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**NATURE, GEOPOLITICS, INTERTEXTUALITY:
A DISCOURSE ANALYSIS OF ENVIRONMENTAL SECURITY**

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ABSTRACT

This dissertation is a discourse analysis of literature on ‘environmental security,’ which was popularized originally in the 1990s, but is still influential in policy circles today. This literature is constructed by a wide range of authors, including academics, foreign policy and defense establishment officials, and sometimes environmentalists. Though this literature is constructed in different ways, it usually either refers to a fairly direct link between environmental change and violent conflict at various scales, or that, as a consequence, environmental issues ought to be treated as issues of national security, or both.

The development of this literature is often hailed as a re-introduction of nature into geopolitics, and an academic and policy discourse enabled by a lightened defense burden at the end of the Cold War. Critics often suggest that it was a shifting of the constitutive ‘other’ from the Soviet Union to the environment, in part to justify exorbitant defense budgets. While the latter argument is more accurate, I use theories of intertextuality outlined by Julia Kristeva, and theories of semiotics outlined by Roland Barthes, in order to show a deeper discursive history of the idea of environmental security. These serve as valuable tools to analyze and draw together a wide range of texts, including WWI era literature advocating military ‘preparedness,’ early Cold-War U.S. geopolitical documents, and neo-Malthusian texts stretching from the first half of the 20th century (and some beyond) in order to show how they inform and constrain more current environmental security literature.

This analysis challenges the ‘newness’ of environmental security and argues that it is highly informed by naturalist epistemologies in the social sciences throughout the

19th and 20th centuries. I also argue that the Cold War ‘othering’ of the Soviet Union was also informed by discourses of nature, both in the sense that the spread of Soviet communism was seen as enabled partly by population-resource imbalances in the developing world, and also in the sense that ‘containment’ doctrine was understood as a form of ‘quarantine’ of an allegedly parasitic ‘other.’ Rather than being a new set of policies, I argue that environmental security is an extension of post-war developmentalism and sustainable development discourse, with the difference being only a slightly more direct rhetorical linking of environment and security. Using these theoretical tools to find common discursive themes throughout a broad range of literature both enables a genealogical history of environmental security in order to better theorize its development, and helps show the relevance of discourses of environment, security and environmental security to real, lived experiences of environmental insecurity.

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Chapter One

Introduction

In October of 2003 the Pentagon released a report describing a worst-case climate change scenario that “would challenge United States national security in ways that should be considered immediately” and exploring “how such an abrupt climate change scenario could potentially de-stabilize the geo-political environment, leading to skirmishes, battles, and even war due to resource constraints” (Schwartz and Randall 2003, p. 1-2). The fact that a Pentagon report conceded the possibility of such severe consequences during a presidential administration seemingly intent on downplaying climate change is only part of what made it so interesting. It was also interesting because of the immediate political controversy its linking of climate change and national security elicited. Although the White House requested that the Pentagon remove the report from its web site, it had already generated national headlines and copies of it proliferated on the internet.

The consideration of environmental change as a national security issue is far from new. As I explain below, though, the environment was re-defined as an object of geopolitical scrutiny sometime around the end of the Cold War. The 1991 National Security Strategy (NSS) was the first to explicitly consider the environment as a national security issue, and every subsequent annual NSS would follow suit, until security issues were ‘re-militarized’ in a post-911 context. The 2002 NSS downplayed the relevance of environmental issues to national security and the Pentagon report of 2003 was met with no small amount of chagrin by the White House, but five years after 911, the 2006 NSS would again at least broach a connection between environment and national security.

However, while one line allowed that “environmental destruction, whether caused by human behavior or cataclysmic mega-disasters ... can threaten national security” (NSS 2006, p. 47), the majority of the 2006 NSS considered its notion of ‘environmental security’ in terms of how the U.S. should secure access to natural resources or protect its population from the “WMD like effects” (p. 44) of natural disasters or pandemics. It diverges from pre-911 reports in that it does *not* consider the security of the environment itself or linkages between environmental scarcity and violent conflict, and focuses on what it identifies as non-anthropogenic environmental changes, even falling back on military metaphors to describe them.

The point is that whatever ‘environmental security’ is - and there has never been agreement on that - *its meanings are multiple, dynamic, and flexible*. Environment and security, so frequently coupled in the 1990s, were de-coupled after 911, at least to a degree. In the context of the 2006 NSS, the notion of environmental security seems to conform to the major media issues of 2005 and 2006, specifically citing oil dependence, Hurricane Katrina, the South Asian Tsunami, and Avian Influenza. This dissertation examines the evolution of the textual interplay between the signifiers ‘environment’ and ‘security’ over time, whether they are explicitly coupled or not.

The fact that notions of security change often in response to international events is of course common. In fact, the bulk of the literature on environmental security proliferated not long after the fall of the Berlin Wall in 1989. Most of this literature suggested, at the minimum, that environmental problems should be included as threats to national security, whether that took the form of environmentalists employing security rhetoric to draw attention to their political agendas, or members of the security

community appropriating new threats to justify exorbitant defense budgets. Such literature has developed into something of a ‘cottage industry’ and engendered a number of foreign policies and institutions in the name of environmental security (several of the most important of which are examined in chapter three).

This dissertation uses discourse theory to trace the genealogy of this fusion of ‘environment’ and ‘security’ through written texts embodying these discourses. Given that a number of authors (Dalby 2002 and Warner 2000, for example) have questioned the efficacy of the environment and security merger already, my contribution is to provide historical depth to the analysis of environmental security. Rather than defining what environmental security is or is not, or explicating the ‘real’ genesis of environmental conflict, I ask how the literature on environmental security is constrained by previous texts upon which it is based. I therefore employ the notion of intertextuality as a key theoretical tool. I certainly recognize that very real environmental problems exist and threaten livelihoods in important ways, and, with this in mind, I will show what material, political, and theoretical consequences follow from the merger of environmental and security discourses.

The first section of this chapter is about that post-Cold War, rhetorical coupling of environment and security as the environment explicitly became an object of geopolitical scrutiny. The goal of that section is to show how literature on environmental security has theorized that development, and to further explain how a discourse analysis will further advance and expand upon that theorization. The second section will then show how the theoretical tools provided by post-structural discourse theory contribute to the above

goals. The final section provides a chapter by chapter overview of the rest of the dissertation.

The Environment as an Object of Geopolitical Scrutiny

The emergence of notions of environmental security in the early 1990s was a complex and multi-layered process. Part of the purpose of this dissertation is to show that it is even more complex and multi-layered than its various authors realize. It is nevertheless important to briefly sketch some of these layers before discussing how discourse theory will help critique them. Chapter three does this more thoroughly, but for now a heuristic mechanism provided by Levy (1995) is useful. Levy broke environmental security literature down into three ‘waves.’ The first wave included broad linkages between the environment and national security made during the 1980s, which, according to Levy, were mostly rhetorical and lacked sophistication. Examples would include the well-known environmentalist Lester Brown’s (1977) *Redefining National Security*, which precipitated nearly annual admonitions in the Worldwatch Institute’s *State of the World* series that national security needed to incorporate environmental imperatives. At the end of the Cold War, the prominent foreign policy journal *Foreign Affairs* carried what is often credited as the seminal work on environmental security – Mathews’ (1989) “redefining Security” – which basically iterated a less radical version of what Brown had said 12 years earlier. Shortly after the NSS began officially recognizing environmental problems in 1991, Gore (1992) proffered a rhetorical appeal to incorporate a security framework into environmental politics, while Myers (1993) argued to incorporate environmental concerns into the politics of development and security. These kinds of

appeals were very important in the creation of, for example, the State Failure Task Force by then Senator Gore and the Strategic Environmental Research and Development Program (SERDP) by Senator Sam Nunn in the early 1990s¹.

The second wave, beginning in the early 1990s, involved more sophisticated work linking environmental change to violent conflict (hereinafter referred to as the ‘environment-conflict thesis’). This wave included notable work by Homer-Dixon (1991) suggesting that resource scarcity ‘triggered’ violence, as well as a highly influential *Atlantic Monthly* article by Robert Kaplan. Kaplan’s (1994) “The Coming Anarchy” painted a bleak picture of burgeoning populations, declining resource stocks, resource capture by elites, and a downward spiral of conflict spreading from West Africa to the developed world, leading him to refer to the environment as “*the* national-security issue of the early twenty-first century” (1994, p. 58, emphasis his). Homer-Dixon’s and Kaplan’s work heavily influenced the foreign policy of the Clinton administration. Addressing the National Academy of Science, then President Clinton remarked “I was so gripped by many things that were in that article [Kaplan’s “The Coming Anarchy”], and by the more academic treatment of the same subject by Professor Homer-Dixon” (Clinton 1994).

At the time, Levy proposed a third wave which would critique the first two waves by questioning the link between environment and security. This wave has since taken off with works by, for example, Dalby (1994, 1998, 2000, 2002), Deudney (1999b), Conca (1994), Barnett (2001) and Peluso and Watts (2001), all of which will be discussed in

¹ Now called the Political Instability Task Force, this office originally published its reports in the annual report of the Environmental Change and Security Project (of the Woodrow Wilson Center for International Scholars in Washington, DC). The SERDP was designed primarily to develop advanced environmental technologies and market them (strategically, as the name implies) to developing countries.

more detail later. Dalby in particular has provided critical insight into environmental security and his work is especially instructive regarding the utility of discourse analysis in the field of environmental politics. Dalby (1990) first analyzed how Cold War strategists re-constructed a Soviet threat in the late 1970s and 1980s, and would later (2002) transfer some of these insights to an analysis of environmental security. Dalby's application of discourse theory to traditional geopolitics and then environmental geopolitics serves as a point of departure for this dissertation, which will expand upon Dalby's work.

At the time Dalby (1990) analyzed the 'second Cold War,' post-modern and post-structural insights were just starting to be used to challenge dominant neo-realist renderings of geopolitics. Dalby would advance that project by showing how Cold War geopolitical discourse, as constructed by a group of influential foreign policy strategists called the Committee on Present Danger (CPD), subjugated certain political possibilities in favor of others by erecting powerful frames of reference. Specifically, he shows how geopolitical imaginaries are created linguistically through a subject/object juxtaposition. For example, he relates Foucault's (1965) observations about the normalization of healthy, 'rational' subjects via emerging discourses of psychological practice and madness to geopolitics. In terms of the latter, he situates the Cold War within broader dualisms in Western thought; the CPD constructs the U.S. as the rational, Cartesian 'I' of enlightenment doctrine by constructing the Soviets as savage, external 'Others'. He argues that "the exclusion of the 'Other' and the inclusion, incorporation and administration of the 'Same' is the essential geopolitical moment" (1990, p. 22).

Dalby (1998) argues that a changing geopolitical world order in a post Cold War context necessitated the scripting of new threats to serve as ‘Others,’ including drug trafficking, terrorism, Asian economic competition, and environmental degradation and scarcity. Dalby (2002) develops the latter in his discourse analysis of Kaplan’s (1994) polemic. Kaplan’s portrayal of chaos and disorder spreading across national borders repeats dualistic notions of an ordered, ‘internal’ singular polity endangered by an anarchic, ‘external’ savagery. Dalby is correct to observe that “Kaplan rearticulates his modified Malthusianism in the powerful discursive currency of geopolitics” (2002, p. 40). Dalby is not the only one to observe that the “‘policy of making foreign,’ of designating external others as different and potentially threatening, has carried its key practices over from the cold war period” (Dalby 2002, p. 26). He in fact borrowed the phrase ‘the policy of making foreign’ from Campbell (1992), who also counts the environment among a list of new foreign ‘Others’ emerging in the 1990s as part of the performative constitution of national identity, “in ways that do not depart dramatically from those dominant during the cold war” (1992, p. 7).

While Dalby’s postmodern emphasis importantly shows the echoes of Cold War geopolitics in environmental security, Deudney (1999a) casts the issue as one of “bringing nature back in[to]” the social sciences, implying that Cold War geopolitical theory neglected nature. Environmental security for Deudney can only be understood by revisiting the naturalism of classic geopolitics (that is, the assumption that political and social order has inherent, underlying causes in a manner similar to, or caused by, the physical world). However, this is more of a normative project for Deudney, as he laments

the alleged ‘loss’ of nature in the social sciences after WWII, and champions its revival². While I also revisit the naturalism of classic geopolitics in order to understand environmental security, I show how naturalism influences, constrains, and informs the social sciences, such that nature never in fact went anywhere in the first place. Discourse theory, as the next section elaborates, will help show that environmental security is only a slightly more direct rhetorical coupling of discourses of nature and geopolitics, and is in fact not ‘new.’

To sum up, ‘third wave’ authors commonly interpreted the linking of environment and security as a shifting of the constitutive ‘Other’ from the Soviet Union to the environment. This was an important observation, but this dissertation more fully theorizes the ‘newness’ of the environment as a constitutive ‘Other.’ ‘Nature’ is of course a much broader and more ambiguous category than ‘environment.’ Still, as chapter five argues, the abstraction of the Soviet Union as a monolithic ‘Other’ was always informed by nature/culture dualisms which abstract nature as wild, unruly, and feminine, and society/culture as ordered, enlightened, and masculine³. It is this observation that troubles any understanding of the environment as filling a sort of metaphorical vacuum left behind by the fall of the Berlin Wall. Moreover, it troubles the schism Deudney (1999a) draws between pre and post WWII geopolitical theory; the persistence of discourses of nature in post WWII geopolitical theory means nature cannot be brought ‘back’ into the social

² To clarify, Deudney in general has been a critic of environmental security in terms of official state policy, but (perhaps contradictorily) supports naturalistic frameworks to examine conflict in the social sciences.

³ Similar claims have been made by Dalby (1990) and Campbell (1992). In short, just as nature as threat serves as the constitutive outside of modern state formation, the U.S.S.R. served as the constitutive ‘other’ in the performative constitution of American national identity. Chapters five and six offer more concrete examples of this, focusing on the use of metaphors of nature to justify security measures and neo-Malthusianism in post-war development policy.

sciences. Consequently, I argue that there is nothing particularly ‘new’ about environmental security.

This problematic is manifested in two more concrete examples, both of which will be elaborated upon later in this dissertation. First, the anarchy that Kaplan predicts is not specific to a post-Cold War context. The provision of food aid and green revolution technologies overseas, starting after WWII, was always legitimated as a mechanism of anti-communism and American national security. The architects of ‘containment’ doctrine felt that scarcity and hunger induced by population growth would create a ‘breeding ground’ for communism, and therefore the environment was a key arena for geopolitical contestation. In other words, fears of communism spreading had their own Malthusian underpinnings. Second, geopolitical discourse during the Cold War borrowed a number of naturalistic metaphors, ranging from depictions of U.S. territory as a garden needing weeding by an overseeing caretaker to notions of the ‘body politic’ being invaded by a parasitic ‘Other.’ Chapter five in particular shows that nature as a discursive resource in geopolitics is more than semantics; it is deeply implicated in the performative constitution of identity and the nation-state. This dissertation, then, foregrounds the intertextuality of environment and security as a way of theorizing the more explicit renderings of environment as a national security threat in the 1990s and beyond. The next section illustrates how discourse theory helps such a theorization.

Discourse Theory

Discourse theory provides a number of tools to help theorize the development of that ‘cottage industry’ of environmental security, as discussed earlier. Many of these tools

have been applied to environmental security or a related topic by other authors. For example, most environmental security literature (at least in the first two waves) assumes ecological scarcity as a natural condition of social life, resulting from the mismatch of unlimited demand for ecological services and the static supply of them. Yapa (2005), however, uses semiotics to show how supply and demand, and thus scarcity, are social constructions. He uses the example of the word signifier 'car', which, rather than unproblematically articulating the physical object of a car, is always mediated through an infinite number of concepts (or 'signified' in Saussurian linguistics), such as status, transport, masculinity, etc. These concepts are promoted over the 'end use' of the car – transportation – to the extent that transportation infrastructure is built around the use of the individual car at the expense of alternative modes of transportation. Consequently, "scarcity is created by expanding the demand for a commodity, which is done by contracting alternative sources of supply, and expanding the use of that commodity beyond its original end use" (Yapa 2005, p. 290).

Foucault's concept of power/knowledge is therefore also appropriate here, as the discipline of economics has worked to singularize the possible concepts mediating the relationship between the word signifier 'scarcity' and the actual lived conditions of scarcity. The result is that scarcity is naturalized and recognition of its social construction is obscured. Dalby (2002), although not using semiotics, employs discourse analysis to show how Kaplan (1994) relies on dualistic notions of 'self' and 'other,' as discussed earlier. Kaplan naturalizes scarcity as part of the chaotic, barbaric 'other' in juxtaposition to the organized, rational (and national) 'self,' where self and other translate spatially into 'here' and 'there'. The construction of knowledge about scarcity and violence in

countries of the periphery⁴ and its dissemination in journals such as *The Atlantic Monthly* or *Foreign Affairs* is another example of power/knowledge which produces an unhelpful spatial dichotomy of problem and solution, with the implication that developing world political economies are somehow not connected to the global political economy within which they are situated.

Semiotics, power/knowledge, self and other and spatial dichotomies of problem and solution are therefore all tools that can and have been applied in discourse analyses of these topics. They are all also shown to be valuable to this research, and will be revisited again throughout this dissertation. Nevertheless, from among the possible tools provided by discourse theory, this dissertation will mostly focus on the concept of intertextuality as elaborated by Kristeva (1980) and Barthes' (1982) use of semiotics as key analytical tools. Chapter four will explain these tools in greater detail.

Organization of the Dissertation

Chapter two shows why this dissertation is important. Discourses are more than simply the words we use to talk about things, the institutions we develop to manage social life, and the arguments we bring to public space to address disagreements. Discourses include all of these things, but they are also sets of communicative practices that do some sort of 'work' in the world, often in the form of limiting or constraining the questions that can be asked or the answers that can be given about a particular topic. Chapter two therefore shows why it is imperative to understand discourse in order to understand environmental insecurity. This is done by first commenting on the importance of oil to discussions of environmental security, and then visiting four case studies of

⁴ A contemporary example would be an increasing discourse on what are often called 'failed states.'

environmental insecurity – ‘water wars’ in various parts of Asia, diamond conflicts in sub-Saharan Africa, bio-diversity issues in central Africa, and arable land in Mexico. The focus will be on the relevance of environmental and security discourse to these issues, and as such I will also introduce and apply Foucault’s concept of ‘bio-power’ and Ótuathail’s (1996) concept of ‘geo-power’ as important analytical tools.

