COPPER, CONTROVERSY, AND CONTRAINTS ON ENVIRONMENTAL IMAGINARIES AT ROSEMONT VALLEY, ARIZONA

By

RORY JAMES ISBELL

A Thesis Submitted to The Honors College

In Partial Fulfillment of the Bachelor's degree
With Honors in

Geography

THE UNIVERSITY OF ARIZONA

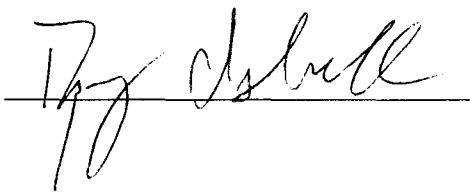
May 2009

Approved by:

Dereka Rushbrook, Ph.D.
Geography and Regional Development

STATEMENT BY AUTHOR

I hereby grant to the University of Arizona Library the nonexclusive worldwide right to reproduce and distribute my thesis and abstract (herein, the "licensed materials"), in whole or in part, in any and all media of distribution and in any format in existence now or developed in the future. I represent and warrant to the University of Arizona that the licensed materials are my original work, that I am the sole owner of all rights in and to the licensed materials, and that none of the licensed materials infringe or violate the rights of others. I further represent that I have obtained all necessary rights to permit the University of Arizona Library to reproduce and distribute any nonpublic third party software necessary to access, display, run, or print my thesis. I acknowledge that University of Arizona Library may elect not to distribute my thesis in digital format if, in its reasonable judgment, it believes all such rights have not been secured.

SIGNED: 

Abstract

The Rosemont Valley, Arizona, is the location of a proposed open-pit copper mine, and consequently the source of high profile local controversy. Two distinct environmental imaginaries are (per)formed: by the mining company that authored the proposal and a local coalition of anti-mine environmentalists. These environmental imaginaries, though formed in the process of seeking different outcomes to the controversy, employ similar rhetoric, and develop surprisingly similar discourses, by means of a dialectical exchange between personal ideologies and already-available popular discourse. The spectrum of human-environment relationship ontologies is limited to the profit-driven sustainable development discourse, preventing alternative, more ecologically and socially conscientious environmental imaginaries from gaining widespread validity in the controversy. Despite the participants' individual ideologies and other existing environmental imaginaries, the public discourses of the two groups discussed here construct the human-environment relationship in purely anthropocentric terms.

Keywords: political ecology, environmental conflict, social construction of nature, environmental imaginary

Introduction

Many of Arizona's schoolchildren in the twentieth century were given an easy way to remember the foundations of their state's economy: the 5 C's, acronym for copper, cotton, cattle, citrus, and climate. These were the canon of Arizona's prosperity, the keys to maintaining the state's relevance in a competitive national and global market, and the state's economic mainstays and sources of pride. In twenty-first century Arizona, things are different:

there has only been one new copper mine in Arizona since the mid-1970s and schoolchildren hear about the “5 C’s” less often, if ever. Just as the South's tobacco, the Northeast's steel, Appalachia's coal, and Texas's oil boomed and busted, Arizona's 5 C's have been challenged by new modes of production. Arizona’s “5 C’s” are now accompanied by diversified manufacturing, a large service sector, and high-tech research, all major contributors to the state’s economic output, and proposals for traditional, resource extractive and intensive industries are often met with new social and political contentions. No longer is environmental disruption for the sake of economic development accepted as willingly in the arid Southwest.

Conflict over the use of the environment is no new phenomenon in the United States. For years, specific sets of knowledge concerning the environment have cycled through the modern European colonial saga and have materialized in conflicts over appropriate uses of land and resources. Peet and Watts (1996) identify these sets of knowledge as deriving from “regional discursive formations” and forming into “environmental imaginaries” (Peet and Watts 1996), which McGregor (2006) explains are the “ways in which a society commonly imagines nature, or how the raw material of existence is transformed, interpreted and conceptualised within the collective (un)consciousness of society” (McGregor 2006: 594). When differing environmental imaginaries butt heads, debates over the use of nature's resources occur from the local to international scale, and are usually saturated with spatially and temporally fugacious politics. User-defined trajectories of the human-environment relationship are developed within these politics, given material merit for a time, and eventually contested at points of ideological difference, interacting in a multiplicitous dialectic. Sometimes contestations succeed in replacing old discourse with new - evidenced in the United States by the creation of National

Parks and the naturalization of a “wilderness” narrative (Quigg 1978) - and gain their own authority. Often these human-environment ideologies are eventually challenged (see Cronon 1996) within contexts of hegemonic discourse in a constantly evolving dialectic of power and knowledge. Thus dominant environmental imaginaries, those notions which guide the human relationship with the environment, are dynamic and they change with popular ideologies and politics of the time and place. Human-environment relationships are cyclically inscribed and naturalized into cultural discourse just as democracy is in politics (Harvey 2005), as heteronormativity is in sexuality (Foucault 1978), and as positivism is in scientific logic (Latour, Woolgar 1986).

Human-environment relationship debates and their resulting cultural normalization of environment discourse have a particularly rich history in the western United States. Historically, the West has been a space subject to both Frederick Jackson Turner’s “manifest destiny” and John Muir’s preservation dream. This land beyond the Mississippi has again and again served as classic stage for America’s idealized independent, entrepreneurial, classic liberalism spirit (its rugged individualism) from the gold rush, to the cattle boom, uranium prospecting, and now wind, solar, and geothermal farming. These varying political economy catalysts have spurred first many politically framed ecological degradations (for example, the role and business of the Bureau of Reclamation) and then ensuing contentions and conflicts over the American West and its natural resources’ role in the American saga. Since Carson's *Silent Spring* (1962), the momentum of the environmental movement has episodically increased. Environmental groups challenging natural resource development plans has become increasingly more frequent and status quo in the late twentieth and early twenty-first centuries (Shabecoff 2003), struggling to

establish new environmental knowledge and inscribe it into popular discourses, with the West often playing host for the continuing battle between those fighting to establish new environmental knowledge and those fighting to maintain traditional resource extraction profiteering (see Wood and Williams 2003).

