
- Dixon, Earle C and Kathleen Peterson 2003 "Utilization of a Technical Peer Review to Support the Mission of the Nevada Test Site Community and Advisory Board" Waste Management Conference. February 23-27, Tucson, AZ.
- Desert Research Institute 2000 "Native American EIS Tribal Update Meeting". U.S. Department of Energy. Las Vegas, NV.
- Erikson, Kai 1994 A New Species of Trouble: Explorations in Disaster, Trauma, and Community. New York: W.W. Norton & Company.
- Eureka County, NV 2003 "Summary of DOE's Yucca Mountain Final EIS: Comment-Response Document". U.S. Department of Energy. Las Vegas, NV.
- Fiorino, Daniel J. 1990 "Citizen Participation and Environmental Risk: A Survey of Institutional Mechanisms" Science, Technology, and Human Values. Vol. 15, No. 2, pp. 226-43.
- Fraser, Nancy and Axel Honneth. 2003 Redistribution or Recognition? A Political-Philosophical Exchange. New York: Verso.
- Fraser, Nancy. 1997 Justice Interruptus: Critical Reflections on the "Postsocialist" Condition. New York: Routledge.
- Futrell, Robert. 2003a "Technical Adversarialism and Participatory Collaboration in the U.S. Chemical Weapons Disposal Program". Science, Technology, and Human Values, Vol. 28, No. 4, pp. 451-482.
- ----- 2003b "Framing Processes, Cognitive Liberation, and NIMBY Protests in the U.S. Chemical-Weapons Disposal Conflict". Sociological Inquiry, Vol. 73, No. 3, pp. 359-386.
- Gamson, William A., Myra M. Ferree, Jurgen Gerhards, and Dieter Rucht 2002 Shaping Abortion Discourse: Democracy and the Public Sphere in Germany and the United States. Cambridge University Press. Cambridge, UK.
- Godsil, Rachel. 1991 "Remedying Environmental Racism". Michigan Law Review, Vol. 90, No. 2, pp. 394-427.
- Gould, Kenneth. 1998 "Response to Eric J. Krieg's 'The Two Faces of Toxic Waste: Trends in the Spread of Environmental Hazards'". Sociological Forum, Vol. 13, No. 1, pp. 21-23.

- Habermas, Jurgen 1987 The Theory of Communicative Action Volume Two: Lifeworld and System: A critique of Functionalist Reasoning. Beacon Press. Boston, Mass.
- ----- 1970 Toward a Rational Society: Student Protest Science and Politics. Beacon Press. Boston, Mass.
- Hines, Revathi. 2001 "African Americans' Struggle for Environmental Justice and the Case of the Sintech Plant: Lessons Learned from a War Waged". Journal of Black Studies, Vol. 31, No. 6, pp. 777-789.
- Mohai, Paul and Robin Saha 2006 "Reassessing Racial and Socioeconomic Disparities in Environmental Justice research". Demography, Vol. 43, No. 2, pp. 383-99.
- Hooks, Gregory and Chad Smith 2004 "The Treadmill of Destruction: National Sacrifice Areas and Native Americans". American Sociological Review, Vol. 69, No. 4, pp. 558-75.
- Hunter, Susan and Kevin Leyden. 1995 "Beyond NIMBY: Explaining Opposition to Hazardous Waste Facilities". Policy Studies Journal, Vol. 23, pp. 601-619.
- Ishiyama, Noriko. 2003 "Environmental Justice and American Indian Tribal Sovereignty: Case Study of a Land-Use Conflict in Skull Valley, Utah". Antipode, Vol. 12, pp. 119-139.
- Jacob, Gerald. 1990 Site Unseen: The Politics of Siting a Nuclear Waste Repository. Pittsburgh: University of Pittsburgh Press.
- Krieg, Eric. 1998 "The Two Faces of Toxic Waste: Trends in the Spread of Environmental Hazards". Sociological Forum, Vol. 13, No. 1, pp. 3-20.
- Laurie Webb & Associates 2004 "Rail Alignment Environmental Impact Statement Tribal Interactions Meeting". U.S. Department of Energy. Las Vegas, NV.
- ------ 2001 "Hearing on the Supplement to the Draft Environmental Impact Statement Yucca Mountain Project". U.S. Department of Energy. Las Vegas, NV.
- McKee, Alan 2003 *Textual Analysis: A Beginner's Guide*. Sage Publications. Thousand Oaks, Ca.
- Nevada Agency for Nuclear Projects. 2002 A Mountain of Trouble: A Nation at Risk: Report on Impacts of the Proposed Yucca Mountain High-Level Nuclear Waste Management. Reno, NV: Office of the Governor.

- Neuman, W. Lawrence 2004 *Basics of Social research: Qualitative and Quantitative Approaches.* Pearson Press. New York, NY.
- ----- 1991 Social Research Methods: Qualitative and Quantitative Approaches. Pearson Press. New York, NY.
- O'Connell, John D. 2002 "Constructive Conquest in the Courts: A Legal History of the Western Shoshone Lands Struggle 1861 to 1991". Natural Resources Journal: Vol. 42, pages 765-799.
- Omi, Michael and Howard Winant 1994 Racial Formation in the United States From the 1960s to the 1990s. Routledge Press. New York, NY.
- Orlando, Caroline L. 1986 "Aboriginal Title Claims in the Indian Claims Commission: *United States V. Dann* and its Due Process Implications". Boston College Environmental Affairs Law Review: Vol. 13:241, pages 241-280.
- Pastor, M., J. Sadd, and J. Hipp 2001 "Which Came First? Toxic Waste Facilities, Minority Move-In, and Environmental Justice". Journal of Urban Affairs, Vol. 23, pp. 1-21.
- Pijawka, David K. and Alvin H. Mushkatel 1991 "Public opposition to the Siting of the High-Level Nuclear Waste Repository: The Importance of Trust". Policy Studies Review. Vol. 10, No. 4, pp. 180-94.
- Rowe, Gene and Lynn J. Frewer 2000 "Public Participation Methods: A Framework for Evaluation" Science, Technology, and Human Values. Vol. 25, No. 1, pp. 3-29.
- Rusco, Elmer R. 1992 "Historic Change in Western Shoshone Country: The Establishment of the Western Shoshone National Council and Traditionalist Land Claims". American Indian Quarterly: Vol. 16:3, pages 337-361.
- Saha, Robin. And Paul Mohai 2005 "Historical Context and Hazard Waste Facility Siting: Understanding Temporal Patterns in Michigan". Social Problems, Vol. 52, pp. 618-48.
- Stoffle, R.W., David Halmo, John Olmsted, Michael Evans 1990 *Native American Cultural Resource Studies at Yucca Mountain, Nevada*. Ann Arbor: University of Michigan Press.
- Stoffle, R.W., M.W. Trangott, C.L. Harshbarger, F.V. Jensen, J. Michael, and P. Drury 1988 *Perceptions of Risk from radioactivity*. Ann Arbor: University of Michigan Press.
- Szasz, A. 1994 *Ecopopulism: Toxic Waste and the Movement for Environmental Justice*. Minneapolis: University of Minnesota Press.

- Urban Environmental Research, LLC. *Tribal Concerns About the Yucca Mountain Repository: An Ethnographic Investigation of the Moapa Band of Paiutes and the Las Vegas Paiute Colony*. Scottsdale, AZ: Clark County Department of Comprehensive Planning.
- Van Gerven, Jesse 2007 "Completing the First World Political Ecology Revolution: The Need to Look Back as well as Up". Presented at the annual meeting of the Midwest Sociological Society. Chicago, IL.