Chapter three explicates the discourses and knowledge claims about the lived experiences of environmental insecurity discussed in chapter two. If chapters five and six show the normalizations, spatializations, and exclusions in environment and security discourse that inform and constrain, and thus are reproduced in, environmental security literature, then chapter three begins this line of argument by explaining what that literature says. Chapter three delineates environmental security discourse in a couple of different ways – according to how it purports to change the notion of security, and according to how it understands the link between environmental change and conflict.

The purpose of chapter four is to elaborate the theory and methods employed in this dissertation. The first part of the chapter situates this dissertation within post-structural discourse theory. I do this by elaborating on the notions of intertextuality and Foucault’s genealogical view of history, and their applicability to the dissertation. The second part of the chapter focuses on methodology by detailing Barthes’ (1982) important essay on the semiotics of ‘myth-making.’ Latter portions of the chapter explain how this methodology translates into specific methods, how the texts were selected, and how they were analyzed.

Chapter five contributes to this dissertation by first exploring the influence of 19th century naturalist epistemologies on classic U.S. geopolitical discourse. It then shows

how invocations of metaphors of the 'body politic' in 20th century geopolitical texts are informed by bio-medical discourses of the corporeal body over a similar time period. Such body metaphors also involve gendered discourses of power iterating state practices as the rational, masculine head disciplining the wild, feminized torso. They can also be seen as forms of bio-power in the sense that they rely on knowledge of human physiology to create a spatial abstraction of national identity. I furthermore argue that the symbolic capital of these metaphors has been appropriated toward the naturalization of territorialized national identities. These constructions are complicit in the construction of both Cold War containment doctrines and, in a post-Cold War context, increasingly common literatures on 'securing' states from environmentally induced chaos abroad.

Chapter six focuses on neo-Malthusianism as one of most important discourses informing environmental security. Many histories of neo-Malthusianism cite its 're-birth' in the late 1960s, during the modern environmental movement. Moreover, a fair amount of contemporary environmental security research still claims that the role of population change in instigating conflict is under-studied academically (Urdal 2005 and Toft 2005, for example). Chapter six disputes both of those claims by arguing that neo-Malthusian discourse circulated through debates about race, class and sexual politics during the late 19th and early 20th centuries (at a time when Malthus's work was allegedly 'dead'). I also argue that it highly informed post-war claims of an alleged causal role of population in resource scarcity and violence, and aids in the discursive construction of geopolitical policies of Soviet containment, third world development, and, during the environmental movement, popular notions of population-induced planetary doom. Part of the purpose of this dissertation is to use theories of intertextuality and Barthes' (1982) semiotics of myth

to show how a very distinct politics of identity along with highly reductive conceptions of human reproduction implicit in neo-Malthusian discourse (as explained in chapter six) informs and constrains post-Cold War environmental security literature.

To that end, chapter seven brings the dissertation full circle by more fully showing the vertical intertextuality between the contents of chapters five and six and the case studies and discourses outlined in chapters two and three. In other words, chapter seven uses the theories of Kristeva and Barthes to pull all of these *seemingly* unrelated discussions together in order to show specifically *how* environmental security literature is limited by and reproduces the normalizations, exclusions and spatializations of previous texts. In that chapter I explicitly show how Barthes' (1982) semiotics of myth sheds light on how metaphors of the body discussed in chapter five help construct the geopolitical myths (as modes of signification) of the 'domino effect' and 'containment.' I then extend the same analysis to the securitization rhetoric of Ehrlich's (1968) *The Population Bomb*, and argue that this popular environmental mythology represents a form of intertextuality between environment and security discourse. Chapter seven argues that the linkage of environmental and security discourse is itself a political act used to mobilize certain discourses of power, such as development, sustainable development, and neo-liberalism. As such, this dissertation argues that rather than being a re-directed focus borne of a lightened defense burden at the end of the Cold War, environmental security is a version of previous environment and security discourse, both in terms of the naturalist epistemology and semiological structures upon which it is based and the specific policies that it advocates. Chapter eight sums up the main points and reflects on this dissertation's links to broader debates and issues for further research.

Chapter Two: Case Studies

Introduction

As stated, this dissertation situates the various discourses prominent in environmental security literature within a broader historical context. This chapter takes a brief detour from this project in order to address one of the key questions of a discourse analysis: why do these discourses matter? In other words, what are the actual material or experiential phenomena addressed by these discourses? How do people experience environmental in/security, what discourses are implicated in this, and how? After first focusing on oil as a critical dimension in intranational and international conflict, I then apply notions of bio-power, geo-power, and the 'boomerang effect' as theoretical tools to four vignettes of conflicts involving water, diamonds, bio-diversity, and arable land, to address the above questions.

It seems that for many people the notion of environmental conflict or the term 'resource war' connotes primarily issues of oil and international geopolitics. Chapter one observed that the 2006 NSS operationalized environmental security in terms of securing access to resource stocks and mitigating the effects of natural disasters. Clearly the news media carry plenty of headlines about U.S. military presence in Iraq, the price of oil and the rising profit margins of international oil companies. Some 15 years ago, the headlines were of the war in the Persian Gulf. Oil has served as a critical dimension of civil conflicts throughout the Caspian Sea Basin, the Niger River Basin, and the Oriente region of Ecuador (Watts 2001). Oil as a commodity also plays a role in the development of national identities and debates over inclusion and exclusion; it has, for example, been a key component of Venezuelan nationalism and anti-Westernism. The popularity of the

American anti-war slogan ‘no blood for oil’ as a form of political dissent is especially interesting in light of the observation that “petroleum is a commodity not only saturated in the mythos of the rise of the industrial West, but also indisputably one of *the* most fundamental building blocks of twentieth century hydrocarbon capitalism” (Watts 2001, p. 189).

Oil has both a tangible form and is situated within an infinitely complex web of meaning, including notions of cultural and industrial ‘progress’ and neo-liberalism. Post-WWII developmentalism assumed a universal trajectory of progress applicable to all countries, and that one initial step of this progression was to develop agricultural and mineral resources – a step that W.W. Rostow (1960) would refer to as ‘preconditions for take-off.’ As I explain further in the case study on water and in chapter six, instigating this ‘take-off’ of developing countries was seen to be in U.S. strategic interests (mostly to ensure access to natural resources, create markets, and develop lender-borrower relationships with development aid). By the 1980s, the U.S. was fully promoting neo-liberal lending policies, tying, for example, international development loans to export led economic restructuring in developing countries based on comparative advantage (e.g., ‘structural adjustment’). This in effect brought all countries into the global economy in a manner that ensured peripheral countries would engage in primary commodity production and supply core countries with commodities such as oil, while core countries could focus on tertiary and quaternary industries with higher ‘value added’ to rates of return.

Neo-liberalism as a discourse is therefore complicit in the production of conflicts over oil, and not only because of oil’s centrality to U.S. geopolitical strategy. For example, Watts’ (2001) study of violent conflict in the Ogoniland region of Nigeria

situates the violence within the capitalist political economy of oil extraction. Nigeria's own attempts at 'take-off' attracted investment from Shell Oil to develop oil resources along the Niger River Basin for export. As Watts points out, resource rents related to mineral extraction for the most part did not keep profits local, nor did renting activity increase employment, raise standards of living, or drive modern development. What did remain local were the waste products inherent in petroleum extraction, which heavily polluted the very river that the Ogoni people depended on for their livelihoods. Local protest was met with violent suppression by the Nigerian government and a staged trial and execution of several Ogoni leaders. The U.S. geopolitical strategy of globalizing neo-liberal economic doctrine has in this case contributed to struggles over oil resources and ecological hazards very similar to what the 2006 NSS warns us about. The following four vignettes examine different resources, but follow a similar format – Western political and economic discourse being implicated in the very violence that environmental security seeks to alleviate. Before I get to those vignettes, however, the next section reviews three theoretical tools helpful in the analysis.

Bio-power, Geo-power, and the Boomerang Effect

Issues of international oil conflicts are also helpful because they illustrate both a manifestation and reification of the horizontal organization of global space into territorial states. That these states should pursue their own self interests and jockey for control of oil resources is too often uncritically taken for granted as the 'natural' state of affairs. Such an assumption sees space as a given, static reality rather than as an effect of power; that is, it is ahistorical and ignores conflicts which led to this particular ordering of space to

begin with. Emphasizing global space as a process rather than a stasis, Ótuathail (1996, p. 11) writes, “the politics of geo-graphing, then, does not begin as a problematic of geography and *international politics* but a problematic of the attempt to produce international politics geographically” (emphasis in original). In other words, geography is not simply an analytical tool used to illuminate a pre-existing international arena, but rather a form of power/knowledge implicated in the ongoing production of that arena. I argue that in multiple ways environmental security is an instance of what Ótuathail calls “the politics of geo-graphing,” and thus is implicated in the reproduction of global space.

I also employ Ótuathail’s (1996) useful concept of ‘geo-power’ throughout this chapter. Geo-power is Ótuathail’s reformulation of the Foucauldian concept of ‘bio-power.’ Foucault (1991) traces the genealogy of what he calls the ‘art of government’ as far back as the 16th century. Foucault calls on Machiavelli’s formulation of ‘the prince’ at the center of politics, with government essentially about defending territory and establishing sovereign authority, as a starting point to illustrate the development of new forms of governmentality. As the ‘art of government’ developed, government became focused on the population and administering people, places and things. It involved itself with the management of the ‘economy,’ first at the scale of the nuclear family and later in terms of the market place, which gave rise by the 18th century to the notion of ‘political economy.’ The art of government became, in words Foucault (1991, p. 93) borrows from Guillaume de La Perrière, “the right disposition of things, arranged so as to lead to a convenient end.”

Foucault also sees the appropriation of scientific knowledge as a form of power to legitimize this art of government, and employs the notion of ‘bio-power’ when this

involves knowledge of human life, death, behavior, health, and so on. He delineates bio-power into two forms developing during the 17th century: an “anatomy-politics of the human body” – a form of power “centered on the body as a machine” and best associated with Foucault’s work on panopticism – and a “bio-politics of the population” (1978, p. 139) - a form of power focused on the social body, as is shown in Foucault’s work on sexuality. In the latter case, Foucault demonstrates how sex was not suppressed by the blunt force of authority so much as it was converted into a discourse to be effectively policed. Sex had to be turned into something knowable by experts, involving a vocabulary of demography, birth control, bastardism, etc, so that this knowledge base could be harnessed toward the management of populations. Chapter five will argue that what Foucault (1980) identifies as a ‘bio-politics of health’ evolved in much the same way and was harnessed toward similar ends. As such, this is a time in which Foucault says government became as much about ‘administering life’ as it was about brute suppression of subjects.

Ótuathail’s (1996) translation of this into ‘geo-power’ makes a similar argument about the appropriation of the geographical and cartographic sciences, arguing that ‘geopolitics’ as a power/knowledge formation is used to reproduce existing expressions of power. For example, imperialism was used to eradicate ‘foreignness’ and geo-code the world in order to bring it under control. As the following four vignettes will show, geographic knowledge is a discourse which ‘writes spaces’ in important and sometimes violent ways.

A second observation helpful to the forthcoming analysis is that the writing of space is not uni-linear in nature but rather relational. Beck (1992) discusses the rise of

what he terms a new ‘risk society,’ in which the rapid and unchecked pace of modernization leads to the globalization of risk. A risk society is one in which risk replaces wealth inequality as the central problematic faced by society. Within his analysis, Beck offers the notion of the ‘boomerang effect’ (some authors term this ‘blowback’) in which globalized risks come back to injure those who “produce or profit from them” (1992, p. 37). Beck uses the example of the heavy application of fertilizers in German agriculture, but one particularly classic example is the negative health effects on surrounding populations as a consequence of national security-inspired nuclear weapons production. Kuletz (1998) shows such an example of the boomerang effect in her study of the production of a ‘landscape of sacrifice’ in the American Southwest, due to nuclear waste disposal there. Each of the following four vignettes can be seen as forms of geo-power in that they contribute to the writing of violent spaces, a writing which (especially in the first two cases) can be seen as having its own ‘boomerang effect’.

Water, War, and ‘Water Wars’

This dissertation is about discourse and how it is codified, re-produced, and deployed in the scripting of environmental violence. Along those lines, there certainly exists a vibrant discourse on ‘water wars’. Myers (1993) influentially offers water scarcity in the Middle East as his first example of ‘ultimate security.’ Homer-Dixon and Blitt (1998), Klare (2002), and Ward (2002) all follow suit, offering examples from the Middle East, Africa, India, and the American West as alleged ‘water wars.’ Gore (1993) begins his famous assessment of ‘Ecology and the Human Spirit’ by invoking the ever popular imagery of a fishing vessel stranded in the dried up Aral Sea Basin. While most

of these authors interpret historical conflicts (such as the 1967 Arab-Israeli war) in water related terms and predict water scarcity as the major source of conflict in the 21st century, a number of more critical authors have initiated a debate both questioning these assertions and calling for a more specific analysis. Wolf and Hamner (2000), for instance, argue that instances of sovereign nations negotiating peaceful water treaties (after a period of saber rattling) far outnumber actual violent conflicts between states, and that conflict over water is likely to be much more diffuse in nature and at the sub-state scale (contrary to what is normally denoted by ‘water wars’).

Such debates are part of a discourse on water wars, which I consider to be a subset of a larger discourse on resource wars. As a means of illustrating some of the general differences between how these discourses script the relationship between water resources and conflict, I will here contrast two recent incantations of water wars discourse. Both are books entitled *Water Wars* and both were published in 2002, but they say very different things about the nature of water and war.

Water Wars (2002) by Diane Raines Ward links water to a broad range of conflicts, from acute violence between Turkey and Syria to social justice issues involving dams in the American West. Ward’s work is couched within a neo-Malthusianist framework, in which scarcity and violence derive from a fundamental mismatch between human population and available resources. Though she begins by attributing the fact that 20 percent of the world population lacks an adequate supply of clean water to the geography of water resources – it simply is not in the right places in the right quantities – she next chalks water scarcity up to population growth. By page three she explains the J-curve shape of population growth as plotted on a Cartesian grid; by page six she (rather

simplistically) explains the familiar notion of carrying capacity, borrowing a metaphor about an unlimited number of guests to a dinner with twelve place settings and one pot of soup. References to population are peppered throughout the rest of her work: she casually refers to “India’s thirsty millions” and New Delhi as an “overstuffed metropolis” (p. 4).

Ward does importantly point out that since the middle of the 20th century, as the global population doubled, water consumption has tripled. Vandana Shiva, in her own *Water Wars* (2002), virtually ignores population growth and focuses primarily on this increase in consumption and the reasons for it – and it is the latter that perhaps best illuminates the difference between the two versions of *Water Wars*. Shiva (1991, 2002) connects water scarcity with the water-intensive practices of the Green Revolution. Ward also connects water scarcity with agriculture, but seems to suggest that increased consumption is merely a reflection of increased population. She states, “we now face the need to feed unheard-of numbers of people on the earth while at the same time accommodating the toll exacted by growing so much food – increases in fertilizers, pesticides, salination, deforestation, erosion, and overgrazing” (2002, p. 3). While Shiva laments these same issues, she sees them more as the manifestation of a technocratic rationality and globalization than as the natural consequence of population growth.

For example, both authors cite the depletion of the Aral Sea, the fourth largest freshwater body in the world. The Aral Sea is normally fed by the Syr Darya and the Anu Darya rivers. Over the past three decades, however, water from these rivers has been diverted for irrigation of cotton, fruit, vegetables, and rice to such an extent that two thirds of the lake have disappeared while salinity has increased six fold. The area is a major ecological catastrophe and fishing is now non-existent. “Lethal winds blowing

over the exposed seabed carry salt and chemicals across the land, poisoning both the ground and the people” (Ward 2002, p. 12). This much both authors agree on. Their disagreement centers on how ‘natural’ they see the cotton and rice irrigation to be. Ward certainly does not support industrial pesticides, but she essentially sees cotton and rice irrigation as a reflection of population growth: more people means more cotton and rice demand means more water extracted for irrigation. Shiva, on the other hand, sees cotton and rice irrigation as very unnatural, situating these practices within modern scientific discourses of control over, and improvement of, nature.

Shiva also argues that the Green revolution actually led to water scarcity in two ways: it replaced water prudent crops, like millet, with water-intensive crops, like rice, and it replaced old varieties of wheat and rice with new varieties requiring three times as much water. Consequently, the intensity of irrigation in places where these new varieties were used increased ten fold (Shiva 1991). Shiva (2002, p. 10) cites the hubris of western science as a driver of water scarcity:

Prior to the Green Revolution, groundwater was accessed through protective, indigenous irrigation technologies. However, these technologies, which relied on renewable human or animal energy, were identified as “inefficient” and were subsequently replaced by oil engines and electric pumps that extracted water faster than nature’s cycles could replenish the groundwater.

Thus for Shiva, cotton and rice irrigation is not a function of increased agriculture to feed increased populations, but the insistence of western science that it could improve upon nature. She also implicates neo-liberal economic discourse by arguing that privatization of water leads to political centralization which induces conflict.

Shiva's work can potentially be charged with perpetuating nature-society dualisms. However, this dissertation is, again, a study of how environmental security is informed by discourses of environment and security, and to that end it is useful to explore whether water scarcity is influenced by these discourses. Again, this is not an attempt to completely discredit any and all links between population growth and water scarcity, nor an attempt to cite globalized neo-liberalism as the single cause of scarcity, but rather an attempt to de-center the cause of the problem by showing how scarcity is to some extent discursively constituted. For that reason I build on Shiva's work by arguing that Green Revolution technologies were not just about a technocratic rationality and Western imperialism, but also a function of post WWII national security discourse that increasingly emphasized the links between food and security.

As chapter six explains in more detail, the Green Revolution is partly a product of post-WWII concerns about 'containing' communism and creating markets for Western products. Perkins (1997) refers to what he calls the Population-National-Security-Theory (PNST) as a model circulated during this time to justify investments in Green Revolution Technologies. The model looked like this (Perkins 1997, p. 119):

Overpopulation → Resource Exhaustion → Hunger →
Political Instability → Communist Insurrection → Danger
to American Interests → War

This model led to Rockefeller Foundation funding of programs investing in the diffusion of Green Revolution technologies overseas, the first of which was the well known Mexican Assistance Program. Perkins (1997) thus firmly roots the spread of the Green Revolution in American concerns over national security and the post-war revival of Malthus in conservation and politics.