The Rosemont Valley, Arizona

This paper focuses on one particular battle for power/knowledge in environmental imaginaries. An environmental issue of recent public controversy and debate in southern Arizona has been the proposed Rosemont Mine in the Santa Rita Mountains about 30 miles south of Tucson (Figures 1 and 2). In July of 2007, the Coronado National Forest received a Mine Plan of Operations ("MPO") from Rosemont Mining Company, a subsidiary of Augusta Resource Corporation, headquartered in Vancouver, British Columbia, Canada. This is Augusta's first mining venture, and without previous capital in the mining industry, the Rosemont project necessitates extensive external investment for the approximately $782.4 million Augusta estimates for the project's total capital costs (www.rosemontcopper.com). According to Augusta's MPO, the open pit copper, molybdenum, and silver mine would sit on approximately 4,415 acres of land in total, including of 995 acres of private land, 3,330 acres of land administered by the National Forest, 15 acres of land administered by the Bureau of Land Management, and 75 acres of Arizona State Land Department State Trust land (Figure 1). All private land on the proposed site has been acquired by Augusta, and includes implements of historic mine operations, old ranching structures, and sites of pre-European Archaic and Hohokam settlement. The 4,415 acres of the proposed site range in elevation from 4,400 to

6,300 feet above sea level and support flora and fauna typical of Arizona's high desert grasslands (Figure 3). The area is topographically variable, with many substantial drainages that feed the "environmentally sensitive" Davidson Canyon in the Cienega Creek watershed (MPO summary). The General Mining Act of 1872 was passed to promote the development and settlement of publicly-owned lands in the western United States and it established mining as the preferred use of federal lands above other interests (Huber and Emel 2009). These policies remain in effect today but with the added stipulations of the National Environmental Policy Act (NEPA). On March 2, 2008, Coronado National Forest managers determined that Augusta had submitted to them sufficient materials to begin NEPA analysis of the proposal. This process entails a series of iterative public input windows and drafts of an Environmental Impact Statement ("EIS"), which must contain evaluation of alternatives to the project, including a "no action" alternative. Upon completion of "all applicable statutes, regulations, policy, and directions" specified in NEPA procedure, Coronado National Forest has the final decision as to whether the mine will be implemented (Mine Plan of Operations Summary). However, the extent to which the Forest Service must take into account the opinions of the public in its decision-making in the NEPA process is not specified.

The largest and most active oppositional organization concerning the proposed mine is the nonprofit coalition Save the Scenic Santa Ritas (SSSR). The group was originally formed by members of the Sierra Club, Tucson Audubon Society, The Wildlands Project, the Sonoran Institute, League Of Conservation Voters, and the Wrong Mountain Wildlife Preserve along with other local and regional residents, with the aim of preventing a proposed 1996 land exchange

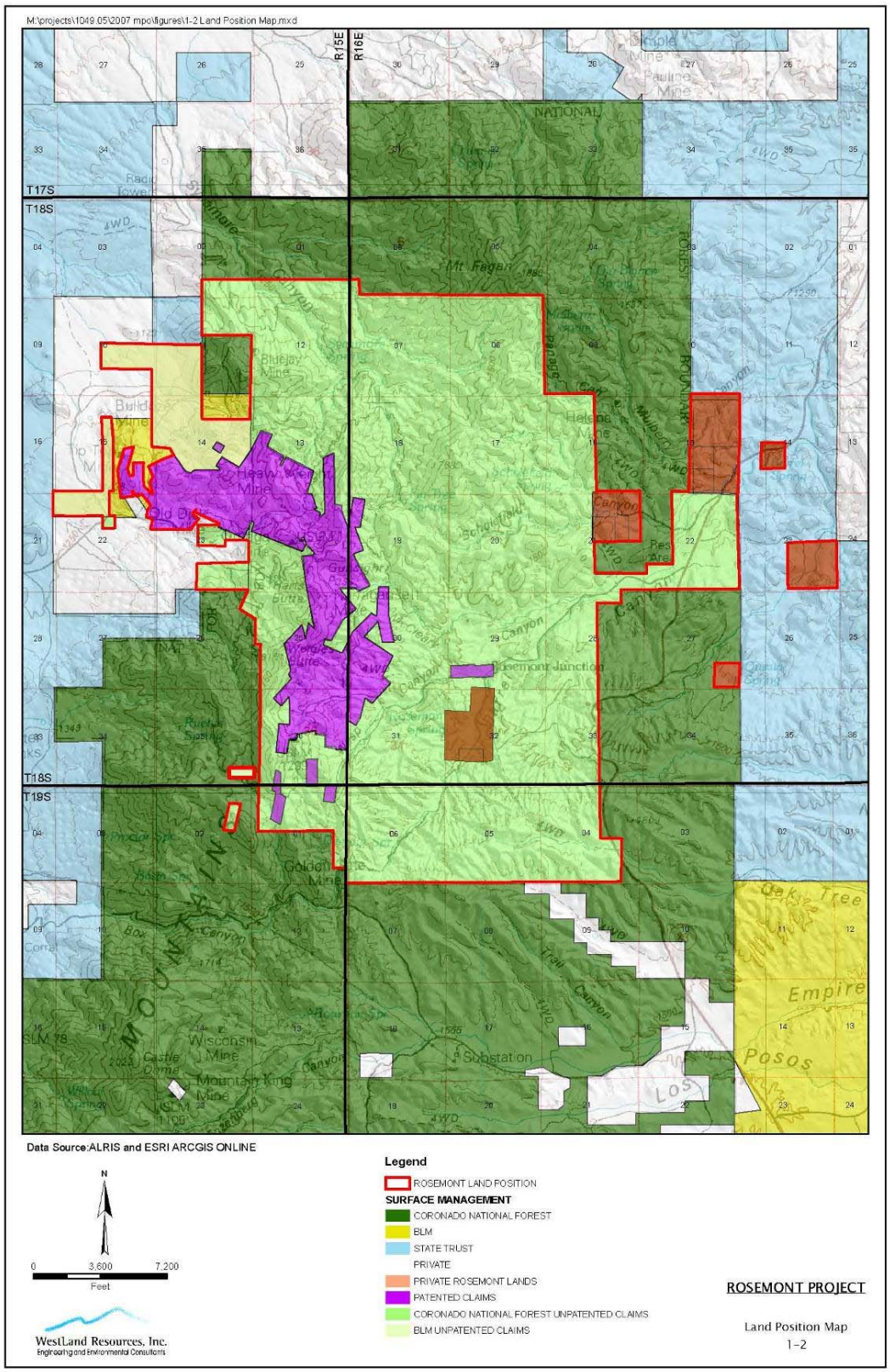


Figure 1. Rosemont project land position map (www.scenicsantaritas.org/photos/Augusta%20Land.jpg)