This serves as a stark example of the intertextuality of environmental and security discourse. Discourse theory shows how water scarcity is both a real, lived experience and something constituted within innumerable and inseparable discursive realms, such as politics, economics, ecology and culture. The point here is certainly not to say that the U.S. caused the Aral Sea disaster⁵, but rather to add national security discourse (and its implicit we/they dualism) to the above list. Current predictions of acute, inter-state conflict over water, or ‘water wars,’ respond to a very politically constructed water ‘scarcity.’ As such, in order to understand ‘water wars’ it is crucial to understand what discourse has to do with the fact that, as both Shiva (2002) and Ward (2002) concede, water consumption has outpaced population growth in the 20th century. Following this line of analysis, it appears that post-war national security discourse helped produce the very water conflicts that are alleged to threaten national security.

Security Assistance and the Illicit Diamond Trade

An increasingly popular articulation of the environment-conflict nexus is the idea of the ‘resource war’ (e.g., Klare 2002), or violent conflict over control of resources. I specify ‘control’ in this case because the label ‘resource war’ does not necessarily imply scarcity. In many examples, resource abundance is said to precipitate conflict. One classic example of the resource war is violent conflict involving diamonds in Africa, most notably in Sierra Leone, the Democratic Republic of Congo, and Angola; for my purposes I will focus on the latter.

Most narratives of conflict diamonds in Angola begin with this essential paradox: why is a country with such plentiful mineral resources (such as diamonds and oil),

⁵ In fact, the U.S.S.R. was in control of that region throughout most of the 20th century.

timber, and agricultural land so rife with poverty and debilitated by persistent conflict? Beginning in the late 1990s, a number of analysts have addressed this question by invoking the concept of the ‘resource curse’ (Guimarães 1998; Le Billon 1999; Hodges 2001; Renner 2002), or essentially that peaceful solutions are inevitably ignored in the presence of extremely high resource rents to be captured by a sovereign authority. Although this notion does not extrapolate violence out of resource scarcity, it still implies the same linear causality characteristic of neo-Malthusian perspectives, as it subsumes any human agency in a conflict under a normalized, mechanistic, auto-response formulation of the relationship between societies and natural resources. Though resource curse theories do leave some room for the role of human economic and political systems as contributing factors, they still ultimately rely on the ‘primitive war’ understandings of conflict which underpin the environment-conflict thesis in environmental security literature (Peluso and Watts 2001).

Referring to resource endowments as the principal cause of ‘resource wars’ is arguably an example of environmental or commodity determinism and obscures the role of international political economy. Angola’s near 30 year civil war is often said to be a fight over and fueled by diamonds and oil, but some analyses of the situation have shown that the conflict was also fueled by Cold War rivalries (James III 1991; Guimarães 1998)⁶. Angola is a classic example of a Cold War proxy battle in which the U.S. and the Soviet Union backed their preferred contenders in a bid to win influence within the developing world. The following comments explain how civil war developed in Angola.

⁶ Not to mention the consistent purchase of illegally mined Angolan diamonds by Debeers, a well known diamond cartel (Roberts 2003).

Angola officially won its independence from Portugal in 1975. Three separate nationalist movements both fought to oust the Portuguese and jockeyed for positions of authority in the years leading up to and following the transfer of sovereignty; these were the MPLA (People's Movement for the Liberation of Angola), the FNLA (National Liberation Front of Angola) and UNITA (National Union for the Total Independence of Angola). The MPLA initially took control of the capital city of Luanda and garnered much of its military support from the Soviet Union and Cuba, while espousing communist politics and a strong central government. The FNLA was supported largely by Zaire, led by Mobutu Sese Seko, and because Mobutu's Zaire was seen by U.S. foreign policy makers as their premier anti-communist foothold in Africa, the U.S. began sending military support toward the FNLA in order to secure their political sympathies. The approximately \$124 million the U.S. sent to the FNLA in the mid 1970s flowed primarily through Zaire (Guimarães 1998). Until its defeat in the late 1970s, the FNLA was also supported by South Africa. UNITA originally found its external funding from China, and consequently espoused a Maoist version of communism. After FNLA's defeat, UNITA's infamous leader, Jonas Savimbi, eventually secured help from South Africa (despite the political risks to UNITA) and later from the United States.

Help from the U.S. was initially difficult to come by because post Vietnam anti-war sentiment led to the passage of the Clark Amendment, which outlawed any covert aid to Angola, in 1976. Savimbi, however, accepted military aid from South Africa until F.W. DeKlerk was elected and apartheid dismantled in the early 1990s. Beginning in the 1980s, however, the MPLA, as an internationally recognized sovereign authority, was able to contract with foreign oil companies (most prominently Chevron/Gulf) to exploit

Angola's considerable offshore oil deposits. The MPLA was consequently able to use the oil rents to enhance its military (at the expense of other social needs). Facing an increasingly formidable foe, UNITA began to rely on guerrilla tactics while continuing its pursuit of U.S. support. Savimbi himself actually maintained an office in Washington, DC throughout the Reagan administration and launched a \$600,000 public relations campaign⁷, appearing on television programs such as Nightline and 60 Minutes (James III 1991). While he once touted a Maoist brand of communism and denounced U.S. imperialism, by the 1980s he disavowed communism and praised the United States.

Reagan argued for the congressional repeal of the Clark Amendment throughout his presidency, claiming Savimbi as a 'freedom fighter' against Cuban and Soviet occupation (being the MPLA's primary source of state patronage). Proponents of the Clark Amendment, as well as the Organization of African Unity and the Congressional Black Caucus in the U.S., argued that Savimbi was a tool of South Africa's apartheid regime. Regardless, the amendment was repealed in 1985, clearing the path for the continuation of covert aid to UNITA. Angolan president Jose Eduardo Dos Santos claimed that "by helping UNITA and Savimbi, the United States is clearly showing that it is on the side of racist South African and apartheid, that it is not a mediator, but a party involved in the conflict" (quoted in Anonymous Correspondent 1986). Though the politics of state patronage and apartheid are complicated, a number of analysts of the Angolan civil war (James III 1991; Guimarães 1998; Hodges 2001) do agree with the latter portion of this sentiment: U.S. support allowed UNITA to broaden its offensive and was a major factor in prolonging the conflict.

⁷ Managed by a Washington, DC based public relations firm with ties to the Reagan Administration called Black, Manafort, Stone and Kelly (James III 1991).

By the late 1980s, as Gorbachev began to withdraw Soviet military commitments from the developing world, and as the Berlin Wall fell and South African apartheid crumbled, President Bush discontinued UNITA aid. In the meantime, UNITA had managed to capture several large diamond mining areas, and greatly escalated its diamond excavation and sales to fill the vacuum left by external state patronage. According to Hodges (2001), UNITA netted \$2-3 billion in illicit diamond sales between 1992 and 1998, massively exceeding total U.S. patronage. After a failed attempt at a democratic election in 1992, and with the MPLA and UNITA increasingly well equipped on account of oil and diamond rents respectively, the 1990s saw possibly the worst violence of the three decade long civil war, prompting some analysts to simplistically portray the issue as oil versus diamonds (e.g., Renner 2002). The total death toll from Angola's civil war is something in excess of 1.5 million (Hodges 2001) – and this not to mention massive human rights violations committed by both the MPLA and UNITA⁸. Savimbi's (combat related) death in 2002 has led to renewed peace efforts, and many analysts see the Angolan peace process as finally taking hold; regardless, the story outlined here shows not only some theoretical problems (discussed below) with 'resource curse' explanations of violent conflict and natural resources, but also the relationship between security assistance of the Cold War and the illicit diamond trade in Angola.

Given that notions of a resource curse attribute violent outcomes to resource endowments, and thus ignore the fact that the Angolan civil war well preceded oil and diamond mining and was at least partly fueled by external state patronage, they represent the genesis of conflict as purely endemic to Angola. Certainly the geology, geography, and the political culture of Angola is important, but it is also necessary to situate the

⁸ UNITA allegedly burned entire families of its own dissidents alive as a warning (Hodges 2001).

conflict within a broader international scale, considering, for instance, the construction of political identities (along a we/they binary) characteristic of Cold War militarism (e.g., (Dalby 1990; Campbell 1992)). These issues will be revisited later in this thesis. For now, it can be said that resource curse literature reiterates a discourse in which regional instability and the threats the U.S. is said to face are considered a static reality independent of U.S. policy response to them, as opposed to acknowledging the role of U.S. foreign policy in creating these conditions.

The illicit diamond trade can be seen as an example of ‘blowback’ or the ‘boomerang effect’ (Beck 1992) mentioned earlier. The primary U.S. policy response to the illicit diamond trade, and an example of how the U.S. Congress has operationalized the idea of environmental security, was the Clean Diamonds Trade Act of 2004. This act ratifies U.S. participation in the Kimberly Process Certification Scheme (KPCS), a global initiative to establish an international protocol for the legitimate diamond trade, in order to help keep illegally mined diamonds out of the ‘clean’ diamond stream. The Clean Diamond Trade Act gives U.S. customs officials the authority to deny imports of any diamonds without the proper certification documents under the KPCS. One very interesting aspect of the congressional debates over different House and Senate versions of the bill was that, while participants did acknowledge the tragedies involving conflict diamonds in countries such as Sierra Leone and Angola, the debates were dominated by discussions of how the illicit diamond trade might affect specifically U.S. national security. Despite the fact that the 911 commission found no substantial link between conflict diamonds and terrorist groups such as al Qaeda and Hezbollah⁹, the Committee

⁹ A claim disputed by Global Witness, perhaps the most noteworthy international NGO addressing the issue of conflict diamonds.

on Governmental Affairs of the U.S. Senate spent a great deal of time insisting on such a link. Senator Dick Durbin, for example, opens the debate arguing:

We have learned that the Lebanese terrorist group Hezbollah has participated in the conflict diamond trade and that it has been a source of funding and a way to launder funds for drug dealers and other criminals...It is now clear that ending the trade in conflict diamonds is not only the just, right, and moral thing to do, it is also in our immediate national interest in our fight against terror. If the crisis in Afghanistan has taught us anything, it must be that we ignore failed, lawless states at our peril (2002, p.2).

Part of the reason for this focus on national security is that the major stumbling block in resolving the House and Senate versions of the bill was the implications it would have for U.S. commitments to the World Trade Organization. In order to qualify for an exception to the WTO's trade policies, Congress had to be able to argue that the illicit diamond trade was in fact a threat to U.S. national security. And therein lies the blowback: the above narrative illustrates how U.S. foreign policy discourse, allegedly in the national interest of Americans, helped to fuel the Angolan civil war, and, consequently, the illicit diamond trade. Here we see influential members of the U.S. Congress arguing that the illicit diamond trade is a threat to the national interest of Americans. What all of this points to is that foreign policy is embedded in and re-constitutes a discursive economy in which 'threat' is said to emanate from a socially constructed 'outside,' and that these threats are not part of a pre-political, pre-discursive reality independent of foreign policy.

Security Assistance and Coercive Conservation

The case of the illicit diamond trade shows the influence of security assistance as a component of foreign policy on a contemporary ‘resource war.’ By the early 1990s, Congress had urged the State Department to incorporate environmental objectives into security assistance programs in order to keep them funded in a post-Cold War context (Butts 1999). This would take the form of a number of programs broadly falling under the label ‘environmental security assistance,’ such as the African Biodiversity and Conservation Program, the Africa Coastal Security Program, and the African Civic Action Program. Here I focus on the latter, and how it dovetails with literature on ‘coercive conservation’.

The Africa Civic Action Program was created in 1985 and was administered by the Transatlantic Programs Center (TAC) of the U.S. Army Corps of Engineers. The objectives of the program included “improving the capability of African militaries to protect natural resources and to plan and implement projects that benefit the civilian population” (General Accounting Office 1992) and, consequently, to improve relationships between African militaries and civilian populations (MED News 1987). Throughout the 1990s and into the 21st century the TAC did this in a number of ways, including the construction of water wells in Cameroon and Botswana, the sale of fishing patrol boats to many African littoral states, and the establishment of biodiversity projects in the Central African Republic, Chad, Niger, Ghana and Cameroon (Kibler 2001).

The biodiversity project in Cameroon is called the Korup National Park, and it is often hailed as an Africa Civic Action Program success story. The Cameroon government created the 400 square mile park in 1986, while later the TAC assisted efforts to relocate

the 4200 residents. The TAC helped local military and park officials to site and install a bridge to help residents cross the Mana River (said to be dangerous during the rainy season) to help facilitate relocation, and assisted in the construction of “housing, a small elementary school, community facilities, and outside latrines for the first group of villagers relocated from the park” (Kibler 2001, p. 5). After the bridge was installed a representative from the U.S. Embassy in Cameroon commented that it was “yet another example of the value of the longstanding military-to-military relationship between Cameroon and the United States” (quoted in Kibler 2001, p. 6).

Many of those who have studied the Korup Park, however, would not characterize it as such a resounding success. As is often the case in Central African ‘protected areas’ (PAs), park officials took an ‘exclusive’ approach to management, meaning that indigenous use of resources and biodiversity protection were taken to be mutually exclusive. The 4200 residents of the park did agree to resettlement, but because refusing to resettle was never a real option, and because no compensation was offered, the agreements are of dubious legality (Schmidt-Soltau 2003). These residents were resettled into five different villages within the park, but their traditional subsistence practices, such as hunting, trapping, and gathering of non-timber forest products, were either criminalized or highly regulated by the Cameroon government. Here we see an example of how subsistence hunters and part-time gatherers are socially and politically constructed as ‘poachers’ and ‘thieves,’ respectively.

Such social transformations have not been in the livelihood interests of the local people. Schmidt-Soltau (2003) argues that this resettlement of the park’s residents has led to a higher degree of social stratification in the villages. This, he argues, leads to “the

capitalization of resources for the storage of money or as an indicator of status and prestige” (2003, p. 545), and consequently *more* resource exploitation, not less¹⁰. In their recent study of livelihoods in the Korup Park, Mbile et al (2005) characterize the park as a “catastrophic failure” (p. 1) because resident populations were seen as anathema to biodiversity protection, rather than being integrated into an inclusive management plan. They also found that some villages had established what are referred to as ‘no-go’ areas, where park guards understand not to patrol lest they face violent resistance from well armed villagers. Lacking any incentive to put their lives on the line, park guards respond by simply not going there. By both Mbile et al’s (2005) and Schmidt-Soltau’s (2003) estimations, even the park’s conservation goals have in fact failed.

But more importantly for this dissertation, we see a relationship between western discourses of conservation and national security and the production of violent spaces in Central Africa. The notion of coercive conservation, or the violence towards, and displacement of, indigenous populations in the name of conservation, is fairly well traveled academic terrain (for example, Peluso 1993, 1998; Neumann 2004). I use the example of the Korup Park in particular because it shows an example of how U.S. foreign policy is implicated in the writing of violent spaces. In other words, this is an example of Ó tuathail’s (1996) conception of ‘geo-power,’ in which the organization of, and inscription of meaning into, space is a key component of juridical power. As discussed at the beginning of this chapter, Ó tuathail’s geo-power is based on Foucault’s bio-power. This case study also helps show how the intertextuality of environmental and security discourse renders problematic any rigid distinctions between ‘geo’ and ‘bio’ as modes of

¹⁰ Schmidt-Soltau’s (2003) contention is that egalitarian societies rarely extract more resources than they need, while stratified societies tend to extract resources for reasons other than need.

power. Part of the logic of environmental security assistance, according to Butts (1999), was to promote a common sense of national identity in developing world countries by way of military-civilian cooperation in environmental matters, and that this would promote U.S. interests by ensuring regional security. In the specific case of the Korup Park, the partitioning of 1260 square kilometers of Cameroonian forest into a biodiversity reserve is the spatial manifestation of nature/culture dualisms. Space is thus organized and defined as a means of power.

In addition, this geo-power is inextricably bound up with ecological discourse. A singular identity with the nation-state is rooted in naturalistic epistemologies in the social sciences - a point made by Ó tuathail (1996) and Agnew (2002), and which I will elaborate upon in chapter five. Furthermore, the post Cold War re-articulation of security assistance into programs such as Africa Civic Action is itself informed by neo-Malthusian assumptions of a pre-discursive 'balance' with nature as the difference between war and peace. These efforts were based on the same fears that Kaplan (1994) would later express in *The Coming Anarchy*, that skyrocketing African populations would outstrip resources and lead to regional insecurity. In other words, Darwinian and Malthusian theory are implicated in the presence of the U.S. military in Central Africa. In the next section we will see how many of these same issues arise in narratives of the Zapatista rebellion in Chiapas, Mexico.

Land Invasions in Chiapas, Mexico

The Zapatista rebellion of the mid 1990s in the Chiapas region of Mexico turns out to be one of the frequently cited cases studies of environment-related conflict in the

environmental security literature. Howard and Homer-Dixon (1995, 1998) take it up on a regular basis as an example of population growth leading to what Homer-Dixon (1999) would call ‘demand-induced scarcity,’ as Mexican ranchers and peasants clash in political struggle.

Most narratives of the conflict begin with the armed uprising of the Zapatista National Liberation Army in San Cristobal on New Year’s Day, 1994. While short-lived, it emboldened peasants in other parts of Chiapas to initiate land invasions of rancher’s land over the next few years (in which peasants dispossessed ranchers of their land by simply squatting on it in large numbers). By 1998, a little more than 200 invasions occupied approximately 16,000 hectares of land in the Chilón region of Chiapas alone. In about 30 percent of those cases, the Mexican government ordered forced evictions of peasants, leading to at least 12 deaths and numerous injuries. The remaining cases were resolved more peacefully, with the Mexican government buying out the ranchers and selling land to peasants at reduced costs. What is interesting for this dissertation is that these narratives script the genesis of the conflict in different ways. Howard and Homer-Dixon (1998) tend to emphasize ecological and demographic factors, while Bobrow-Strain (2001), for example, emphasizes rapid economic liberalization in Mexico.

The difference between the two interpretations hinges largely on what the authors consider the context of the conflict versus the driving force. Although Howard and Homer-Dixon (1998) do recognize “orthodox political-economic explanations” such as economic liberalization, they relegate them to the “national and international context in which the crisis evolved” (1998, p. 19). For Howard and Homer-Dixon these explanations “obscure the role of ecological and demographic forces” (1998, p. 19). They

rely heavily on population-density data¹¹ to argue that population growth and resource depletion led to ‘resource capture’ by landed elites. Bobrow-Strain (2001) first counters that their population data only concern urban San Cristóbal, not the rural areas of Chiapas where the conflict took place. He argues that “the focus on environmental scarcity obscures important dynamics that shape the trajectories of violence in Chiapas,” which include

the confluence of national economic reforms, changes in international commodity markets, and local histories of violence and insecurity... In this sense, the actual scarcity in Chiapas is not tied to the environment or even land distribution but rather to politically charged forces that push producers toward less effective production (2001, p. 175).

Bobrow-Strain’s argument is complicated and very nuanced, but essentially he contends that declining state support for agriculture and an influx of American beef imports due to NAFTA led land owners to put more land under production. In other words, he ties the ‘resource capture’ cited by Howard and Homer-Dixon to the same political-economic factors that Howard and Homer-Dixon relegate to ‘context.’

It is noteworthy at this point that both authors refer to each other as *obscuring* other factors in the above quotes. This is not merely semantics. Howard and Homer-Dixon concede some relevance to these political-economic factors, while Bobrow-Strain and Peluso and Watts (2001) overstate somewhat Homer-Dixon’s focus on ecology and demographics. However, as each author picks either ecology/demographics or politics/economics as allegedly obscuring the other, we see a fundamental disagreement as to what the dominant discourse (if any) on resource conflict is in the first place.

¹¹ For example, they point out that population density in San Cristóbal more than quadrupled between 1950 and 1990 (Howard and Homer-Dixon 1998).

This is not at all a trivial reflection because each of these discourses are embedded in and informed by their intellectual histories, which are an important part of why either discourse might be dominant over the other. Howard and Homer-Dixon's work is very much informed by work in cultural ecology emphasizing a human 'balance with nature.' Peluso and Watts (2001, p.7) argue that the environmental security literature, especially as developed by Homer-Dixon, "suffer(s)...from both the historic failings of Malthusian thinking and an untenable theory of political economy and political action." The purpose of chapters five and six is to take this intertextuality a step further, but for now it can be observed that the focus on ecology and demographics is informed by naturalism as it emerged in the social sciences in the late 19th century. Reference to a 'balance with nature' is a form of naturalism because it presumes a tipping point (or threshold, as Homer-Dixon calls it) beyond which violence ensues, and that this tipping point is simply part of the natural order of things. Peluso and Watts (2001) and Bobrow-Strain (2001) see this tipping point as not at all static and to a large extent constructed by human political and economic forces – neo-liberal trade policy in this example. Homer-Dixon rarely directly addresses his critics, except to refer to them as "distributionists" (1999) using "orthodox political-economic explanations" (Howard and Homer-Dixon 1998, p. 19) based on neo-Marxist theory.

Understanding these different explanations is also relevant to broader debates about the very factors Howard and Homer-Dixon call 'contextual' and Bobrow-Strain considers paramount – most notably debates over 'free trade' and NAFTA. Hence this case study is rooted in the same neo-liberal discourses discussed in the section about oil conflicts in Nigeria opening this chapter. NAFTA was designed for many reasons, not

least of which was to create markets for federally subsidized U.S. agricultural products, and thus enhancing American economic power. The discourse of neo-liberalism works to entrench core-periphery hierarchies in the global economy via 'free trade'. In this and all of the previous cases of resource conflicts, American foreign economic and geopolitical discourse can be seen as partly causative of these conflicts.

This chapter sought to empiricize this dissertation by illustrating how environmental (in)security can be and has been experienced. I have shown how conflicts over oil, water, diamonds, bio-diversity and arable land are both produced by, and themselves produce, discourses of environment and security, and newer literatures on 'resource wars.' Thus I have shown that a discourse analysis of environmental security is important to geographic literature. The following chapter will elaborate on the various discourses linking environment and security under scrutiny in this dissertation.

Chapter Three: Discourses

This chapter lays out the discourses on environmental security under scrutiny in this dissertation. As the first chapter explained, this dissertation is an analysis of the discourses which have historically influenced and constrained what environmental security has come to mean – what I have chosen to explain through the concept of intertextuality. Chapters five and six will flesh out this discursive history. This chapter will focus on the discourses of environment and security manifested in the post-Cold War literature on environmental security. More specifically, I will investigate how these discourses understand and script the actual resource conflicts discussed in chapter two.

Environmental Security is the complex outcome of the juncture and disjuncture of innumerable discourses over time, but for organizational purposes this literature can be divided along a couple of different themes. The first theme concerns the normative linking of environment and security in terms of policy, and differentiates analysts who see environmental security as the next challenge for the American military apparatus to conquer from those who see it as a fundamental re-conceptualization of what security means in the first place. The first two sub-sections of this chapter will discuss these differences in more detail and show how they relate to the previous chapter's vignettes on water, diamonds, and, to a lesser extent, bio-diversity.

The other major theme is more explanatory than prescriptive. The last two sub-sections will expand on how the previous chapter's vignettes on bio-diversity and arable land are scripted differently by competing discourses on environmental conflict. It will explain the prominent neo-Malthusian influence in much of environmental security discourse, and contrast this with political ecology approaches. The purpose of this chapter

is to explicate how all of these discourses contest what environmental security means and how this relates to the environmental *insecurity* shown in the previous chapter.

“Green Security or Militarized Environment”

That first theme in the literature can be illustrated using Käkönen’s (1994) influential edited volume, which questioned whether the merger of environment and security discourse in the early 1990s was a matter of “green security or militarized environment.” One might interpret this question as a matter of whether linking environment and security might have one or the other *effect*, but for my purposes I use it to investigate how environmental and security communities each sought to incorporate the other’s discursive capital. In one sense arguments about ‘securing’ natural resources are hardly new; the environmentalist Lester Brown, for example, stated in 1977 that “failure to arrest this deterioration of biological systems threatens not only the security of individual nations but the survival of civilization as we know it.” Discussions of ‘environmental security,’ then, can be seen in a couple of different ways. On one hand, they can be seen as environmentalists increasingly employing a rhetoric of security to draw more attention to environmental problems. Although this is certainly happening, it is not entirely new. On the other hand, environmental security can be seen as the security community (including both government officials and scholars in the areas of ‘peace studies’ and/or ‘security studies’) gradually redefining what it considers ‘threats’ to include the environment. This increased statism in environmental politics is the central phenomenon under study in this dissertation.

Environmental security can thus be seen as the convergence of the two discourses of environment and security. Conca (1994, p. 8) describes that convergence from the ‘security’ point of view:

The waning of Cold War tensions has driven an intellectual reorientation within the peace studies community, with the environment seen as one of several new and expanding arenas for scholarship and activism. The incorporation of an environmental agenda into peace studies thus reflects larger changes within a field passing through a period of uncertainty and intellectual ferment...As relative newcomers to the debate, however, peace scholars must grapple with the fact that a well-established environmental discourse already exists.

Barnett (2001, p. 1), on the other hand, describes this convergence from a perspective of ‘Green theory’¹²:

Environmental security arises from the conjunction of two powerful yet (probably) ontologically divergent words: ‘environment’ and ‘security.’ Readers need scarcely be reminded that in the name of this amorphous ‘security’ inestimable amounts of life and spirit have been wasted – yet who has been secured and from what contingencies have they been saved? ‘Environment’ is no less elusive and its history may yet be no less malignant, as by virtue of its ambiguity and its intuitive resonance it is amenable to misuse to support interests which are the antithesis of the Green agenda. So, to pursue the question ‘What is the meaning of environmental security?’ is to explore certain theories and discourses which wind throughout modern politics and collide at the juncture of environment with security.

Barnett refers to environment and security as ‘ontologically divergent.’ Given that much of the environmental security literature argues whether these terms *should* be linked, in many ways environment and security can be said to be normatively divergent (or convergent, as the case may be). This dissertation, however, will argue that the

¹² “Where the capital ‘G’ denotes the radical ecophilosophical perspective embodied in ecofeminism and social ecology” (Barnett 2001, p. 2).

distinction between normativity and ontology is in fact so blurred that they are in many ways co-constitutive; environment and security discourses are shown to be implicated in the production of environmental conflict, and vice versa. What these quotes both point to is the necessity of understanding how proponents of each of these discourses incorporate the other to formulate ‘environmental security’ in a post-Cold War context.

‘Militarized Environment’

Though a number of analysts (e.g., Wolfers 1952, Baldwin 1997) have identified ‘security’ as an under-theorized concept, it has been employed and reified as a discourse in particular ways throughout the 20th century. The term security can and has been mediated through concepts of personal, family, community, or global security from economic, cultural, political or any of vast array of threats. Chapter five will expand upon the ‘preparedness movement’ of the WWI era which sought to contract those possible meanings of security to specifically military terms. After WWII the military as a percentage of the U.S. federal budget tripled, helping professionalize a new class of ‘national security managers’ (Hogan 1998). Consequently, during the Cold War, national security became increasingly militaristic, with ‘threat’ usually understood as direct military violence, and placed the nation-state squarely in the center of all security concerns (Evans et al 2000). In other words, while physical protection of territory was always one meaning of security, during the Cold War the discourse of a specifically *national* security, with all its institutional manifestations, worked to contract the generally accepted meanings of security in favor of a state-centered one. Academically, what is now referred to as ‘security studies’ was then known as ‘national security studies,’ and was dominated by a realist paradigm which assumed states as unified

political entities acting solely to maximize their own power (Dalby 1990, Pettiford and Curley 1999, Evans et al 2000). It was largely in this context that green revolution technologies were diffused overseas and U.S. security assistance to UNITA in Angola fueled that country's civil war, both allegedly to insulate the U.S. from the spread of communism. As was shown earlier, these foreign policies are implicated in the production of conflicts over water and diamonds, respectively.

With the end of the Cold War in the late 1980s, debates about whether and how security might change proliferated; for example, national security studies dropped the word 'national' to become simply 'security studies' (Wyn Jones 1999). The journal *Foreign Affairs*, widely known as the flagship journal of the foreign policy community, took up the theme in 1989, publishing Jessica T. Mathews' article *Redefining Security*. Mathews argued that the understanding of security in military terms was outdated and suggested "broadening [the] definition of national security to include resource, environmental and demographic issues" (1989, p. 162). Even earlier, in 1987, the World Commission on Environment and Development (WCED) coined the phrase 'sustainable development,' alleging that environmental stress and conflict are co-constitutive. Although their report *Our Common Future* did not challenge the statism of traditional security thinking, it did invoke a global referent of security, stating, "the global commons cannot be managed from any national centre: the nation-state is insufficient to deal with threats to shared ecosystems" (Brundtland 1987, p. 301).

This statement, however, was not a critique of the state as a political entity per se, but rather an admonition that environmental insecurity has no military solutions, and that economic and political integration had already "fundamentally modified" national

sovereignty to the point that unilateral state behavior was ineffective. The WCED's solution was multilateralism and treaties between states. It can be seen as the incorporation of environmental themes, such as interlinking natural systems and the construction of a global "our" with apparently shared futures, into traditional security discourse.

The reverse – the incorporation of security discourse into environmentalism (discussed below under 'greening security') – actually holds much more in common with these literatures than with an entirely separate literature arguing that linking environment and security is simply a bad idea in the first place. This latter most literature does not fall within either the 'green security' or 'militarized environment' tropes, in as much as it disputes linking environment and security on any grounds. Deudney (1990) was the first to argue against such a linkage on grounds that 'security' carried with it a certain statist politics not conducive to addressing trans-border environmental politics. According to Deudney (1999b, p. 192-93), "the scope and source of threats to environmental well-being and national-security-from-violence are very different. There is nothing about the problem of environmental degradation that is particularly "national" in character." National security is centered upon a 'nation' to be secured, a formation almost¹³ irrelevant to local, regional, or global environmental problems. Also, Deudney (1999b, p. 194) argues that the institutions of security produced during the Cold War are too "secretive, extremely hierarchical, and centralized" and are "remote and highly specialized organizations that are far removed from civil society," and thus not built for the kind of cooperation and synthesis that environmental restoration requires.

¹³ 'Almost' because, as was mentioned earlier, significant environmental degradation has taken place in the name of national security; e.g., Kuletz (1998).

In other words, he argues that the legacy of the Cold War shaped the discourse of ‘security’ such that it is incompatible with environmental discourse. In terms of the previous discussion of normative or ontological divergence of environment and security, Deudney’s argument is essentially about their ontological incompatibility. The arguments made in this dissertation complicate this assertion to a considerable extent. I argue that nature in fact played a significant role in how the discourse of security developed throughout the 20th century U.S., so blanket statements about their incompatibility are problematic. My purpose instead is to better explicate *in what ways* they are compatible or incompatible and more thoroughly theorize how ‘environmental security’ is embedded in and reflective of environment and security discourse. By looking at the partial co-constitution of environment and security, I foreground the socially constructed nature of these ontologies, and show how they are produced out of normative claims about nature, the state, national identity, and so on (hence normativity and ontology are blurred).

Nevertheless, the concerns that Deudney raises are important in terms of policy. While the WCED (1987) and Matthews (1989) did not necessarily advocate direct military intervention in environmental affairs, their arguments were followed by the exact policies that Deudney warned against, such as the environmental security assistance programs discussed in the previous chapter. Butts (1994) offers his justification of the military’s direct involvement in foreign environmental policy via such programs as the African Civic Action Program (ACAP). For Butts (1994, p. 88) the ACAP is meant to “promote biodiversity and natural resource conservation, and environmental management, and support the development of a national identity.” His rationale for this is that many developing countries have multiple nations within them which, during times of

economic stress or resource ‘scarcity,’ will conflict with each other or distrust the state’s willingness to distribute resources fairly. He argues that the economic, health, and environmental aid provided by the U.S. military can resolve these conflicts and create “a more positive milieu in which these groups may seek national identity and a feeling of belonging” (1994, p. 88). This is said to be the case because the U.S. military would work with the domestic military, which is said to be more ethnically diverse and representative of the population than the state, hence promoting a sense of national identity. Butts would re-publish almost this exact same argument in 1999. His argument uncritically assumes identity with the state as not only the norm but a pathway to peace. He oversimplifies developing world conflict by attributing it to a lack of conformity to this norm by members of multiple cultural and ethnic identities. The previous chapter’s vignette on coercive conservation in Cameroon illustrates why this view is simplistic, as the African Civic Action Program was, in this case, implicated in a form of violence perpetrated by the state against its own people.

McNeil and Manwaring (2002) take a starkly militaristic approach to environmental security. Their analysis rests on a belief in the environment-conflict thesis, although they are two of the relatively few writers in the field who believe that environmental degradation can lead directly to *interstate* conflict (as opposed to limiting the environment-conflict thesis to *intrastate* conflict that potentially spreads via environmental refugees). Such conflict, they argue, leads to local and regional instabilities detrimental to U.S. national interests and justifies direct American intervention. Their view of environmental security is less of a broadening of the idea of *security* to include environmental change as a threat, than a broadening of *strategy* to say

that ameliorating the root causes of much conflict – environmental decline and scarcity – is as important as winning the conflict on the battlefield. Although Manwaring (2002) recognizes that scarcity is not necessarily a function of rising population and finite resource stocks, he reduces it to a causative outcome of irresponsible and corrupt government, criminal anarchy, and ‘failed states’ in the developing world, rather than situating it in the global political economy or broader structural inequalities.

Sometimes invocations of environmental security involve some type of reformulation of security, but often times, especially in the cases of Butts (1999) and MacNeil and Manwaring (2002), environmental security still maintains the state as the basic referent of security. Consider, for example, this extended quote from Manwaring (2002, p. 165):

When what mattered most in U.S. national security policy was military bases, preserving access to sea lines of communication, choke points, and raw materials – and denying those assets to the Soviet Union and its surrogates – the United States could generally ignore internal conditions in other countries. But, since the United States is now also interested in the need for nonhostile dispositions toward the country, the nonproliferation of weapons of mass destruction (WMD), the capacity of other countries to buy American-made products, the continued development of democratic and free market institutions, and human rights – as well as cooperation on shared problems such as illegal drugs, the environment, and the victims of natural and man-made disasters – then the United States and its allies must concern themselves with the internal conditions that spawn subnational, national, regional, and global instability.

The ‘internal conditions’ of which he speaks are both population induced scarcity and the maldistribution of resources by politically corrupt elites in the developing world. Manwaring makes this argument as part of his vision of environmental security, and it is

clear that for him the reformulation of security in a post-Cold War context in no way involves a change of referent – especially considering his concern for foreign markets for American made products. His formulation of environmental security also typifies Warner’s (2000) criticism of the concept that it amounts to a tool to justify intervention in and control of foreign affairs.

What I have shown up to this point in this chapter is one half of the cleavage in the environmental security literature between those security texts incorporating environmental discourse (‘militarized environment’) and those environmental texts calling for a redefinition of security (‘greening security’). Therefore, we have two separate discourses – though I will show how they have co-evolved later in this dissertation – drawing on each other’s discursive capital, along with another set of literature faulting such a normative linkage in the first place. The next subsection will outline how environmental discourses have incorporated security discourse before moving on to a different theme.

‘Green Security’

When environmentalists have incorporated security discourse, however, they were not necessarily making Warner’s criticism. Rather, they were seeking a fundamental reformulation of the concept of security. Brown’s previously quoted passage about threats to security arising “less from the relationship of nation to nation and more from the relationship of man to nature” (1977, p. 6) stands in stark contrast to Manwaring’s quote above. In addition, Renner (1989, p. 132-133) argued that “military means are no longer adequate to provide tangible security benefits...If security policies are to be relevant to society’s future security needs, they need to be reoriented to meet looming

environmental dangers.” Renner’s chapters in subsequent editions of The Worldwatch Institute’s *State of the World* would maintain the theme that national security was an outdated concept and needed to include environmental threats. The environment as focal point of a newly conceived understanding of security would be popularized by a number of other environmentalists, including Myers (1993) and Gore (1992), and as early as Brower (1981). The Worldwatch Institute, though, emerged as one of the leading influences incorporating security rhetoric into environmental discourse throughout the late 1980s and 1990s.