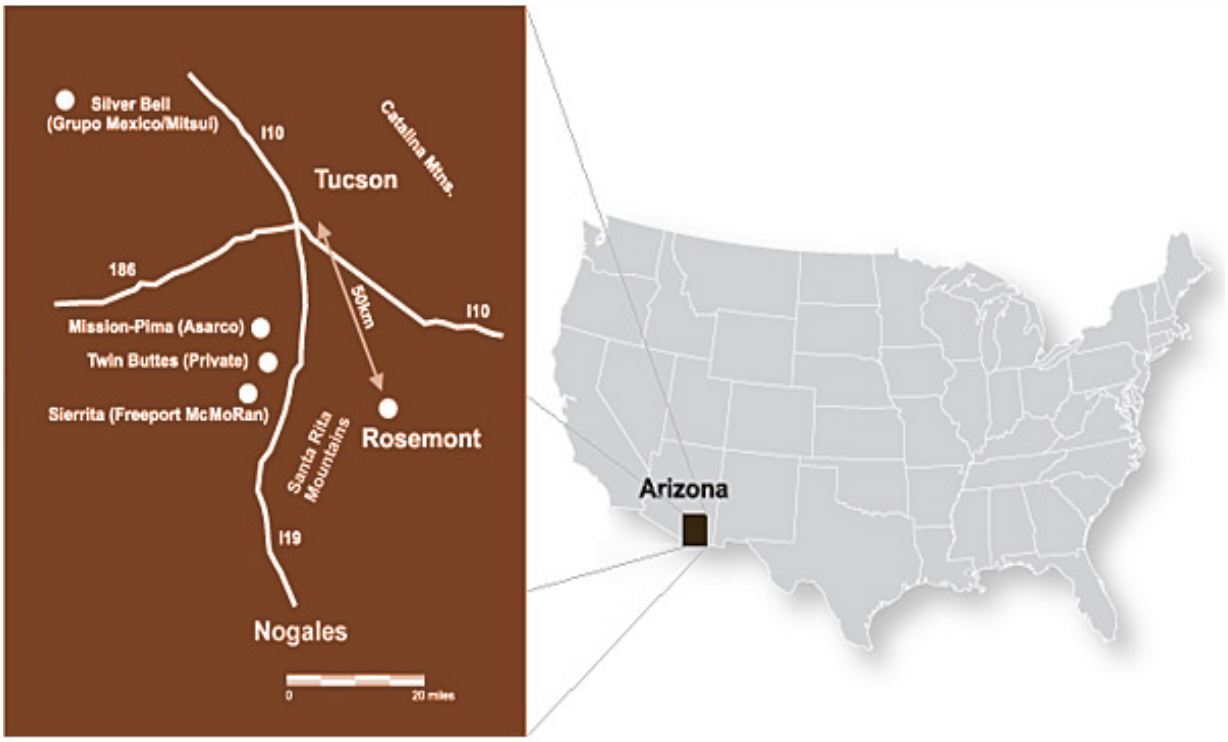


Figure 2. Rosemont site location (www.rosemontcopper.com/PlanOfOperations.asp)

Figure 3. The Rosemont Valley. (www.scenicsantaritas.org/photos.asp#rosemont)

between Coronado National Forest and ASARCO, a multinational mining corporation with an extensive history and many active mining projects in Arizona. The land exchange was prevented, but the group became active once again in 2005 when Augusta bought the historic Rosemont Ranch property and subsequently proposed its open pit mine. The group lists its short-term goal as preventing any mining from occurring in the Santa Ritas and adjacent mountain ranges, with a long-term goal of obtaining "permanent protection by supporting withdrawal of the Forest Service lands from mineral entry, and protecting the private lands from mining" (SSSR website). SSSR has also worked closely with the local congressional representatives, gaining their support and lobbying for a bill to reform the 1872 General Mining Act, and building a larger general political campaign which takes at the least partial credit for the fact that positions of all of southern Arizona's elected officials and governing bodies[1] are decidedly against the mine (SSSR website).

Political ecology and anthropocentrism

Geographers have pursued many methods for exploring and explaining human-environment relationships. This history of this human-environment examination is riddled by fundamental debates, such as those between theory and empirics (Turner and Robbins 2008) or constructivist claims and deep ecology (Braun and Castree 1998). Several key methodologies resulting from these debates are particularly helpful in examining the Rosemont mine controversy.

Smith (1984) locates the omnipresent, unavoidable guiding force in modern human-environment discussion: "More than any other identifiable experience, the emergence of

industrial capitalism is responsible for setting contemporary views and visions of nature." This realization is first and foremost. Most current human-environment debates are inspired by capitalism's onslaught on the natural world, and its influence in paramount. With this point established, the methodologies of political ecology are a logical development. Political ecology, as a term, derives from a general ecology from the natural sciences, along with 'political economy', the field of study with Marxian origins that seeks to relate economic conditions, particularly social classes, to political discourses (Paulson and Gezon 2004). The result of this conceptual marriage is to explain ecological conditions via political economy causality. Thus the field of political ecology was initially connected with the Marxist framework. Blaikie and Brookfield (1987) claim that "[political ecology] combines the concerns of ecology and broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself" (Blaikie and Brookfield 1987: 17). In this dialectic, relations between political power and its subjects shape varying human-environment relationships. Paulson and Gezon (2004) see political ecology work as challenging "dominant interpretations of the causes of environmental degradation and contest(ing) prevalent prescriptions for solving such problems" (Paulson and Gezon 2004: 17). These initial conceptualizations of political ecology rely heavily on structural narratives, i.e. Marxist prescriptives, which frame ecological conditions as primarily contingent on political and cultural discourses. While these explanations of the human-environment relationship may have spawned the beginnings of political ecology as a critical discipline, more recent critiques of the field's methodology have produced more culturally sensitive poststructuralist viewpoints (Robbins 2007). The human-environment relationship is to many a

myriad set of human-environment relationships, each differentiated from the others by local histories, local ecologies, local and extralocal political structures, subjectivities, and postcolonial residues, rather than the result of one overarching discourse. As effective as political ecology has been and can be in deciphering these complex human-environment relationships, it should not be perceived as offering a general narrative explanation to the human-environment relationship. Rather its contributions are most useful when combined with various other event-unique human-environment themes into more nuanced and useful explanations. Political ecology, then, with a healthy dose of poststructuralism's multiplicitous sources of discourse, is conceptualized in this paper as the *presence* of causal themes as objects or components in case studies more than any consistent theoretical or methodological *approach* to them (McCarthy 2002, original emphasis). Political ecology shows us how the controversy surrounding the proposed Rosemont Mine is the product of the collective histories of the actors involved (the mining company, the opposition, the policy that governs the mine proposal). How the land of the Rosemont Valley will be used is subject to the ideologies of its stewards and the political structures they operate within, a point that hints at the very real, very immediate material power of the controversy's actors and their discourses**.**

Much recent debate in political ecology and human-environment studies has been over the extent to which nature is socially constructed (Cronon 1996, Braun and Castree 1998, Castree 2002, Demeritt 2002). Robbins (2004) explains how social constructions of nature can be hastily operationalized in environmental conflicts with resulting problematics, where "struggles over ideas about nature, in which one group prevail not because they hold a better or more accurate account of a process... but because they access and mobilize social power to

create consensus on the truth," (Robbins 2007: 176) an observation that identifies how standpoints in human-environment conflicts are often situational and socially constructed. Cronon (1996) uses a socially constructed nature to refute the American focus on wilderness, arguing that the idea of wilderness is not a reference to a real space but rather an illusion of a virgin space "that supposedly existed before we began to leave our marks on the world," a construction of Western society that serves as an alibi for many geographers in their case against capitalism's marring of the environment. While these constuctivist arguments are a valuable and attractive tool in finding truth in human-environment relationships, they run the risk of dominating the nature conversation and becoming, ironically, a type of structural argument that they were formed to critique. When all human relationships with the environment can be refuted as illegitimate social constructions, the nuance and situationality of each of these relationships is lost. Sensitive approaches in political ecology work (Sundberg 1998, Agrawal 2005) recognize both large political causalities and human constructions of knowledge about nature within and outside of the political arena.

Demeritt (2002) shows how **"**the use of construction-as-refutation rhetoric is just the latest fashion in a long-standing tradition of speaking truth to power" (Demeritt 2002: 769). Robbins (2004) also warns that the constructivist approach to political ecological conflicts "makes the symbolic systems of human sovereign over all other reality, apparently disabling empirical investigation in traditional environmental science." In the same vein, and condemning the lost potential geographers have in influencing policy, Castree (2002a) argues that "geographers might do well to think more systematically about who they want to influence and how when it comes to helping create inhabitable environments" (Castree 2002a: 362). As

provocative as social contructivist explanations can be, theory-soaked and often terra firma-detached interpretations can sometimes blur real issues happening on the ground. When undeniable environmental disruption or social injustices occur or are imminent, research must aim at soliciting change. Robbins cites Cronon (1996), where the legitimacy of the wilderness concept is questioned, as particularly problematic, arguing that the rejection of wilderness undermines environmentalism's conservation and preservation efforts, and throws an unnecessary wrench in otherwise positive environmental work (Robbins 2004).

Environmental imaginaries and ecocentrism

Other discussion vectors in human-environment research and theorization, engaging with the contributions and shortcomings of social constructivism, take on less anthropocentric and more ecocentric principles (McGregor 2004). So-called “deep ecologists” have sought to denaturalize the modern binary separating humans and nature (Braun and Castree 1998). Whereas the constructivist tradition often claims that the environment as an entity separate from the realm of humanity is a false dichotomy, others argue for a more “responsible” human-environment narrative asserting humanity as participant in a 'deep ecology' of all material things. Kovel (2003) agrees that nature is a signified phenomenon, and thus humanity cannot consider itself an equal part of nature. Instead, he argues the case for a “fully emancipated ecological society” that fully recognizes its otherness from nature, and uses this knowledge to produce a respect for nature and recognizes humanity's role as steward of nature. Kovel concludes that the extreme signification and otherness of nature is an enabler of the fetishism that drives capitalism, and his proposed recognition of humanity's separateness from nature

coincides with synthesis of a new mode of material production, following the Marxist framework. Despite its often less pedantic analytics that rely on essentialist conceptions of spirituality and connectivity (as compared to the poststructuralists' social construction focus), deep ecology's ecocentrism yields a refreshingly holistic perspective (McGregor 2004).

The world, human and natural, is not, unfortunately, built upon holistic ecocentric principles, and explanations in human-environment research cannot avoid the historically systematic and focused encroachment of the capitalist and his machinations into most every nook and cranny of the earth. The environment becomes commodified through capitalism's logic of exchange value. All human activity under advanced capitalism presupposes the possibility for the environment to have a separate and autonomous status, and it is always-already in relation to discourses of culture and political economy (Braun and Castree 1998, Baudrillard 1975). Work on neoliberalism and the environment, which highlights how nearly all of earth's material resources are subject of political economy systems, effectively illustrates this point (Heynen, McCarthy, Prudham, and Robbins 2007; McCarthy 2002). The extension of capitalism to the global scale, made triumphant by neoliberal discourse, encroaches on not only labor, markets, and resources, but also becomes embedded in the seemingly autonomous materialities of bodies and the environment (Foucault 1978, Harvey 2007).

Analyses of human-environment relationships and ideologies have walked a tricky line between reliance on certain explanations, i.e. structural explanations or explanations based on social constructivism and their sometimes resulting stoicism towards the people and places victim of environmental degradation (Bridge 2000; Castree 2002a). Any new specific framework for analysis should be appropriated with caution, as differential inequalities between people

and environmental quality are easily overlooked by the power/knowledge gained by certain environmental discourses, many of which are born in the academic world. One useful and sensitive method for analyzing human-environment relationships is the use of "environmental imaginaries" (Peet and Watts 1996) introduced earlier. In this conceptualization, the language used to describe the environment carries with it a certain set of discourses which predetermine human-environmental conflict into certain parameters, most often the parameters of capitalism and "sustainable development." An environmental imaginary is the product of the knowledges selected by people from the multiplicitous dialectic of political, social, and environmental narratives. McGregor's conceptual framework of environmental imaginaries and their associated discourses is particularly useful in identifying current popular trends in popular human-environment explanation approaches (Appendix A).

With recognition of the social constuctivist argument's problematics and pitfalls, this research seeks not to just deconstruct the environmental imaginaries of the participants in the Rosemont mine controversy, but to identify the discursive and material effects of their dominance in the controversy and discuss the material implications. This does entail a denaturalizing of the popular human-environment ideologies in the Rosemont mine conflict, and therefore the social constructedness of human-environment relationships remains a useful concept, but only when seeking an alternative, rather than a simple refutation of human cognizance and signifacation. Bakker and Bridge (2006) and their focus on the material in human-environment relationships provides an inspirational model for resignifying resource geographies with a more responsible substantive aim. A key research motivation is to identify not the status of nature in Western culture, but rather the status of Western culture in nature,

and thereby calling for a more ecocentric environmental imaginary in the Rosemont Mine controversy.

Finding the ecology in the political

The use of the "case study" as data source remains a relevant and foundational tool in human-environment research (Punch 2005). It is from the great pool of cases that we are able to draw our conclusions and attempt to generalize some of our analysis. Certain of these case studies are particularly relevant to the Rosemont case, providing example of how local significations of nature are formed and the methodologies used in their identification and their deconstruction. Stolle-McCallister (2004) argues that when facing environmental conflicts of interest, local peoples can contingently choose from the wide array of environmental discourses: "people negotiate and appropriate those explanatory and prescriptive narratives that describe their situation and provide possible solutions to their problems" (Stolle-McCallister 2004: 210). This work brings to light the complexity of environmental conflicts and the hybrid forms of human-environment relationships that activists use. Environmental conflicts are not limited to a specific number of human-nature ideologies present, but often utilize an assortment of variously discoursed epistemologies drawing from combinations of modern Western environmentalism, indigenous knowledge, capitalist perspectives, institutional policy, etc. Expounding on the marginalizing tendencies of two-sided environmental conflicts, Willems-Braun (1997) discusses the appropriation of nature as an object by postcolonial discourse in British Columbia, Canada. He argues that every environmental conflict that debates the human-environment relationship results in an unnatural and unfair objectification of nature,

"this is because speaking for ‘nature’ is always simultaneously an enframing of ‘nature.’" The modern human-environment conversation, for Willems-Braun, takes a poststructuralist narrative, showing us that the very signification of nature is an act subject to the discursive tendencies of the people describing it. Buried with other cultural groups’ epistemologies about nature is nature’s own epistemology; its sovereign agency is lost when described within European postcolonial discourse.