This distinction between ‘green security’ and ‘militarized environment’ is roughly the same as Barnett’s (2001) distinction between ecological and environmental security. The basic difference between Barnett’s delineation of environmental security as a category and mine is that his is much less inclusive; while I see environmental security as inclusive of environmental and political rhetoric as well as official state policy, Barnett limits it to primarily the latter. Barnett argues that given the realities of environmental degradation around the world, a basic linking of environment and security is a good idea. The problem he identifies, however, is that in the U.S. this has taken place without the afore-mentioned re-conceptualization of security, and that Cold War formulations of the term with their *we/they* dualisms have constrained how U.S. policy operationalizes environmental security. He argues that in other contexts, such as Australia, the environment as a security issue is no longer centered exclusively on the state. The former he calls environmental security and the latter, which he advocates, he calls ecological security.

However, Barnett seems to imply that the idea of ecological security is his creation to undermine an otherwise monolithic discourse on environmental security. This might seem credible given that Barnett's primary data sources are predominantly U.S. government documents such as the annual National Security Strategy. The problem is that he defines environmental security in terms of the U.S.'s post-Cold War incorporation of environmental issues into the security agenda as if environmentalists' use of security rhetoric (e.g. Brown 1977) falls under a different rubric altogether. This is not simply an issue of semantics either – I argue that both rhetorical maneuvers combined to formulate a highly nuanced body of argumentation about environment and security. Much of what counts as environmental security discourse can be traced to pre-1989 environmental discourse and, in fact, that what Barnett calls ecological security is essentially traditional environmentalism in new packaging¹⁴. Barnett's too narrow view of environmental security led his analysis to show ecological security as a sort of new challenger on the environmental security scene. While this dissertation is sympathetic to the basic tenets of ecological security, it represents an advance from Barnett's work in showing ecological security as something not new at all, and as in fact deeply implicated in the advent of environmental security.

What most of these nuanced versions of environmental security do have in common, however, is an impoverished view of the genesis of an environmental 'threat'. Dalby (2002) points this out (in his critique of Kaplan (1994)) especially by showing how environmental security works to create a 'bi-furcated world' in which the threat is said to emanate from the over-populated masses of the South endangering the North. For example, chapter two discussed the involvement of the U.S. Army Corps of Engineers

¹⁴ Barnett also fails in his attempts to distinguish ecological security from sustainable development.

(under ACAP) in the re-settlement of villagers in the Korup National Park in Cameroon as an example of how the U.S. has operationalized environmental security. Regardless of whether it represents an example of 'green security' or 'militarized environment,' or for that matter environmental or ecological security in Barnett's (2001) terms, environmental security discourse in the U.S. fails to see the threats to bio-diversity in Cameroon as much other than an imbalance between local populations and forest resources. Notions of the commodification of nature for western consumption, as a consequence of the globalization of neo-liberalism, are certainly absent from environmental security discourse. The justification for programs such as ACAP exclude mention of how the villagers of the Korup Forest are situated within and affected by changes in the structure of the global political economy, including the proliferation of free trade, structural adjustment programs, etc. Rather, environmental security discourse in the U.S. is underpinned by neo-Malthusian discourses of an allegedly natural balancing point in nature delineating peace and harmony from violence and environmental destruction, leading to what Dalby calls the 'bi-furcated world'. Such a focus employs metaphors of 'thresholds' in nature in order to naturalize environmental insecurity and obscure the role of political-economic structures. The use of naturalistic metaphors in environment and security discourse will be explored at length in the latter chapters of this dissertation.

Up to this point I have mapped out the discourses of environmental security that make normative claims about whether and how environment and security ought to be fused together politically. The second half of this chapter will take off from these observations about the neo-Malthusian underpinnings of environmental security by

showing how they inform many asserted ontological linkages between environmental change and violence.

The Scripting of Environment and Violence

Neo-Malthusianism

The efforts on the part of the U.S. Army Corps of Engineers to relocate the residents of the Korup Park in Cameroon reflected the dominance of neo-Malthusian discourses in U.S. policy towards Africa. The influence of Malthus and other explanations of the relationship between the environment and violent conflict were to some extent covered in chapter two's vignette on the violence in Chiapas, Mexico. Here I present a fuller picture of the discourses informing those explanations. Chapter six will provide a yet deeper history of neo-Malthusian discourse in the U.S.

Thomas Malthus was the 18th century British economist who hypothesized that the growth of human societies would outpace their capacity to feed themselves, leading to massive human death tolls. For Malthus, this was nature's method for maintaining balance. Malthus was writing at a time (during the late 18th century) of great social and political upheaval throughout Europe, and his argument that it was more humane in the long term to let the poor starve was seen by many as a retrenchment of bourgeois interests. An important facet of Victorian social thought emerging in the early 19th century was the assumption that a healthy social polity was the aggregate of healthy individual, corporeal bodies. As Gallagher (1986) points out, however, Malthus's work was in fact an important departure from this, in the sense that he posited healthy, fecund bodies as a threat to social order through their ability to procreate. Either view relies on a

metaphorical extrapolation of bodily health at the individual scale to economic, political and moral health at the societal scale. This sort of extrapolation became more commonplace as naturalist epistemologies were popularized in the social sciences during the 19th century. For example, Darwinian evolutionary biology was often extrapolated to human social and political systems (though not necessarily by Darwin himself), a move which was also influential in no small amount of German, British, and American geopolitical theory. The purpose of chapters five and six is to flesh out these relationships more fully, but for now it can be observed that Malthus's presumption of a natural basis for social health was highly influential epistemologically in the social sciences.

Malthus's ideas saw a degree of resurgence in the post WWII period (Gottleib 1995) as some authors sought to explain the fighting of two world wars in as many generations in terms of these alleged natural limits (e.g., Osborne 1948, Vogt 1948). The reduction of complex environmental problems to issues of human 'carrying capacity' and a 'balance' with nature was very common during the modern environmental movement in the U.S. during the 1960s and 1970s, as popularized especially by Ehrlich's (1968) *The Population Bomb* and NGOs such as Zero Population Growth. This *neo*-Malthusian discourse also underpinned what became known as 'lifeboat ethics' debates about provisions of development aid after WWII, and was also implicated in the diffusion of green revolution technologies (Perkins 1997). Critiques of this *neo*-Malthusianism argued that fears of overpopulation in the global South amounted to the same entrenchment of bourgeois interests as in Malthus's time, only now at a global scale and with a racial and ethnic dimension.

Environmental security is heavily informed by neo-Malthusian discourse. This neo-Malthusian influence is manifested in two major research programs exploring the environment-conflict nexus: the Swiss *Environmental Conflicts Project* (ENCOP), led by Gunther Baechler, and the Canadian *Environmental Change and Acute Conflict Project* (ECACP), led by Thomas Homer-Dixon. Drawing on forty case studies of violent conflict, Baechler (1996, p. 24) argues that environmental degradation triggers violence if combined with histories of conflict, environmental discrimination and weak or insufficient regulatory structures incapable of smoothing over “social fault lines.” In 2005 Baechler qualifies his environment-conflict link somewhat, citing global processes of industrialization and industrialized agriculture as contributors to environmental conflict, rather than citing purely indigenous causes. However, he uses United Nations human development indicators (HDI) to correlate ‘maldevelopment’ with ‘proneness’ to violence in certain areas. ENCOP’s theoretical framework is therefore also based on Western models of development and modernization. Its link between ‘maldevelopment’ (typically in areas of low industrialization with largely agricultural economies) and ‘proneness’ to violence also indicates a simplistic link between environment and conflict. This violence is seen as leading to the destabilization of the state structure which poses a more traditional military threat to the United States and its interests.

ECACP has made similar arguments. Homer-Dixon’s (1991) *On the Threshold: Environmental Changes as Causes of Acute Conflict* was one of the first, and most frequently cited, post Cold War attempts to explicitly link environment and conflict. Homer-Dixon’s project is to move beyond case studies showing *where* environmental conflicts are occurring to generalize *how* environmental stress leads to conflict. He goes

to great lengths to qualify his work: “I do not hypothesize that the causal links between these variables will be tight or deterministic...numerous intervening factors – physical, technological, economic, and social – often permit great resilience, variability, and adaptability in human-environment systems” (1991, p. 78). His theoretical framework is nevertheless neo-Malthusian; scarcity is taken as a given (and as a function mostly of population growth) and is said to trigger violence once it crosses a certain ‘threshold’.

Homer-Dixon (1993) updates this work by arguing that this scarcity and ensuing violence holds implications for ‘global security,’ as it can tip balances of power or lead to friction between nations (or states, less commonly) leading to international strife. His analysis begins with warnings of global ecological catastrophes before focusing on a number of regional scale case studies, with the purpose of ultimately constructing a generalizable model of environmental conflict. Homer-Dixon mentions the issue of changing conceptions of the idea of security, but prefers what he sees as ‘traditional’ notions of security as protection against violence. Finally, he speculates that international wars could break out if the global community wages war against an individual country posing a threat to the global commons; despite the disproportionate ecological impact of the United States, Homer-Dixon uses projections of future Chinese carbon emissions to cast China as such a “free-rider” (1993, p.7) country.

Homer-Dixon’s (1998) *Ecoviolence* continues this inductive, case study approach towards a generalizable model. Homer-Dixon’s overview first reviews a number of different types of environmental change – involving water, land, climate, etc. – before exploring the physical and demographic pressure that lead to ‘environmental scarcity.’ He then examines what he calls “key social effects,” such as a vaguely defined notion of

‘social friction,’ resulting from scarcity, how this can lead to violence, what types of institutional failures contribute to the problem, and why developing countries are more prone to such violence¹⁵. The volume then provides five co-authored case studies, beginning with the study of land scarcity in Chiapas discussed in the previous chapter, and continuing through similar cases in the Gaza Strip, South Africa, Pakistan, and Rwanda.

Homer-Dixon (1999) synthesizes nearly a decade of ECACP research. While focusing also on state capacity in developing countries to deal with scarcity (as well as the response of ‘elites’ to scarcity), Homer-Dixon identifies three types of scarcity. Supply induced scarcity is said to be a result of the depletion of renewable resources. Demand induced scarcity is said to be a function of population growth when increased demand is not met by a finite resource stock. Structural scarcity is said to be a function of distribution; it occurs when “a fall in the quality or quantity of a renewable resource interacts with population growth to encourage powerful groups within a society to shift resource distribution in their favor” (1999, p. 73). The latter category is thus a function of the first two, with the sources of conflict purely endemic to the local context in which it occurs. Population driven scarcity is allegedly the key factor in conflict, but mostly intra-state (or inter-nation) conflict, as opposed to large scale, inter-state conflict. Conflict is consequently assumed as a natural condition of human affairs, rather than as a social construction born of global politics, economics, and discourse.

Both ECACP and ENCOP have provoked criticism (e.g., Levy 1995 and Peluso and Watts 2001), especially in terms of their case study approach. Around the time

¹⁵ In general he cites a closer dependence of the world’s poor on natural resources and ineffective institutional structures to ameliorate or buffer against scarcity, though in Homer-Dixon (1993) he also cites a lack of development and “intellectual resources of highly industrialized countries” (p. 9).

Ecoviolence was published, Gleditsch (1998) formulated a point by point critique of environment-conflict literature. The most compelling of these points were that the literature often neglected political and economic factors, that only case studies having strong evidence of both resource scarcity and violence were selected (meaning there was no control sample), and that the literature uses speculation of future conflicts as empirical evidence. Homer-Dixon (2000) responds to the first of these issues by asserting that Gleditsch is simply incorrect and citing instances where he does mention (albeit over-generalized) notions of “state capacity” and “opportunity structure” in the case studies. He defends his case study selection by arguing that the method of “process tracing” (which traces the ‘dependent variable’ of violence back to ‘independent variables’ of environmental scarcity in order to establish causal connections along the way) is sufficiently rigorous to unveil crucial causal mechanisms (which he distinguishes from causality). The final point Homer-Dixon rebuts by arguing that Gleditsch is conflating his work with other, less rigorous work in the field.

Peluso and Watts’ (2001) critique of Homer-Dixon (discussed briefly near the end of chapter two) was far more scathing than Gleditsch’s, and consequently provoked an even sharper reaction from Homer-Dixon (2003). In this short piece, Homer-Dixon argues that Peluso and Watts’ and Betsy Hartmann’s chapters in *Violent Environments* are a “grotesque caricature” (p. 89) of his work, riddled with misquotes and misrepresentations. Homer-Dixon focuses on three main points of contention between his work and *Violent Environments*. First, he argues that the authors’ primary focus on Marxian political ecology occludes any other theoretical perspective which might prove valuable. Peluso and Watts’ (2003) response asserts that their book occludes nothing and

that Homer-Dixon's work was essentially non-theoretical to begin with, despite Homer-Dixon's insistence otherwise. Second, Homer-Dixon points to a fundamental disagreement about the relative importance of population growth to scarcity – on this issue Peluso and Watts maintain that they see it in less causal terms than Homer-Dixon, but do not say that it is a non-issue.

Third, and perhaps most importantly for this dissertation, Homer-Dixon sees a fundamental disagreement between himself and Peluso and Watts on causal role of nature in human affairs. He supports Deudney's (1999) call to 'bring nature back in(to)' the social sciences – the same call that I critiqued and used as a theoretical starting point in my opening chapter. Peluso and Watts respond that several chapters of *Violent Environments* in fact focus on the physical geography and biophysical properties of resources as crucial dimensions of conflict over them, without engaging in any form of determinism.

Homer-Dixon is for the most part correct when he says Peluso and Watts exaggerate how tightly deterministic his purported links between scarcity and violence are. However, Peluso and Watts' counterpoint is also valid; a research model which uses a very under-theorized notion of scarcity as a starting point while relegating cultural, political, and economic factors to a "vague and woolly notion of 'context'" (Peluso and Watts 2003, p. 93) does often imply fairly deterministic linkages. For example, Homer-Dixon (1993) warns of severe land and water shortages in India as a consequence of population pressure, while mentioning nothing of trends toward resource privatization, and he sources the ongoing conflict between Turkey, Syria and the Kurdish people to obstruction of the Euphrates, mentioning nothing of Kurdish nationalism. He does not

ignore cultural, political and economic factors in quite the manner that Peluso and Watts suggest, but he does subjugate them under the label 'context' in favor of a 'causal' role of nature.

But it is the third point of contention (about the causal role of nature) that best illustrates where I situate this dissertation within that debate. Peluso and Watts' response that they do show a relationship between physical geography and conflict is valid, but starkly different than my own response to Homer-Dixon's (2003) and Deudney's (1999) call to 'bring nature back in.' Homer-Dixon argues against the 'trigger' as a metaphor for understanding the environment-conflict nexus, instead preferring a different, more naturalistic metaphor of a "deep, "tectonic" stress" (2003, p. 91) that scarcity has on political and economic stability. This dissertation does not engage in a debate about the relative importance of physical processes in human conflict, but rather interrogates the metaphorical language involved in these types of explanations. A metaphor of tectonics implies that scarcity is something underlying (as in tectonic plates) or foundational to reality, and hence justifies Homer-Dixon's use of it as a fundamental starting point. The adjective 'deep' is also a spatial metaphor which discursively reinforces the naturalness of scarcity. Chapter seven of this dissertation will return to this body of work in order to show how it is influenced by previous environment and security discourse.

Where this dissertation takes off from this debate is in critiquing such metaphors in order to question whether nature ever 'left' the social sciences and thus necessitating its re-introduction. In my attempt to show the intertextuality of nature and politics over time through the critique of naturalistic metaphors, this dissertation therefore makes an argument quite different from, but still in support of, that made by Peluso and Watts

(2001). The final section of this chapter discusses more thoroughly the field of political ecology (but not *Violent Environments* in particular).

Political Ecology

Chapter two showed how this neo-Malthusian discourse informs certain scripts of the conflict over arable land in Chiapas, Mexico. It also showed how these interpretations were countered by efforts by political ecologists – in that case Bobrow-Strain (2001) – to situate the conflict within a broader geographic context. That is, political ecology does not see conflict over resources as entirely a problem of supply and demand for resources endemic to local contexts, but rather as “site-specific phenomena rooted in local histories and social relations yet connected to larger processes of material transformation and power relations” (Peluso and Watts 2001, p. 5). Whereas neo-Malthusianist discourse interprets the need to re-settle the villagers of the Korup Park in Cameroon as a means of keeping human populations in balance with resources, a political ecologist might see threats to bio-diversity in West Africa in terms of, for example, the demand created in Western markets for timber or other forest products, or how structural adjustment programs might influence the possible decisions available to local land managers. The remainder of this chapter elaborates the political ecology tradition and the critique it makes of environmental security discourse.

The sub-discipline of political ecology developed within and out of a broader project of cultural ecology and ecological anthropology in the late 1960s. This broader project was to some extent a product of growing ecological concern in the 1960s and a consequent desire to see how indigenous communities struck a ‘balance’ with nature (Peet and Watts 1996), and thus was based on neo-Malthusian discourse. Political

ecologists were dissatisfied with both these explanations and neo-classical explanations of simple 'market failure' as the proximate cause of environmental degradation. Just as cultural ecology and ecological anthropology can be understood partially as a product of the context of the environmental movement of the 1960s, political ecology can, at least in some ways, be seen as flowing from many of the rapid economic transitions of the 1970s and 1980s. For instance, the globalization of neo-liberalism and "peripheral Fordism" (Peet and Watts 1996) led political ecologists to insist on situating land and resource management decisions within broader political economic contexts. Political ecology replaced questions of a cultural harmony with nature with questions of the relationship between such economic transitions and use of the environment.

Political ecology's concern with how these economic transitions affected peasant society reflects its early Marxist influence. The base-superstructure model within some Marxist theory is highlighted by the insistence on understanding the political-economic context within which these societies operate. Political ecology often dispatches Blaikie and Brookfield's (1987) well known 'land manager' as the independent, rational actor whose natural resource decisions are constrained and (arguably) determined by their lowly position at the losing end of a flow of power. Political ecology essentially replaced population and market failure explanations with poverty as the main cause of, again borrowing the previous chapter's examples, threats to biodiversity in Cameroon or conflict over arable land in Chiapas, Mexico.