Sundberg (1998) adds another valuable case study to the discourse analysis in environmental conflict. She seeks to discover how the histories of the various environmental groups working to protect forests in Guatemala, which includes both indigenous and Western environmentalist groups, manifest their discourses into real conditions on the ground. These environmental groups, though claiming to support local indigenous use of the forests, often simultaneously marginalize local traditions and livelihoods by deeming them inappropriate for sustainable forest use. Sundberg's research illuminates the material and social effects of narrow environmental discourse.

Traditionally, political ecology has sought to explain the effects of political and cultural structures and conditions on the environments of the third world. It is there in the exploitation of non-westerners and their landscapes by Western capitalism that the tools of political ecology have most effectively deconstructed human-environment relationships and illuminated environmental injustices. Back in the first world, however, equal or even greater environmental perversion at the hand of human activity occurs under just as nuanced and profound ideological systems. James McCarthy (2002) makes a compelling case for the application of the critical political ecological method to conditions of the first-world, a methodology that will “explore the

ongoing nature of capitalist development, emphasizing that new rounds of investment, revolution of means and relations of production, and other associated dynamics are guaranteed to continue to disrupt temporary coherences in social relations, the built environment, and human-environment relations" (McCarty 2002: 1298, original emphasis).

Cases showing the shifting role of the environment in the contemporary globalized economy demonstrate the dynamic quality of human-environment imaginaries and their discursive consequences. Walker and Fortmann (2003) chart the shifting power and rights to landscapes as urban development encroaches on rural areas, highlighting the effect of new modes of production and subsequent conflict amongst landscape inhabitants, particularly between generations. In their analysis of Arizona grassland management policy, Brogden and Greenberg (2003) show how sometimes new modes of production that are perceived as politically progressive and more environmentally conscious than their predecessors are often more ecologically harmful. In their case, cattle ranchers are shown to have been villainized by environmentalists, to the possible detriment of biodiversity, in favor of suburban development that is framed as 'green' or 'sustainable'. These cases demonstrate how attitudes towards proper environmental management are easily made normative, despite the logic of less popular environmental imaginaries or those perceived as outdated.

With so many methods and critiques for analyzing how social conditions affect environmental conditions, how is the daunting task set forth by human-environment research to be approached? Can social conditions and the environment even be separated or are they two parts of one terrestrial deep ecology? Many researchers become lost in the theoretical and methodological melee, and it seems the main struggle in human-environment work is

developing a coherent research framework. This quandary can be answered in terms of close examination of particular case studies, as each example of human-environment research presents its own unique variables, including history, people, policy, environment, social network, and power structure. The Rosemont Mine controversy presents a plot of land on which two dominant environmental imaginaries are constructed by participants, by both the deployment of individuals' values and the formation of group discourses. The work and outcomes of their struggle will yield explanation to these questions of *how* social power and knowledge become reified at this particular site. This paper examines the rhetoric of these pro-mine and anti-mine camps in the controversy and identifies the environmental imaginary (Peet and Watts 2006, McGregor 2006) that each presents, and finally explores the effects of these environmental imaginaries on how nature is conceived, constructed, appropriated, and ultimately chained to narrow social interests.

Sustainable Mining and Sustainable Environmentalism

On the home page of its website, Augusta's first goal is to establish the absolute necessity of copper mining. Copper is made very personal to the audience, "Without copper, you wouldn't be visiting this website, because without copper, computers wouldn't exist." Immediately Augusta seeks to eradicate itself as the sole responsible party for copper use and subsequent copper mining, and transfer some of their accountability as resource miners to all copper users. This serves a very rhetorically discursive end. The audience's very reading of Augusta's website becomes a performative act: by seeking information about Augusta's copper mining, one becomes a reason *for* copper mining. The home page continues, "Copper truly is

essential to our modern way of life, 'the cornerstone of today's world.'" Augusta promulgates the extraction of copper as requisite for modernity, and thereby requisite for ideals of the current forms of common sense and normativity. The environment and its mineral deposits are immediately injected with the discourse of capitalist modernity, and immediately made subjects of an environmental morality that seeks better and greener futures for the world via continued, if sustainable, development. By continually embedding the environment in this powerful discourse, Augusta makes it difficult to see any alternative future for the copper deposits beneath the Rosemont Valley aside from aiding the progress of capital accumulation and development. Rather than accepting a portrayal as a despoiler of the natural environment, Augusta frames itself as enabler of our modern way of life, and by extension, enabler of all of humanity's wellbeing.

In a promotional pamphlet, Augusta continues to describe copper's continued growth "in importance to our way of life" and lists the many high-tech and alternative energy applications of copper. In trying to capitalize on current popular discourses of sustainability and sustainable development, Augusta again frames the environment as a private resource to capitalism's modern undertaking to commodify and profit from all. In Augusta's rhetoric, copper exists solely to serve the ambitions of the industrialized world economy, to aid in the continued perseverance and ingenuity of Western society. Copper will build photovoltaic cells and wire wind energy production systems that will power a utopian human future. This language frames copper and the environment as supplements to technological development, economic development, and ultimately the maintenance of highly consumptive capitalism (though constructed as less consumptive by the lexicon of sustainable development). The

environmental imaginary formed here sees nature as subject of the human project, and clearly falls into the “sustainable development” environmental imaginary category (McGregor 2004), one which believes that “ongoing development can be sustained if based on principles of environmental management” and sees “nature as resource requiring expert human management” (McGregor 2004: Table 1).

The argument of activist group Save the Scenic Santa Ritas, though its members seek a drastically different outcome in the controversy, is bounded by similar discursive parameters in their attempt to secure the Rosemont Valley from resource extraction. A 2008 SSSR pamphlet states that

> “the income to Pima and Santa Cruz Counties from recreation, tourism, and birdwatching far exceeds the economic benefits from mining. Scenic, pristine landscapes, clean air and water, wildlife, and other environmental attractions foster long term residency, tourism, and related industries.”