As the field of political ecology developed, its Marxist orientation was challenged on several different levels. Marxism arguably centralizes a single productivist logic based on class relations as the locus of power and the sole shaper of landscapes and mover of

history; Moore (1996) argues that Gramscian post-Marxism challenges this by recognizing cultural relations and ideology as well. Berry (1993), for example, challenged the efficacy of relying on Blaikie and Brookfield's (1987) 'land manager' model. In order to understand resource use and access, Berry argued that one cannot presume a singular, rational actor seeking to maximize his or her own benefits, but that the power network within which they work, the culturally constructed ideas of authority and obligation, various social relations and historical legacy must also be considered. In her study of sub-Saharan African farming communities, Berry argues that previous, Marxist inspired studies of the same topic constructed African identities solely in terms of class. For that reason, much of that literature treats producers as static, predictable units when they often change over time and space. Not only is the rational actor model incomplete as a way of understanding human-environment relations because of its simplistic understanding of identity, but it also fails because it assumes the rules and norms governing behavior are clearly enforced and unambiguous.

In other words, the land manager model is reductionist because people make complex decisions for complicated reasons, and because rules and norms governing behavior are fluid and often the site of contested meanings. It was observations such as these that led scholars in political ecology to recognize that political-economic context is not the only factor driving human use of the environment; it was also necessary to understand the multiple meanings attached to identity, social norms, laws, and cultural attitudes, and to recognize that these meanings are not static cultural conditions (as with earlier cultural ecologists) but points of contestation and change. Political ecologists thus began to look at the multiple production and contestation of meaning and representation

in nature-society relations. It is at this point that, in my opinion, post-structural explanations began to supercede Marxist ones. Generally, Marxist theory sees nature reproduced in the form of the commodity, while post-structural theory sees nature reproduced in the form of myriad axes of meaning, representation, and form, including but not limited to the commodity.

For example, Neumann (2004) shows how media representations socially construct the juridical category of 'poacher' and work to "radically reorder the moral standing of African poachers and wild animals" (p. 813) by justifying certain shoot-on-sight protocols. Neumann was not talking about the Korup Park in particular, but given that "national park boundaries have long-served as the physical and symbolic divide between nature and culture" (2004, p. 817), the establishment of the Korup Park and the re-settlement of its inhabitants also works to construct the category of 'poacher' in Cameroon. Turner (2004), as another example, examines local conflicts between farmers and herders in the Sahel region of Africa. He challenges orthodox 'environmental security' (or neo-Malthusian, the way he employs the term) explanations of these conflicts as a 'here and now' auto-response to local mismatches between resource supply and demand. He also juxtaposes political ecology with common property theory, which traces the etiology of resource conflicts to the failure of regulatory schemes to adjudicate access to resources. Turner argues that such interpretations share in common with environmental security an assumption of supply/demand mismatches born out of rational actors pursuing only their own immediate self-interest. He prefers to stress moral dimensions of farmer/herder relations, such as the establishment of precedents in conflict resolution, local historical memory, considerations of justice and ethics, and a sense of

community among and between combatants. Turner also concludes that the portrayal of conflict in environmental security terms is used to support neo-liberal policies of enclosure of land as private property.

In this chapter I have mapped out the discourses analyzed in this dissertation. The first half of the chapter was organized along lines of a 'green security' or 'militarized environment' typology, differentiating between what environment and security literatures see as the major normative and policy implications of linking environment and security. The second half of the chapter focuses on competing interpretations of the role of environment in social conflict, exploring both environmental security's neo-Malthusian underpinnings and how political ecology challenges such interpretations. The opening chapter explained the utility of discourse theory as a tool to analyze these discourses; the next chapter will detail the precise methods employed to accomplish this task.

Chapter Four: Theory and Methods

Introduction

While the previous two chapters discussed examples of the lived experiences of environmental insecurity and the various post-WWII environmental security literatures being analyzed, this chapter explains the theory and methodology that serve as the basis of this discourse analysis. The first full section of the chapter focuses on theory, and is divided into three sub-sections. The first sub-section briefly reviews 1960s post-structuralism and semiotic theory. The second sub-section reviews the notion of intertextuality as outlined by Julia Kristeva, and to a lesser degree Roland Barthes, as well as its applicability to this dissertation. The third sub-section offers some comments about the relevance of Foucault's genealogical view of history to this analysis as well. The second full section then explains the data sets and methods employed. I first explain how the texts being examined were selected, but focus on how Barthes' (1982) use of semiotics serves as a methodology for this dissertation, as well as how this translates into specific methods.

Post-structuralism, Intertextuality, and Genealogy

Post-structuralism

The environment-conflict thesis reflects assumptions about timeless, universal and pre-cultural, pre-political relationships between environmental factors and human behavior. The search for these universal relationships is indicative of the ontological assumption of the modern social sciences that certain foundational truths exist

independently of the search for them. Such ‘foundationalism’ also assumes that facts and values are separate and that objective researchers can deal with facts by leaving values behind, and that such efforts can uncover meanings, essences and relationships that exist inherently within and between certain concepts (Powers 2001).

This insistence on a foundational truth is evidenced in the case studies of environmental conflict discussed in chapter two. For example, the land invasions by Chiapas, Mexico are explained by Homer-Dixon as a function of rising population and a static supply of agricultural land. Violence involving access to clean water, the African diamond trade, and “petro-violence” (Watts 2003) are typically scripted in the same way. Intertextuality and genealogy as analytical tools are valuable to this study because they treat this script not as static and a natural given, but see it as a form of power/knowledge with intellectual precursors. In short, such scripts borrow from naturalistic assumptions that social relations have underlying patterns in the same way that the physical world does. For that reason, a genealogy of environmental security should explore the development of naturalism in the social sciences and its relationship to various discourses on human-environment relationships.

Moreover, a foundational approach assumes that a word signifier such as ‘threat’ or ‘security’ corresponds to real, objectively known conditions of threat or security existing in the world; a post-structural approach, however, challenges any purely reflective, one to one relationship between signifier and signified. Rather, it recognizes threat or ‘danger’ as a social construction: “Danger is not an objective condition. It (sic) is not a thing which exists independently of those to whom it may become a threat” (Campbell 1992, p. 1, parenthetical ‘sic’ in original).

In the 1960s, structuralists such as Saussure and Levi-Strauss problematized the (foundationalist) assumption that the meaning of various signs comes from the essential character of the things they are assigned to designate. Rather, Saussure used semiotics to show that the meaning of signs rose from a structure of difference; that is, signs can only be defined relative to what they are not, making the ultimate meaning of any sign always contingent on some other meaning. Theorists of intertextuality apply the same concepts to texts: “Just as signs refer only to other signs, texts can refer only to other texts, generating an intersecting and indefinitely expandable web called *intertextuality*” (Sarup 1988, pp. 57-58, italics in original).

Post-structural discourse theory emphasizes the notion of a de-centered subject. Whereas Descartes’ ‘I think therefore I am’ subject, which assumed autonomous, rational individuals as the drivers of the development of society and the unfolding of history, has dominated much of modern thinking, structuralists sought to understand the subject as a product of this structure of difference as much as signs were. Lacan (1999) in particular argued that the subject is defined by a mutual opposition to the object and thus is a product of linguistic structure. Again, the subject is de-centered because it is no longer driving society, but rather is dissolved within society, describing the notion of *intersubjectivity* (e.g., self and society is a false dichotomy).

Post-structuralists, such as Foucault and Derrida, added to and transcended these observations in several important ways. For them, structuralism was still based on the search for universal structures (linguistic ones, in this case) to explain human behavior, and also denied agency to individuals; the post-structural response was to deny grand meta-narratives about how the world works – such as with Foucault’s genealogical view

of history. As such, they argue that meaning comes not only from linguistic structures of difference, but from a multitude of other systems of meaning embedded in culture. Foucauldian genealogy can be thought of as a study of these systems of meaning and action to better understand the constitution of the human subject.

One of the salient implications of all of this is that the ideas of threat and security can be seen as a mutually constitutive binary. For example, Hobbes' notion of a society based on a social contract is in many ways a reflection of a theoretical state of anarchy; though few people have ever experienced a state of anarchy, its very concept serves as a constitutive non-society or non-order by which society or order is defined. Similarly, Campbell (1992) skillfully uses post-structuralism to argue that 'threat' or 'danger' serves as a constitutive 'other' against which national self-identity is constructed. The point is that threat and security do not have stable, essential meanings, and that the meaning of one is contingent upon the other. Just as the state of anarchy legitimizes the social contract and danger concretizes national identity, the idea of 'threat' is constitutive of institutions of security. Political struggle is often about closing and concretizing those meanings (Howarth and Stavrakakis 2001); this dissertation is about the history of that political struggle as it regards the textual interplay of environment and security.

Intertextuality

Environmental security as a policy discourse can be critiqued within such an intellectual framework. For example, the environment-conflict thesis typically locates the source of environmental threats in the burgeoning populations of the global South, thus discursively constructing a bi-furcated world (Dalby 2002) in which the South is essentialized as the area of the problem and the global North as the area of the non-

problem. What constitutes ‘threat’ could have multiple interpretations, and in fact it is only recently that many environmentalists have begun to recognize American consumerism as deeply implicated in the problem. An example of the closure of the meaning of threat is that the environment-conflict thesis forecloses on an understanding of American consumerism or neo-liberal economic policy as threat. Once threat is defined in terms of what it is not, half of the security-threat binary has *allegedly* been stabilized. Environmental security can be seen as a form of power/knowledge which essentializes blocks of space (industrial North, impoverished South, etc.) as either source of threat or referent, which helps reproduce power relations and a problem versus non-problem binary. These are crucial observations, but they are also terrain covered thoroughly by Simon Dalby. What I explore is the history of the environmental-geopolitical imaginary, with its we/they dualisms, threats and referents, and Malthusian and Hobbesian assumptions, that make such a bifurcation possible. *In other words, whereas Dalby and others have explored the spatiality of environmental security, this dissertation explores its genealogy via intertextuality.*

Thus, the most salient concept used in this research is intertextuality, a term coined as part of the post-structural turn in the late 1960s. The term intertextuality is usually attributed to Julia Kristeva, who introduced it in her revival and re-casting of the work of Russian literary theorist M.M. Bakhtin. Bakhtin himself was critical of Saussurian linguistics, arguing that Saussure’s emphasis on the production of meaning out of a linguistic structure of difference over-privileged language at the expense of social context. Bakhtin argued that the meaning of a given signifier was also dependent upon recent events, class relations between author and reader, and previous invocations of that

signifier. Bakhtin referred to this literary and social contextualization as ‘dialogism’, as opposed to Saussurian ‘monologism’ (Allen 2000). However, though Bakhtin complicated structural linguistics, he still supposed a scientifically knowable structure of meaning. Kristeva, on the other hand, redirected Bakhtinian dialogism toward literary texts by translating it as ‘intertextuality.’ Kristeva’s use of the term maintains the emphasis on social and historical context, but denies the applicability of a scientifically knowable structure to literary texts on account of “an infinity of pairings and combinations” (Kristeva 1980, p. 69) between signifiers and signified. Kristeva first coins the term as she applies Lacanian intersubjectivity to literary texts in an oft-quoted passage: “the notion of *intertextuality* replaces that of intersubjectivity” because “any text is the absorption and transformation of another” (1980, p. 66, emphasis in original).

Kristeva’s account of intertextuality is therefore a direct challenge to the notion of a centered, Cartesian subject. Rather, Kristeva argues that “the notion of the sign... is a product of scientific abstraction” (1980, p. 69) in that it assumes both a vertical division of texts from previous texts and linear division of texts from the cultural milieu within which they are consumed. As Barthes (1977) argued, this is a major assumption of the Cartesian ‘I think therefore I am’ subject mentioned above, which assumes literary text as an instrument of the author to convey meaning. Kristeva challenges this assumption by arguing that “linear history appears as abstraction” (1980, p. 65) if we situate texts within a broader historical and cultural context, as Bakhtin suggested.

Abstracted linear history is in other words a product of the Cartesian subject which assumes the possibility of a transcendental signified. Revealing how such assumptions work to reify or singularize certain meanings while subjugating others helps

show how literary texts can embody and thus reproduce social cleavages and hierarchies in society. As Kristeva puts it, “any evolution of literary genres is an unconscious exteriorization of linguistic structures at their different levels” (1980, p. 66). In other words, to say that texts are informed and constrained by previous texts is to suggest that they reify or singularize only the meanings that were not subjugated or excluded by previous texts. This is how, as Lacan would suggest, the authorial subject is written as much as it writes; linear history is shown to be an abstraction if texts are imbued with the same socially specific exclusions of previous texts. Chapter five of this dissertation shows how these observations are relevant to nature and geopolitics: metaphors of the ‘body politic’ are shown to be powerful discursive tools for creating a spatial abstraction of national identity based on exclusions of race and gender, which are both based on previous similar exclusions and carry them over into geopolitical documents.

The use of intertextuality as an analytical tool is not the same as suggesting that one author is merely ‘influenced’ by another – the concept of influence in literary theory in fact presumes both linear causality and a Cartesian authorial subject. Barthes sees intertextuality as something broader, in fact as reflecting cultural and ideological codes, discourses, and ways of knowing, such that “nothing exists outside the text” (Barthes 1975, p. 36). In fact, most theorists of intertextuality see language and culture as dissolved into each other. According to Frow (1990, p. 47),

In its early elaboration by Kristeva, Barthes and others it was not restricted to particular textual manifestations of signifying systems but was used, rather, to designate the way in which a culture is structured as a complex network of codes with heterogeneous and dispersed forms of textual realization...

Frow further champions the work of Althusser as exemplifying how “discourse is co-extensive with the social, and is not opposed to a non-discursive realm” (1990, p. 52) by showing the relevance of semiotics to Marxist thought¹⁶. This critique of authorial intent will be crucial in later chapters which explore the “complex network of codes” discursively connecting, for example, bio-medical and geopolitical discourse.

The use of intertextuality as an analytical tool allows a critique of the social contestations reproduced in and by texts. Kristeva says texts are productive at the point at which horizontal and vertical intertextuality overlap. Vertical intertextuality refers to how “the word in the text is oriented toward an anterior or synchronic literary corpus,” e.g., it is influenced by past texts, while horizontal intertextuality refers to how “the word in the text belongs to both writing subject and addressee” (Kristeva 1980, p. 66) in the same way that the sign refers to a system of difference rather than a pre-discursive signified. Kristevan intertextuality can be distinguished from Bakhtinian dialogism by the observation that the point at which these two axes intersect is where texts work to reproduce social hierarchy and subjugations: “authors communicate to readers at the same moment as their words or texts communicate the existence of past texts within them” (Allen 2000, p. 39). By saying that texts are in this sense ‘productive,’ I suggest that they perpetuate social exclusions, such as those illuminated by Marston’s (1990) and Anderson’s (1991) discussions of the social construction of ‘the people’ and ‘imagined communities,’ respectively. These exclusions are performative in nature, and thus need constant re-iteration. This is not accomplished by bio-medical or even geopolitical

¹⁶ Some authors have preferred the term interdiscursivity to emphasize the importance of non-textual discourse to cultural reproduction, though it is questionable whether this term expands on intertextuality in any particularly ‘new’ way (Orr 2003).

discourse alone, but by the afore-mentioned “network of codes” connecting them both over time and from author to reader (as will be elaborated in chapter five).

This is also why intertextuality is more than simply a citation analysis. Barthes (1977) in fact, argues that the notion of individual ‘authorship’ itself is a social construction born out of capitalism to turn books into commodities and readers into consumers. Again, these observations help illuminate how texts such as the 2004 Pentagon report, the annual NSS, and the cottage industry of environmental security literature discussed previously are a product, as this dissertation will show, of previous texts concerning nature, nationalism, and geopolitics.

Genealogical View of History

A genealogical view of history is something different than, but quite complimentary to, intertextuality. Genealogy refers to a non-teleological view of history which rejects the meta-historical platform upon which history allegedly unfolds. This view refuses to privilege grand, large scale events and totalizing narratives. In Foucault’s (1984, p. 77) words, genealogy “rejects the metahistorical deployment of ideal significations and indefinite teleologies. It opposes itself to the search for “origins””. Rather, it works backward through history to trace the development of discourses and institutions (Sarup 1988). Rather than casting itself as a search for ‘the truth,’ genealogy is a search for what is counted or discounted as truth and how these categories are operated. Again, Foucault (1984, p. 79) explains:

Truth is undoubtedly the sort of error that cannot be refuted because it was hardened in to an unalterable form in the long baking process of history. Moreover, the very question of truth, the right it appropriates to refute error and oppose itself to appearance, the manner in which it developed ...

does this not form a history, the history of an error we call truth?

For Foucault, genealogy is something inscribed both in the body and the human subject. He uses it to trace the development of the subject, with intertextuality as one component within that development. This dissertation's use of intertextuality as a key analytical tool therefore draws on Foucault's genealogical view of history.

To stay with this understanding of truth as category, as opposed to underlying form, genealogy is an analysis of this long 'baking process' to which Foucault refers; it is not *what* is baked, but *how* it is baked. Indeed, Foucault (1991) stresses that he is much less concerned with what these categories are than with how they operate. For example, he is less concerned with what is 'sane' or 'insane' than with how practices of psychiatric diagnosis and commitment to the asylum (1965) or incarceration (1977) are normalized. Foucault's off-the-cuff reference to 'baking' can be likened to Kristeva's above comments on the "exteriorization of linguistic structures" as literary genres 'evolve.' I will be applying this to the naturalization of the environment-conflict thesis through environmental and geopolitical documents.

Such documents are not simply stand-alone discursive events ushering along a teleological flow of human history. Foucault (1984, p. 88) argues for an understanding of such an 'event' as "not a decision, a treaty, a reign, or a battle, but the reversal of a relationship of forces, the usurpation of power, the appropriation of a vocabulary turned against those who had once used it, a feeble domination that poisons itself as it grows lax, the entry of a masked 'other.'" Foucault (1991a) refers to this method of historical analysis as "eventalization;" I employ the term to emphasize not precisely *what* the documents say, but rather *how* they are rendered intelligible by other previous and

concurrent texts. This also enables an analysis which ‘decenters’ individual events in order to see them as parts of larger processes. He describes decentering as a type of causal multiplication, or seeing not root causes for various events or conditions, but multiple processes (such as changes in flows of power) infinitely diffuse throughout society¹⁷. Where Foucault applies eventalization to the birth of the prison, I will apply it to the normalization of the category of ‘environmental security.’

Data Sets and Methods

Data Sets

This dissertation focuses specifically on actual written texts, as opposed to, for instance, landscapes or institutions as texts. Duncan and Duncan (1988) applied the same theories of intertextuality (without specifically referring to Kristeva) to landscapes. They importantly argued that landscapes are constructed to reflect the dominant cultural codes of society, and, because those landscapes can be read like texts, they perpetuate those codes by naturalizing them (in the same way that Kristeva’s vertical intertextuality perpetuates these codes from text to text). Since then, the study of landscapes as texts has been an important analytical focus within cultural geography.

A couple examples are pertinent here. Woodward (2004, p. 3) analyzes military landscapes, arguing that “militarism and military activities create spaces, places, environments and landscapes with reference to a distinct moral order.” In a manner similar to Duncan and Duncan’s argument, she continues (p. 3) that this “exert(s) control over space in ways and through means which frequently render this control invisible.” That ‘distinct moral order’ is then naturalized and concretized. Olwig (2002), on the other

¹⁷ Foucault (1977) frequently uses capillaries as a metaphor to illustrate this.

hand, focuses on landscape as a discourse and its importance to the historical construction and naturalization of national identity. Thus Olwig is still focusing on landscape as text, but the focus of his analysis is mostly written texts, images and even stage scenery, rather than actual physical landscapes. In other words, he examines *the idea* of particularly American (or non-American) landscapes, as opposed to actual material landscapes.

This dissertation is closer to Olwig's work than Woodward's, in the sense that while I also analyzed the role of discourses of nature in the naturalization of national identity, I have done so through the written text. The texts I analyzed are different than Olwig's, and, because this dissertation is largely a critique of environmental security, I focused primarily (though not exclusively) either on official policy statements or unofficial literatures ostensibly about either militarism or population-resource balances. In the former case, the texts selected were crucial to the formation of Cold War geopolitical policy, and in the latter case the text selected were crucial to how population-resource relationships were rendered intelligible after WWII and through the environmental movement. As I explain below, these categories reflect two very broad discourses that I see informing environmental security. Landscapes are no doubt important to discourses of nationalism (and can also have political aims), but the texts I selected nevertheless more directly inform environmental security literature than would an analysis of landscapes or institutions¹⁸. The following paragraphs explain more specifically how I arrived at these texts.

As mentioned in the introduction, one contribution of this dissertation is an analytical framework in which environmental security is situated at the end of a long,

¹⁸ Though if militarism and population-resource 'science' are seen as institution, then one could possibly see this dissertation as an analysis of institutions *through* the written text as a medium.

historical interplay of environment and security discourse. It is this framework that drove the selection of primary data sets. Data were selected to reflect two very general categories, with the important caveat that part of the point of this dissertation is that these categories cannot be unproblematically separated from each other. The first includes texts generally considered to be about the environment, but which incorporate security concerns into their analyses. The second category includes texts considered to be primarily geopolitical or security texts, but which either incorporate environmental themes, or which will be shown (later in the dissertation) to be informed by discourses of nature. Table 1 (below) illustrates this typology and includes the actual data sets selected. The vertical columns reflect the above categories. I also broke each column again into two categories to distinguish environmental security literature from previous texts. The horizontal rows, therefore, reflect pre and post 1989 literatures.

Table 1: Primary Data Set Selection		
	Environmental texts incorporating security	Security texts incorporating/informed by environment
After or During 1989	EPA (1999) Gore (1992) Kaplan (1994) Myers (1993)	Mathews (1989) Parker (1990) Schwartz and Randall (2003) Wasserman-Goodman (1996)
Before 1989	Brower (1981) Brown (1977) Burch and Pendell (1945) Drysdale (1912) Ehrlich (1968) Fite (1916) Isaacson (1912) Malthusian League (1911) Osborn (1948) Pearl (1925) Stopes (1923) Vogt (1948)	Chadwick (1842) Hart (1917) Kay-Shuttleworth (1832) Kennan (1947) Keynes (2001) May (1993; <i>NSC-68</i>) McNamara (1968) Parkhurst (1917) Ritchie (1913, 1941) Sperry (1918) Wilson (1918)

Most of the texts in the uppermost row of table 1 are dealt with in chapter seven of this dissertation. With a few exceptions, the lower half of the left hand column corresponds with chapter six and the lower half of the right hand column corresponds with chapter five (though there is considerable overlap). As the following section on methods explains, data set selection and data analyses were co-evolving processes. The ‘post-1989’ texts were read initially to allow certain predominant discursive themes to emerge. These themes, which were (broadly) neo-Malthusianism and the binary logic of Cold War geopolitics, then drove the selection of texts in the lower brackets. The following section will explain the details of how those texts were analyzed in more detail.

The Environmental Protection Agency’s (1999) *Environmental Security; Strengthening National Security Through Environmental Protection* is included because it shows how one of the primary government agencies in charge of environmental protection defines and operationalizes the term environmental security. Though clearly written for political purposes, Gore’s (1992) *Earth in the Balance* is included because its proposed ‘global Marshall plan’ to address environmental degradation and Cold War rhetoric are clearly securitization techniques. Gore’s proposals are explicitly couched within Cold War rhetoric of development, containment and a generalized American ‘mission.’ Kaplan’s (1994) *The Coming Anarchy* invokes imagery of ‘containment’ or isolation against proliferating environmental degradation and thus (both implicitly and explicitly) draws on Cold War binarism. Myers’ (1993) *Ultimate Security* is authored by one of the leading consultants on the World Commission on Environment and Development, and along with being one of the original and most widely cited texts on environmental security, can also be seen as a manifestation of sustainable development

discourse. Gore, Myers and especially Kaplan all also invoke neo-Malthusian arguments – Kaplan, for example, calls Malthus “the prophet of West Africa’s future” (1994, p. 48).

Brower’s (1981) *Conservation and National Security*, Brown’s (1977) *Redefining National Security* and Ehrlich’s (1968) *The Population Bomb* were all included as examples of the securitization rhetoric often used by the modern environmental movement (and which I will show as important to environmental security). All three use the language of security, threat and war as means to prioritize environmental issues. Ehrlich’s classic text does this particularly with population issues, and will be analyzed at length in chapter seven. The remaining texts in the lower left hand column are all included because they express neo-Malthusianism viewpoints, albeit in different ways and for different purposes. Vogt’s (1948) *Road to Survival* and Osborn’s (1948) *Our Plundered Planet* will be focused on in chapter six. The others are too numerous to explain individually here, but help show neo-Malthusianism’s different manifestations in debates about class, race and moral politics; chapter six traces their influences through Vogt’s and Osborn’s books, and forward into the modern environmental movement.

In the right hand column, Mathews’ (1989) *Re-defining Security* is included for reasons mentioned earlier in chapter one, but in short is often cited as the seminal article on environmental security and appeared in the foreign policy journal *Foreign Affairs*. It is also included because part of the point of this dissertation is to show that there is nothing particularly seminal about it. Parker’s (1990) *Environment Moves to Front Burner* is included because it exemplifies how the Department of Defense operationalized environmental security immediately after the Cold War. Wasserman-Goodman’s (1996) *The Environment and National Security* was an address to the National Defense

University. It is included because Wasserman-Goodman was the Under Secretary of Defense for Environmental Security in the Clinton Administration, and her comments show a clear lineage from Cold War policy discourse to environmental security policy. Schwartz and Randall's (2004) Pentagon paper, discussed earlier, is also included as a recent manifestation of environmental security and because its geopolitical assumptions – that changing environmental conditions would cause chaos and resentment in developing countries toward the U.S. - are characteristic of the assumptions made by Kaplan (1994) and others.

The texts in the lower right were all selected to show how the Cold War geopolitics that influenced environmental security were themselves influenced by naturalism and metaphors of nature. Woodrow Wilson's (1918) *Fourteen Points* address, George Kennan's (1947) *The Source of Soviet Conduct* and *National Security Council document 68 (NSC-68, as reproduced in May, 1993)* are all included because they are crucial documents in the history of American geopolitical thought. With the exception of John Maynard Keynes' (2001) *The Economic Consequences of the Peace*, which is included, again, because of its neo-Malthusian arguments, and Robert McNamara's (1969) *The Essence of Security*, the other texts in that block are included because of the metaphors of disease, health and the body they employ towards the performative constitution of a national 'self.' These texts are analyzed primarily in chapter five and are shown to be highly informative of the containment policies and development initiatives which are, according to McNamara's (1969) book, allegedly part of the "essence of security."

Data Analysis

The selection of the specific texts under scrutiny is itself part of the analysis. Rose (2001) emphasizes a certain “eclecticism” (p. 143) of method for locating data in a discourse analysis. This includes both identifying a ‘starting point’ based on scholarship of the issue being studied and using those texts to identify other sources, as well as finding common themes among sources that might otherwise seem unrelated. This dissertation uses both approaches. As the previous section explained, much of the data selection was structured around two predominant themes identified in environmental security literature (and based on scholarship of that literature): Cold War binarism and neo-Malthusianism. These are themes at the broadest level used in this dissertation, and roughly correlate to chapters five and six, respectively. Texts within each of these themes were then read to allow more specific themes to emerge. In the former case, these themes were metaphors of the body, health and disease to construct notions of the nation, security and threat, and in the latter case they were themes of race, class, and sexual politics in neo-Malthusian literature (though the boundaries between these themes are far from distinct).

But the emergence of these themes also determined the actual texts selected and vice versa. In the chapter about neo-Malthusianism, for example, once certain important neo-Malthusian texts were identified – namely Ehrlich (1968), Vogt (1948) and Osborn (1948) – it was possible to find further data based on which texts these authors cited. Because I recognize in this dissertation that intertextuality is about more than simply one author’s ‘influence’ on another (which would assume a Cartesian authorial subject), it is important to note that this is *not* a citation analysis. It is nevertheless relevant that, for

example, Ehrlich (1968) cites Osborn (1948), who cites Burch and Pendell (1945), who cites Pearl (1925), East (1923) and Drysdale (1912), and so on. Using individual bibliographies to branch from one text to another was an important way of identifying the afore-mentioned themes of race, class and sexual politics, and the identification of these themes yielded yet more texts – Isaacson (1912) and Stopes (1923), for instance. The chapter about body metaphors and geopolitics relied much less on actual citations. After identifying the themes of body, health and disease at metaphors in Wilson (1918), Kennan (1947) and *NSC-68* (the starting points), the remaining texts were selected to reflect these themes. These texts perhaps come from disparate sources, but, as Rose (2001) puts it, “some of the most interesting discourse analyses are interesting precisely because they bring together, in convincing ways, material that had previously been seen as quite unrelated” (p. 143).

Each text was then thoroughly analyzed in terms of how they represent these themes. From each text was generated a list of quotes which exemplify how it portrays, for example, sexual reproduction, class, nationhood or threat. These lists served a number of purposes. First, it enabled comparisons between texts to flesh out certain commonalities over time (which will be explained in chapters five, six, and seven), such as the assumptions made about citizenship and the punctuated scripts of threat as emanating from the ‘other’ and direct toward the ‘self.’ Second, and related to the first purpose, this allows an analysis of how the arguments made in the texts construct particular claims to truth or knowledge. More specifically, it allows an analysis of how they attempt to naturalize their truth claims as either matters of empirical fact or as innocent language. In other words, these texts were analyzed for how they attach certain

meanings (or signifieds) to various word signifiers as though this attachment was universal or ‘natural.’ That attachment is an inherently political act, but occurs within a social context that often defines it as, at most, *about* politics, not thoroughly political itself. The data analysis employed in this dissertation is thus an analysis of how such acts of speech or writing are *rendered natural*, or depoliticized, and the policies, institutions and modes of power that are a consequences of that depoliticization.

The specific mechanism for interrogating these expressions is adapted from Barthes’ (1982) semiotics of myth-making. In his essay *Myth Today*, Barthes explains his concept of myth as not merely an object, concept or idea, but as a “mode of signification” (p. 93) which serves this process of naturalization or depoliticization. Because myth is a mode of signification, and therefore a matter of form rather than substance, anything can be a myth. Barthes explains that while “a tree is a tree” (p. 94), the way a tree is represented, signified and politicized creates the myth of the tree, which is “laden...with a type of social *usage* which is added to pure matter” (p. 94, emphasis in original) of the tree. For Barthes, then, rather than emanating from a generalized ‘nature’ of the tree, “myth is a type of speech chosen by history” (p. 94). This usage of the concept of myth is valuable in part because it allows an understanding of nature as both a material entity and a social construction. The tree as myth, in other words, is both the actual tree and the historically and culturally informed modes of signification about trees.

What is even more important about Barthes’ essay, however, is that he provides a precise scheme for showing the semiotics of myth-making. His essay first uses as an example a rose as a ‘signifier’ and passion as its ‘signified.’ What the above comments made clear was that neither signifier or signified, or rose and passion, springs naturally

from the other. He then adds that (on what he calls the ‘plane of analysis’) there are more than two components to this relationship. In addition to signifier and signified, there is the ‘sign,’ which is a combination of the other two, in this case the ‘passionified rose.’ For Barthes the signifier by itself is an ‘empty’ signifier in the sense that it has no inherent meaning. The sign, on the other hand, is itself a historically and culturally situated production of meaning (that roses mean passion), and therefore is ‘full.’ The combination of signifier and signified into a sign is the first step in his analysis of the semiotics of myth, and can be diagrammed like this:

1. Rose (signifier)	2. Passion (signified)
3. Passionified Rose (sign)	

As Barthes importantly points out, these concepts are re-combined in different ways by different theorists – Barthes specifically mentions Sartre, Freud and Saussure. In the latter case, for instance, Saussure uses the term signifier to denote a sound image and signified to denote the concept of a rose, and the sign, as with Barthes, is again the combination of the two. Barthes’ focus on a rose as a word signifier or symbol which is used to connote the concept of passion is partly because Barthes is focusing on literary texts rather than spoken language, but mostly as a way to show the relevance of the sign, and hence of a semiotic analysis, to the broader social context which it constitutes and is constituted by (and to that extent Barthes’ analysis is different in form from Saussure’s, but not incompatible analytically).

The union of signifier and signified into a sign for Barthes is what he refers to as a ‘first order semiological system.’ Myth is then a ‘second order semiological system,’

which uses the original sign as its signifier. This second order system also has its own, more complicated signified, which combined with the original sign (second order signifier) creates yet another sign, one that for Barthes is myth. Barthes is not overtly clear about how this extends from his example about roses, but the point is that the 'passionified rose' is a signification then connected with the expression of love or passion, all of which is part of the legitimation of the cultural myth that the proper expression of affection is the giving (and hence buying) of roses (or other items). The point is also that myth works to reduce the original unity of signifier and signified (rose and passion) "down to mere language" (p. 99), or, in other words, it makes the rose as a symbol of passion seem 'natural' or 'innocent.'

Barthes (1982) is more extensive in his deconstruction of a magazine cover with a picture of a black soldier in a French uniform giving a salute. In the first order semiological system, the signifier of the black soldier combines with the signified of French patriotism (in the form of a salute and a uniform) to create the sign of the black soldier expressing allegiance to France. The myth then legitimated by this sign is one of French imperialism. The second order semiological system here combines the black patriotic soldier (signifier) with the implied "zeal shown by this Negro in serving his so-called oppressors" (p. 102) as an implied response to criticism of imperialism (signified) into the myth of the benevolence of French imperialism. The first order semiological system is language, the second order is 'form.' Barthes does not sketch this out explicitly, but I would sketch it like this (with the second order semiological system in bold):

1. Black Soldier (signifier)	2. Allegiance to France (signified)	
3. Black Soldier Expressing Allegiance to France (sign) I. Signifier		II. Black Soldier Serving ‘Oppressors,’ or French Color-Blindness (Signified)
III. The Overall Benevolence of French Imperialism (Sign)		

This type of sketch will be applied to environmental security in later chapters. While it is no coincidence that the soldier in the picture is black, in this case the myth nevertheless works to naturalize, or reduce to “mere language,” the expression of patriotism and allegiance of the black soldier. It is important to point out (especially in this example) that the myth of French imperialism here is not directly hiding or effacing political intent; the purpose of using a black soldier is obvious. According to Barthes, “myth hides nothing and flaunts nothing; it distorts; myth is neither a lie nor a confession; it is an inflection” (p. 116). In other words, the image of the black soldier showing allegiance to France is very clearly a statement *about* a political issue and makes an obvious argument. When Barthes says that the effect of myth is that the (first order) sign is “immediately frozen into something natural” (p. 116), he is arguing that what is lost is that the very linguistic combination of signifier and signified into sign *itself* is a political act (in other words, it *is* politics, not just *about* politics). This ‘naturalization’ effect is a matter of making French imperialism a given, such that it would seem to precede the first order, linguistic sign. The myth in this sense is thought to precede language; the language is regarded as merely a political argument about the myth.

This scheme was applied to certain recurring themes which became apparent in the list of quotes generated from the texts, such as ‘body politic’ and ‘population bomb.’ In general I applied Barthes’ scheme to the use of metaphors to see how they work to naturalize the political. One example is the common use of the ‘j-curve’ to represent

population growth in a lot of environmental security literature. The sharply sloping graph is presented as a natural, mathematical way of showing population growth, rather than as a political act in itself. Population has certainly grown rapidly, but population change is more than a mathematical function of $2x$ becoming $4x$, $8x$, $16x$ and so on. This way of graphing population change excludes other issues such as political, cultural and economic context of human reproduction. To call population growth a 'myth' does not mean that it is not real any more than referring to the myth of French imperialism means French imperialism is not real. The 'myth' of population growth is that it is a simple, biological fact of nature that is innocently portrayed in a graph (e.g., it precedes the graph rather than the graph itself being power/knowledge formation). This myth is explored further in chapters six and seven.

As a second brief example, Gore (2002) regularly refers to civilization's "roots in the earth" and "foundations in nature" (p. 1), and illustrates this (somewhat implicitly) by invoking the imagery of fishing vessels stranded in the dried up Aral Sea (reproduced in appendix A). This image is a snapshot in time and space and is used to emphasize the dependency of a symbol of human industry on its environmental context. The ecological disaster of the Aral Sea is of course very real, but is constituted by multiple social relations that are not captured in the photo. Although Gore's explanation of the issue recognizes some of these relations, the photo as a sign naturalizes an interpretation of human-environment relations based on a metaphorical 'rootedness' in nature.