SSSR paints a picture here of a certain type of southern Arizona that is sustained by continued development. It supports a continued population (“long term residency”) on southern Arizona's lands, wants non-locals to travel to use southern Arizona's lands, and wants the industrial mechanisms of these land uses (“related industries”) to themselves be located on southern Arizona's lands. What they don't support is the industry of copper mining in the Rosemont Valley. Analogous to Augusta's appropriation of “modernity” and “sustainability”, SSSR appropriates a common notion of a similar, but somehow more environmentally responsible, modernity. SSSR's environmental imaginary also includes continued development, a result that will occur by embedding the environment in its unique brand of sustainable development

discourse. SSSR does not describe the environment as a priceless entity to be protected at all costs, but a source of "attractions" that sustain a privileged lifestyle in southern Arizona.

In the same 2008 promotional pamphlet, SSSR describes current "extensive recreational use of the Santa Ritas by hikers, hunters, rock hounding groups, bicyclists, equestrians, off-road enthusiasts, and birders," all of which would be "drastically curtailed" by mine activities. The environment is again not an autonomous entity safe from societal control, but rather an external social construction and a subject of a modern political economy. The public's general knowledge of the environmental movement makes the certain uses of land listed by SSSR normative, or normative at least to the expectations of green-minded Americans. SSSR uses the knowledge and power of the environmental movement to naturalize a very particular human-environment imaginary. But the lifestyles endorsed here are arguably the standard consumptive type stereotypical of environmentally destructive American excess and entitlement. One board member of SSSR places conservationist ideology in terms of value for residents of nearby areas:

> "One of the things we are running out of all over the world and in the US are natural areas, and these are to be treasured and preserved. I think it's more valuable for us to have that sense of wildness, that natural area, and particularly one that happens to be close to a city where people can really actually appreciate it. I think in the long run that's far more valuable than copper."

Here, the open land at the Rosemont Valley is described as something more valuable than the subsurface copper. But who is the beneficiary of this value? Is the environment itself worthy of protection from mining? Or is it an important commodity that will sustain an economic future

for humans of the region? Though the private ownership proposed by Augusta is opposed by SSSR, some members condone a profitable relationship with the environment, if not by the same means as Augusta. The same SSSR board member continues:

> "I think the number one solution that I think all of us would like to see is some kind of public ownership of the land, a preferable one would be if Pima County could take it on as a park or a natural area, but we're not rigid on that. The original proposal when the land was sold to a developer was for scattered home sites, and I think if that's done right, that could be a possibility too."

For Save the Scenic Santa Ritas, the proposed Rosemont Mine is to some extent imagined as a NIMBY ("not in my backyard") event. Certain industries and development, likely those necessitating use of copper, are inherent in the vision SSSR paints for southern Arizona's future, but SSSR holds value in the Rosemont Valley that outweighs the vision of sustainable alluded to in their rhetoric. The values and respect participants have for the Rosemont Valley is not contradictory in itself, but inconsistency between some individuals' personal desires and their public rhetoric results in a contradiction between the desire for sustainable development and a refutation of local resource extraction to attain that development.

New discourses struggle within old

Save the Scenic Santa Ritas is stuck between a rock and a hard place, or between an open pit mine and the constraints of the capitalist political economy. They are wary of the environmental ruin that would occur from an open pit mine dug in the Santa Rita Mountains, but the most attractive, and ostensibly logical, way of contesting the mine is by compromising

their environmentalist, ecocentric vision initially decried in fighting for the 'no action alternative' in the NEPA process. From the wide range of discourse about the environment to choose from (Stolle-McAllister 2004), SSSR holds strong to sustainable development, as this is the default discourse currently employed in environmental conflict. They know that part of their rhetoric in opposing the mine must include some form of a profitable alternative, and their discourse continues to stress that no mine will lead to more "income to Pima and Santa Cruz counties" in the future for southern Arizona (SSSR pamphlet). The environmental imaginary they posit in their argument must make a claim for more profitable uses of the environment. As the calls for ecological responsibility in the world become more desperate, with global warming becoming an even more apparent and urban development, deforestation, and extractive industries encroaching on much of the planet's untouched land, one effect on the environmental movement has been a forced conformation of many ecocentric convictions to capitalism's world business model (McAfee 1999). As much as the individuals who make up Save the Scenic Santa Ritas may desire preservation of the environment in the Rosemont Valley, in order to dissuade the ecological end-all of an open pit mine, their promotional literature and some private sentiments propose less harmful, but still ecologically damaging, sustainable development alternatives, such as public ownership or less intensive development, because that is the current normative discourse, and is assumed to be the only one worth their time.

What "buried epistemologies" (Willems-Braun 1997) are neglected by the environmentalist front at Rosemont? Their reliance on the sustainable development narrative overlooks some of the most powerful narratives environmentalists can utilize in their exercises of radical subjectivity against capitalist hegemony. Stolle-McCallister (2004) tells the story of an

indigenous opposition to a foreign golf resort on their lands, and explains how the indigenous camp won that battle by appropriating the myriad environmentalist discourses made available to them by their multicultural, international, and diverse coalition of indigenous activists, American environmental lawyers, and Mexican activists. Why have the same tactics not been employed at Rosemont? Surely the same degree of diverse, talented, and concerned citizens exists, but the difference lies in the nature of the space in which the conflict occurs. In Mexico, indigenous movements for autonomy in other regions have created powerful discourses that the coalition in Tepoztlan (Stolle-McAllister 2004) has been able to appropriate and combine with American environmental discourse to create a successful blend of contingent hybrid environmental discourse. The Rosemont mine controversy, however, takes place in the American West, an historical hotbed of entrepreneurial extractive industries and development. The discourse of the General Mining Act 1872 was initially set by President Ulysses S. Grant to promote settlement of the rural American West, and this discourse, combined with modern sustainability and sustainable development discourse, make up the dominant form of power/knowledge in the controversy. SSSR, whether cognizant of this or not, is forced into the semantic and normative logics and assumptions of this discourse, and fights a difficult battle to break free from that authoritative discourse.

How does the mining industry face a local population increasingly hostile towards traditional resource extraction? In this case, they reframe their mineral extraction as congruent with that hybrid form of capitalism that has developed out of the twentieth century's radical environmental contestations and that is now naturalized by processes of governmentality into official political economy discourse: sustainable development (Summerville, Adkins, and Kendall

2008). But to convince the citizens of Pima County (including the progressive hotbed Tucson) that digging an open pit copper mine in a scenic natural area is in line with their interests, Augusta is forced to appeal only to certain qualities on the surface of the environmentalists' ideology, such as reclamation. Augusta attempts to maintain the traditional entrepreneurial discourses of the American West as normative, so is fuses the new progressive or greener discourses used by environmentalists with the old. In a tour of the Rosemont Valley hosted by Augusta Resource Corporation, the element discussed most adamantly and used most frequently to argue against environmentalists' contestations is Augusta's dedication to environmental concerns. One Augusta employee guiding tours of their property and proposed open-pit sit states that "I daresay reclamation is our number one priority."

Discussion/Conclusions

When the conflict is framed so narrowly and fought by two self-interested actors, they each begin appropriating each other's interests: Augusta makes claims about their environmental concerns, and SSSR contends that its vision for the Rosemont Valley is more valuable than Augusta's and will yield more income, that southern Arizona will accumulate more wealth from the Rosemont Valley by pushing tourism and a more conservative sustainable development (but sustainable development nonetheless). On McGregor's matrix of environmental imaginaries (Appendix A), both groups fall into the "sustainable development" category, at the "anthropocentric" end of the environmental imaginary spectrum. What chance does the environment have to achieve real protection and real autonomy with its own intrinsic rights when both groups describing it and speaking for it seek sustainable development? If the

environment remains subject to dynamic environmental imaginaries, the latest (sustainable development) a last ditch effort to protect the environment from capitalism's incessant encroachments, the environmental concerns of participants in the controversy can likely never be met. Even Augusta, who stresses, and to some extent, truly believe in the importance of sustainability and reclamation in their mining practices, will likely find that these environmental considerations coupled with sustainable economic development cannot coexist. Kovel's (2003) vision of a society "fully emancipated" from commodification of nature and the subsequent human disconnect between humanity and nature points towards an alternative environmental imaginary more compassionate to all actors in the human-environment network. Latour's decoupling of discourse from human individuals to include all subejcts and objects produced under systems of power/knowledge effectively illustrates how the environment itself becomes an object of discursive power (Latour and Woolgar 1986; Latour 1999). In this model neither ecocentrism nor anthropocentrism would be stressed, but rather both humans and ecosystems are connected entities in a network of mutuality. By recognizing the power the environment itself gains as a member of the combined discursive history of the human-environment relationship(s) developed in the modern era, the environment can be separated from its politics, and exist with greater influence within the human ontological network. Ingram's (2007) employment of the Latourian model to strengthen the position of "back to nature" alternative agriculture demonstrates how the type of destabilizing of normative relationships between human and environmental entities can lead to more sensitive considerations of the environment. This theoretical network proposed within Latour's general model is still infused by the power and discourses of political economy, but a separation between environment and

society is less imperative. Only when this separation is broken down, and the environment emerges as a legitimate actor with its own power to shape is position in a network of human discourse, can the ecocentric values that many environmentalists feel find a legitimate outcome. Many would argue that this sort of new ontological vision of human-environment relationships are unlikely to be accomplished under the oppressions of capitalism's logic, and perhaps the most appropriate method for rethinking environmentalism truly involves ecoMarxist perspectives (Castree 2002b).

The data and dimensions of the controversy considered in this paper are not comprehensive, and to gain a clear and valid understanding of participants' attitudes towards the proposed mine, towards environmentalism, and towards the political frameworks that govern this controversy, more in-depth ethnography and both quantitative and qualitative social research would be necessary. During the scoping period of the NEPA process, the Coronado National Forest received over 11,000 comments from the public concerning the mine. Analysis of this dataset, which is authored by additional citizens who chose to participate in the NEPA process, might yield additional insight. More extensive ethnography of participants in the two groups studied here would bolster claims about their personal ideologies and the formation of environmental imaginaries. Employees of the Coronado National Forest are also worthy participants for further research as they hold a unique position in the controversy as mediator between state policy and public opinion in the NEPA process. What this paper has hoped to show, however, is that there are many unfortunate and hidden paradoxes in the public debate process and presentation of information in this controversy. Participants' convictions about the environment, development, the NEPA process, and sustainable development are not given due

justice within the capitalist framework set by policy, the mining industry, and the accumulated discourses of settlement and capital accumulation in the American West. Those dated discourses that still hold authority over the power/knowledge of resource extraction are indeed being contested, but the Rosemont case shows us that the logics of capitalism continue to hold firm sway despite the contestations of an idealistic environmentalism that has proven itself incongruent with American capitalism. Sustainable development is the only environmental imaginary formed in this controversy, to the detriment to the ecocentric values of environmentalist participants.

As for SSSR, its desire to prevent resource extraction and environmental degradation does not fit into the popular discourses they are pushed into using. The reasons its members oppose the mine, and the value they wish to place in the environment as a distinct and worthy entity, are incongruent with current metrics used for deciding the outcome to the controversy. They are coerced into the sustainable development discourse by the complex and focused disciplinary discourses of modern capitalism. While those participants who are coerced into narrow discourse have their ecological visions unjustly marginalized, the other loser in this controversy is the environment itself. Only when the actors in environmental conflict demonstrate coherent meaning in the environment that preexists modern capitalism can a legitimate argument for the environment's case be built.

Appendix

A. The spectrum of popular environmental imaginaries. From McGregor 2004.

Table 1
Conceptual framework

Core principles	Discourse	Key narrative	Key terms, concepts	Nature metaphor	Commonly associated texts and institutions
More likely to identify with anthropocentric principles	Sustainable development	Ongoing development can be sustained if based on principles of scientific environmental management	Sustainability, species, carrying capacity, resources, environmentally friendly, environmental management	Nature as resource requiring expert human management	Brundtland Report, Rio Earth Summit, Johannesburg World Summit, Australian government policy
	Left-greens	Capitalism necessitates the destruction of its resource base and must be replaced by ecologically-informed socialist modes of production	Capitalism, socialism, Marxism, modes of production	Nature as resource being exhausted through capitalism	Pepper (1993), *Capitalism, Nature, Socialism* (journal)
	Survivalism	Development is threatening the earth's capacity to provide for human life and will lead to widespread tragedy unless radical changes are adopted	Limits, life support systems, carrying capacity, catastrophe, crisis	Nature as fragile but vital resource that is rapidly depleting	Carson (1963), Ehrlich (1969), Meadows et al. (1972), Hardin (1977)
	Eco-regionalism	Societies need to restructure themselves into smaller non-hierarchical groups living within, and learning from, local ecological systems	Small-scale, bioregionalism, social ecology, decentralisation	Nature as model system for human societies to learn from	Bookchin (1994), Sale (1984), Schumacher (1973)
	Moral extensionism	Certain non-human species possess intrinsic rights to life based on their inherent morally considerable characteristics	Animal rights, animal liberation, animal cruelty, intrinsic rights, morally considerable, ecocentrism, biocentrism	Nature as a collection of separate morally considerable parts	Singer (1976), Regan (1983), Animal Liberation, PETA
	Ecofeminism	Humans need to value repressed feminine traits when interacting with nature and develop special relationships to place	Love, caring, compassion, empathy, virtue ethics, compassion, respect, friendship, women, Mother Earth	Nature as friend, mother or companion to humans	Plumwood (1993), Merchant (1980)
More likely to identify with ecocentric principles	Deep ecology	Spiritually, there is no separation between human and non-human nature, protecting nature is protecting our transpersonal selves	Transpersonal identities, Gaia, ecocentrism, spirituality, connectivity	Nature is a single organism of which humans are a part	Naess (1973), Fox (1990), Devall and Sessions (1985), Earth First!

Works Cited

Bakker, Karen, and Gavin Bridge. 2006. Material worlds? Resource geographies and the 'matter of nature'. *Progress in Human Geography* 30: 5-27.

Baudrillard, Jean. 1975. *The Mirror of Production*. Trans. by M. Poster. St. Louis: Telos Press.

Blakie, Piers, and Harold Brookfield. 1987. *Land Degradation and Society*. London: Routledge Kegan & Paul.

Braun, Bruce, and Noel Castree. 1998. The construction of nature and the nature of construction: analytical and political tools for building survivable futures. in *Remaking Reality: Nature at the Millenium*. London: Routledge.

Bridge, Gavin. 2000. The social regulation of resources access and environmental impact: production, nature, and contradiction in the US copper industry. *Geoforum* 31: 237-256.

Bridge, Gavin, and Phil McManus. 2000. Sticks and Stones: Environmental Narratives and Discursive Regulation in the Forestry and Mining Sectors. *Antipode* 32: 10-47.

Brogden, Mette J., and James B. Greenberg. 2003. The Fight for the West: A Political Ecology of Land Use Conflicts in Arizona. *Human Organization* 62: 289-298.

Castree, Noel. 2002a. Environmental Issues: from policy to political economy. *Progress in Human Geography* 26: 357-65.

———. 2002b. False Antithesis? Marxism, Nature and Actor-Networks. *Antipode* 34: 111-146.

Cronon, William. 1996. The Trouble with Wilderness: Or, Getting Back to the Wrong Nature. *Environmental History* 1: 7-28.

Demeritt, David. 2002. What is the 'social construction of nature'? A typology and sympathetic critique. *Progress in Human Geography* 26: 767-790.

Foucault, Michel. 1978. *The History of Sexuality: Volume One*. New York : Pantheon.

———. 1979. *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books.

Harvey, David. 2005. *The New Imperialism*. New York: Oxford University Press.

Huber, Matthew T, and Jody Emel. 2009. Fixed minerals, scalar politics: the weight of scale in conflicts over the '1872 Mining Law' in the United States. *Environment and Planning A* 41: 371 – 388.

Heynen, Nick, James McCarthy, Scott Prudham, and Paul Robbins. 2007. *Neoliberal*

Environments. New York: Routledge.

Ingram, Mrill. 2007. Biology and Beyond: The Science of “Back to Nature” Farming in the United States. *Annals of the Association of American Geographers*. 97: 298-312.

Kovel, Joel. 2003. The Dialectic of Radical Ecologies. *Capitalism Nature Socialism* 14 (1):75-87.

Latour, Bruno, and Steve Woolgar. 1986. *Laboratory life: the construction of scientific facts*. Princeton, NJ: Princeton University Press.

Latour, Bruno. 1999. *Pandora's Hope: Essays on the Reality of Science Studies*. Cambridge, MA: Harvard University Press.

Quigg, Philip W. 1978. *Protecting natural areas : an introduction to the creation of national parks and reserves*. New York : National Audobon Society.

McAfee, Kathleen. 1999. Selling nature to save it? Biodiversity and green developmentalism. *Environmentand Planning D: Society and Space* 17: 133-154

McCarthy, James. 2002. First World political ecology: lessons from the Wise Use movement. *Environment and Planning* 34: 281-302.

McGregor, Andrew. 2004. Sustainable development and ‘warm fuzzy feelings’: discourse and nature within Australian environmental imaginaries. *Geoforum* 35: 593-606.

Nesbitt, Todd J., Daniel Weiner. 2001. Conflicting environmental imaginaries and the politics of nature in Central Appalachia. *Geoforum* 32: 333-349.

Paulson, Susan, and Lisa L. Gezon (editors). 2004. *Political Ecology Across Spaces, Scales, and Social Groups*. New York: Rutgers UP.

Peet, Richard, and Michael Watts. 1996. *Liberation Ecologies*. London: Routledge.

Punch, Keith F. 2005. *Introduction to Social Research: Quantitative and Qualitative Approaches*. 2nd ed. London: Sage Publications.

Robbins, Paul. 2007. *Political Ecology : A Critical Introduction*. New York: John Wiley & Sons, Incorporated.

Shabecoff, Philip. 2003. *A fierce green fire: the American environmental movement*. Washington: Island Press.

Smith, Neil. 1984. *Uneven Development*. Athens, Georgia : University of Georgia Press.

Stolle-McAllister, John. 2004. Contingent Hybridity: The Cultural Politics of Tepoztlán's Anti-Golf Movement. *Identities: Global Studies in Culture and Power* 11:195-213.

Summerville, Jennifer A., Barbara A. Adkins, and Gavin Kendall. 2008. Community participation, rights, and responsibilities: the governmentality of sustainable development policy in Australia. *Environment & Planning C: Government & Policy*. 26: 696-711.

Sundberg, Jaunita. 1998. Strategies for Authenticity, Space, and Place in the Maya Biosphere Reserve, Peten, Guatemala. *Conference of Latin Americanist Geographers* 24: 85-96.

Turner II, B. L., and Paul Robbins. 2008. Land-Change Science and Political Ecology: Similarities, Differences, and Implications for Sustainability Science. *Annual Review of Environment and Resources* 33: 295-316.

Walker, Peter, and Louise Fortmann. 2003. Whose landscape? A Political Ecology of the Exurban Sierra. *Cultural Geographies* 10: 469-491.

Willems-Braun, Bruce. 1997. Buried Epistemologies: The Politics of Nature in (Post)colonial British Columbia. *Annals of the Association of American Geographers* 87: 3-31.

Wood, Christopher A., Jack Edward Williams. 2003. *From conquest to conservation: our public lands legacy*. Washington DC : Island Press.

Notes

1 As of February 2009, the following elected officials and governing bodies have issued public statements opposing the proposed Rosemont Mine: Santa Cruz County; Pima County; The City of Tucson; The Town of Patagonia; The Town of Sahuarita; The Town of Marana; The Town of Oro Valley; Arizona State Senate District 30 Representatives Tim Bee, Jonathan Paton, and Marian McClure; the San Xavier District of the Tohono O'odham Nation; Arizona Game and Fish Department; United States Representatives Gabrielle Giffords and Raul Grijalva; former Arizona State Governor and current United States Secretary of Homeland Security Janet Napolitano.