Chapter five applies this exercise to metaphors of the body, health and disease to describe the nation, security and threat, respectively. It specifically focuses on often taken-for-granted expression of 'the body politic.' As that chapter will argue further,

body metaphors operate to naturalize the nation as a system of inter-working parts toward a common goal (health). After WWII, Harry Truman often characterized American efforts to promote democracy and ‘contain’ Soviet communism in terms of a ‘total war,’ an expression intended to marshal the attention and cooperation of all the various parts of the populace in unison, much as the different systems of the human body work together to promote health. I argue that body metaphors as linguistic signs are crucial to the myth of containment and total war. Barthes’ system can be applied in this way:

1. Body (signifier)	2. Nation (signified)	
3. Body politic (sign) I. Signifier		II. National unity of inter-working parts (Signified)
III. Truman’s ‘total war’ myth (Sign)		

The manner in which these metaphors serve to naturalize nationhood will be explored in much more detail later, but in short, this diagram shows that the myth of total war is based on the reduction of the body metaphor to “mere language,” or, in other words, as a mere political argument about a pre-existing nation-state rather than an act of politics which constitutes the nation. The linking of body and nation into the sign of the body politic is depoliticized – it is rendered as descriptive language to an allegedly pre-existing ontology.

I therefore use multiple methods in this dissertation. The first was a co-evolving process of identifying predominant themes in the literature, selecting further texts based on those themes, and then identifying more sub-themes from these additional texts, and so forth. This continued until intertextuality between environmental (or neo-Malthusian) and security (or geopolitical) literatures could be identified and described. At that point

certain key discursive constructions and metaphors were identified and subjected to Barthes' (1982) semiotic scheme. The methodology used is therefore based on discourse theory and Kristeva's (1980) concept of intertextuality as discussed in the theory section of this dissertation. It is furthermore informed by Barthes' notion of myth as a mode of signification. I also translated his diagrammatic scheme for showing this into an important part of my methods, with the understanding that it is used as an analytical tool and does not imply that the objects of study can in actuality be easily compartmentalized. The remainder of this dissertation will flesh out the history of exclusions, naturalizations, and constructions of truth which are complicit in the signification of environmental security.

Chapter Five: The Bio-Politics of Bodies Politic

Introduction

In June of 2006, when seven Floridians were indicted for allegedly plotting to attack the Sears Tower in Chicago, FBI director Robert Mueller characterized the Floridians as “yet another homegrown terrorist cell” (Mueller 2006). This was only the latest use of nature as metaphor to describe acts of domestic terrorism in organic terms. Media accounts of ‘homegrown terrorism’ are now common, invoking images of a nationally-bounded garden to distinguish it from apparently ‘normal’ terrorism. Ten days after the attacks on the World Trade Center in 2001, Richard Haass, then director of the Policy Planning Staff in the State Department, unearthed the Cold War moniker of ‘containment’ as part of his rhetorical appeal to the National Defense University analogizing terrorism as a “terrible, lethal virus.” He continues:

Terrorism lives as part of the environment; sometimes dormant, sometimes virulent, it is always present in some form.... We therefore need to take appropriate prophylactic measures at home and abroad to check terrorism from infecting our societies or damaging our lives.... And we need to drain the swamps where terrorism flourishes with long-term programs to promote development and good governance. But when the virus appears, we must quarantine it and fight it using all our power (Haass 2001).

I cite the above selections as a jumping off point to explore how modern geopolitical imaginaries are highly informed by discourses of nature. Mixed metaphors of the body and the garden have been exceedingly common in classic and Cold War U.S. geopolitical discourse and are implicated the spatial abstraction of a nationalized self.

This chapter, then, interrogates the deployment of nature as a “singular abstraction¹⁹” (Williams 1980) mostly in the form of body metaphors (though frequently mixed with garden metaphors) as a key legitimation strategy in classic U.S. geopolitical discourse. The purpose of this chapter is also to show how the theories of intertextuality as outlined in the previous chapter can pull together literatures and discourses which might otherwise seem unrelated (and have been written about as though they were).

This chapter is also situated within a critical geopolitics literature which has shown the intertextuality of geopolitical discourse and naturalist epistemologies. I will argue that all forms of naturalism deploy some form of metaphor, and these metaphors are complicit in forming “oppressive theories of the body political” (Haraway 1991, p. 11). In particular, it addresses the use of what Deudney (1999) refers to as ‘analogical naturalism’ in the form of body metaphors to describe the state and its defense. I argue that such metaphors are partly informed by what Foucault (1980) identifies as a ‘bio-politics of health’ emerging in the 17th and 18th centuries, a set of discourses about the body and its maintenance which serves to enable a Foucauldian ‘policing’ of populations.

The arguments made in this chapter break the ‘bio-politics of bodies politic’ down into at least two main themes. First, body metaphors reduce society into an unbroken unity, a system of inter-working parts that fulfill a role towards the reproduction of that unity. The unity is coded as fundamentally moral, but endangered by the infiltration of foreign contagion, coded as immoral. In many ways, then, body metaphors are discourses of power which work to produce what Anderson (1991) terms ‘imagined communities.’ They obscure internal exclusions and dominations by abstracting and universalizing

¹⁹ Williams’ (1980) now classic piece importantly shows that the singular abstraction of an external nature is a pivotal development in Western idealist thought, linking it dialectically to the use of the term ‘nature’ as denoting an essential, immutable quality of something.

populations into ‘the people’ (Marston 1990). They also reproduce understandings of threat as always emanating from outside the body, and only enabled by those who would destabilize this perfect unity of inter-working parts.

And thus the second theme is the performative constitution of self and other as the body politic is constantly policed for those who would destabilize this unity, just as the human body identifies and expels foreign contagions. Throughout this chapter I will argue that the masculinized scientific pursuit to subdue nature is reproduced in the state’s – or the male head of the body politic – insistence on subduing the female torso by disciplining internal ambiguity. I will also situate this claim within a discussion of colonialism, science and nature-culture binaries in order to fully show how broadly related the discursive construction of national identity is to so many other discourses.

The spatial abstraction of the nationalized self opens up what Lefebvre (1991) terms a ‘space of representation,’ a discourse of space that informs what can possibly be said or imagined. In Pratt’s (1998, p. 13) terms, such abstractions “open up some avenues of thought and necessarily close down others.” Body metaphors, for example, allowed Truman to justify rhetoric of a ‘total war’ against communism requiring the cooperation of all the inter-working parts of the body politic, informed discourses of war on everything from Aids to poverty in the last decades of the 20th century, and, in a post-911 context, are infused within media characterizations of domestic terrorism as carried out by “homegrown terrorists.”

In the next section, I juxtapose Fukuyama’s (1998) discussion of ‘chimpanzee politics’ with Haraway’s (1991) critique of animal sociology as a starting point to show how naturalist epistemologies can serve to naturalize geopolitical order. The third section

looks at several different types of naturalism, provides examples of them which are particularly relevant to geopolitical and post-colonial discourse, and shows their relevance to this dissertation. I also argue that all forms of naturalism are essentially metaphorical, and briefly discuss the importance of metaphor to an analysis of discourse. In the fourth section, I review how Cold War geopolitical documents are influenced by classic geopolitical discourse and 19th century naturalism, while the fifth section further situates the latter within yet broader discourses of nature, gender and colonialism. The next section then shows how the important geopolitical texts discussed up to that point in the chapter are legitimated via a bio-political deployment of powerful metaphors of gardens and, even more frequently, the human body to explain social and political life. This section, in other words, supports the above argument by illustrating the intertextuality of bio-medical discourse and geopolitical discourse. A few concluding remarks then indicate how these observations will dovetail with critiques of environmental security made in the remainder of the dissertation.

Naturalist Epistemologies: The Example of Chimps and Geopolitics

In 1998, the eminent foreign policy journal *Foreign Affairs* carried an article in which neo-conservative Francis Fukuyama reduced the majority of war and violence to “biologically grounded nature” (1998, p. 40). In Fukuyama’s polemic, largely a reaction to (then recent) feminist currents in international relations (IR) theory (e.g., Enloe 1990; Peterson 1992), he essentialized men as more war-prone and women as more peaceful²⁰. As evidence, he pointed to cases of violence perpetuated by coalitions of male

²⁰ Though feminist approaches to international conflict are highly varied, including essentialist, non-essentialist, and non-dualistic, co-constructive theorizations (Tickner 2001; Nightingale 2006), Fukuyama reduces most of it down to a simplified notion of non-essentialism.

chimpanzees against other chimpanzees in two locations: the Burger's Zoo in Netherlands, and the Gombe National Park in Tanzania. In the latter case, several dominant males in one group ranged into adjacent territory to kill other males, eventually incorporating (Fukuyama reads this as 'forcing') remaining females into their group. In a quick jump from chimps to humans, Fukuyama (p. 33) observed that,

It is very difficult to watch Muslims and Serbs in Bosnia, Hutus and Tutsis in Rwanda, or militias from Liberia and Sierra Leone to Georgia and Afghanistan divide themselves up into what seem like indistinguishable male-bonded groups in order to systematically slaughter one another, and not think of the chimps at Gombe.

Fukuyama assumed that chimpanzees are an appropriate model for the behavior of pre-modern, stateless humans, thereby reinforcing a neo-realist and conflict-driven politics by re-iterating longstanding Hobbesian assumptions of an original 'state of nature.'

There are a number of theoretical problems with Fukuyama's extrapolation of 'chimpanzee politics,' as he calls it, to human history. For example, Haraway's (1991, p. 11) important critique of animal sociology shows that it has been "unusually important in the construction of oppressive theories of the body political." As such, Haraway shows the "embodiment of social relations in the content and basic procedures" (p. 12) of animal sociology that are part and parcel of the naturalization of domination and hierarchy in human society, in ways that are readily apparent in Fukuyama's essay. Fukuyama brings his own gendered political assumptions to his interpretations of female and male chimp behavior: "female chimps have relationships; male chimps practice realpolitik" (1998, p. 25). He also interprets "hooting and feverish excitement" (p. 24-5) as a *celebration* of murder, assumes chimps as an analogue for pre-political, pre-cultural

humans, and, crucially, only uses chimp behavior to explain intra-state, but not inter-state, conflict.

Though these critiques are important and will be revisited later, a detailed deconstruction of Fukuyama's work is beyond the scope of this chapter. Rather, I juxtapose Fukuyama and Haraway in order to show a contemporary example of the use of naturalist epistemology to legitimate political order and to open a discussion of how metaphors of the 'body politic' serve to naturalize the state. In particular, I advance this discussion by showing how Haraway's critique helps illuminate the intertextuality of classic U.S. geopolitical documents, such as Woodrow Wilson's fourteen points, George Kennan's 'X-telegram', and National Security Council Document 68 (NSC-68), with 19th and 20th century bio-medical discourse.

As I explain further in the penultimate section, authors such as Campbell (1992) and Olwig (2002) have discussed the importance of organic or bodily metaphors to the social construction of the state, while Martin (1994) has shown the importance of military metaphors in bio-medical discourse. In the latter case, for example, "the portrait of the body conveyed most often and most vividly in the mass media shows it as a defended nation-state, organized around a hierarchy of gender, race, and class" (Martin 1994, p. 51-52). Federici (2004) importantly shows the importance of the body in the historical development of capitalism. This chapter brings these types of analyses into conversation by showing how the horizontal and vertical intertextuality of the discourses they analyze (in the form of their dual use of metaphor) is implicated in the naturalization of territorialized national identities and the militaristic policies advocated on their behalf.

Naturalism and Metaphor

The sociobiology of human conflict that Fukuyama draws on to make his point has important intellectual beginnings in the late nineteenth and early twentieth centuries (Crook 1994), a time when the social sciences attempted to gain scientific credibility by pinning their epistemologies to various naturalisms. I reference naturalisms in the plural because there exists no singular form of naturalism. Agnew (2002) argues that all forms of naturalism share two basic characteristics: 1) they assume a rational subject independent of its object of observation, an assumption typical of enlightenment rationality, and 2) they borrow precepts and conceptual tools from the physical sciences to explain human phenomena. Sociobiology may be the most direct example of this; studying chimpanzee behavior is not said to offer merely a metaphorical explanation of human conflict, but allegedly sheds light on an intrinsic human nature that is causative of conflict.

Deudney's (1999) less critical typology of naturalism is useful heuristically in separating out these issues of metaphor and materiality at the same time that it is conceptually problematic. He identifies four categories of naturalism: analogical naturalism, cosmic naturalism, anthropological naturalism, and functional-materialist naturalism. Although I borrow Deudney's terminology here, in this chapter I purposely blur the distinctions between his categories in order to show that all forms of naturalism are ultimately metaphorical.

Analogical Naturalism

In short, analogical naturalism involves the description of human social behavior using metaphors of nature. Deudney (1999) cites 19th century appropriations of

Darwinism to explain human behavior as his example. The most classic example, though, is perhaps the social Darwinist Herbert Spencer's *Man Versus the State* (1892), in which social interaction between human beings is equated to a ruthless, animalistic struggle that eventually leads to positive social outcomes, and was used by Spencer to justify laissez-faire capitalism. The influence of Darwinism on social and political theory in the nineteenth century is far too enormous to do justice to here, but the next section of this paper will detail an example of analogical naturalism commonly found in critical geopolitics literature – Friedrich Ratzel's Organic Theory of the State.

I will call on analogical naturalism later in this paper as I explore metaphors of the human body to explain social and political life. These metaphors are replete with descriptions of immigrants as viruses invading the body politic, gendered notions of male, rational head protecting a female, emotional body, and a bio-medical discourse portraying the human body as a unified fortress protected by modern scientific practice.

Anthropological Naturalism

For now, recall that Fukuyama was not suggesting that chimpanzee violence was *like* human violence, but that, because chimps are the closest animal relative to humans, seemingly arbitrary violence between them proves that aggression is hard-wired into the human mind. This corresponds to Deudney's (1999) anthropological naturalism. Deudney here refers to the assumptions of racial superiority used to justify European imperialism. Fukuyama, of course, is not suggesting any inherent racial characteristics nor even basing his analysis on racial lines, but he is very directly arguing variable levels of innate human aggression among gender lines, thereby perpetuating an implicit

hierarchy (especially when he argues that the verities of a violent world necessitate aggressive – and presumably male – leadership).

Thus we see a distinction between naturalism as a metaphor borrowed from nature and naturalism suggesting no metaphor at all, but rather an intrinsic ‘nature’ to human social activity. While I do not claim to entirely collapse that distinction, one purpose of this chapter is to destabilize its categorical boundaries. The sociobiology of primates purports to investigate the latter naturalism, but the use of primates to understand human behavior assumes an ultimately metaphorical ‘ladder’ of human biological and social evolution, both from primates to humans and from early, Hobbesian ‘state of nature’ humans to modern humans. Although Darwinism shows a clear evolutionary connection between primates and humans, the assumption of a teleological progress towards ever more advanced and sophisticated forms is, according to Crook (1994), an extrapolation of Darwin’s concept to humans not necessarily endorsed by Darwin himself. Crook (1994) explains this teleological form of Darwinism (extrapolated to human social and political life) as the result of the dominant Christian theology incorporating assumptions of a pre-ordained schema in order to rationalize and blunt the effects of the haphazard, secular disorder that Darwinism represented. That metaphorical ladder was the work of Spencer and others, not Darwin; in other words, and, more to the point, it is the same metaphor that was used to legitimize notions of racial inferiority/superiority. Anthropological naturalism is thus not free of metaphor itself. In his typology, Deudney was not necessarily saying otherwise, but Haraway’s work can illuminate how Fukuyama’s own anthropological naturalism, in the form of the sociobiology of chimpanzees, suffers similar epistemological problems. In the same way that an insistence on teleology

ultimately reified racial divisions, uncritically assumed gender roles inform both the practice of sociobiology and its extrapolation to humans.

Functional-Material and Cosmic Naturalism

Functional-materialism, in Deudney's (1999) terms, refers to the ways in which physical geography limits and enables various human endeavors and selects for different outcomes, and is exemplified in geopolitical literature by Alfred Mahan's *The Influence of Sea Power Upon History* (1890) and Halford Mackinder's *The Geographic Pivot of History* (1904). Such arguments, while variably determinist or possibilist, still borrow Darwinian principles to explain human conflict – in this case, however, with larger social groupings (nations, states, races, etc) as analogous to the individual organism in Darwinian evolution. They employ a metaphor of nature selecting for certain endeavors over others in its influence over that metaphorical ladder of human evolution. There is little doubt that the physical environment does have an impact on social outcomes, as Diamond (2005) extensively argues, but the point is that the degree to which human society is impacted by physical environments is in constant flux depending on economic, cultural, political and discursive contexts, rather than an empirically verifiable reality. The very notion of nature impacting upon and delimiting human action is itself metaphorical. Deudney's mention of cosmic naturalism refers to notions of a pre-ordained universal order of things – Deudney references Lovelock's Gaia Hypothesis as an example. While interesting, such arguments are outside the scope of this chapter.

While Spencer's extrapolation of Darwinian principles to human behavior is clearly metaphorical, Darwin himself “transferred metaphors taken from European military and imperial experience directly to nature” (Crook 1994, p. 15), often

referencing a 'struggle for existence' with certain creatures 'overmastering' each other. He later emphasized, though, that these were 'only' metaphors. Metaphors are rarely innocent, however, and even if often overlooked are very important in the production of modern geopolitical imaginaries.

Aiken et al (1998, p. 4) argue that metaphors are important symbolic constructs that perform "cultural and political work" because "power accrues to those who set the standards of signification." Metaphors are powerful instruments for setting such standards because they work to reduce otherwise elusive or ambiguous concepts into something known, familiar, or seemingly static. Consequently, as mentioned above, metaphors "open up some avenues of thought and necessarily close down others" (Pratt 1998, p. 13). Geographic metaphors are especially adept at this because the socially constructed 'givenness' of space serves to render static and de-historicize complex spatial and temporal dynamics (Smith and Katz 1993, Pratt 1998).

Smith and Katz (1993, p. 68) argue that "metaphor is inseparable from the generation of meaning, from language and thought," and that metaphor is thus highly implicated in the social production of space. Indeed, as chapter four's discussion of semiotics suggest, all language is basically metaphorical. The 'work' done by invoking metaphors often involves normalizing ideologies of domination that have important consequences; the metaphorical teleological 'ladder' of progress, for instance, not only reified racial divisions but justified an imperialism that further organized the world in hierarchical ways. Also, War is naturalized either because chimpanzees do it, or because it is necessary to produce positive social outcomes at various scales, or because of an environmentally determined global hierarchy.

Moreover, these kinds of metaphors can be used as instruments to appropriate scientific knowledge in order to regulate and manage populations – what Foucault (1978) terms ‘bio-power’. The penultimate section of this chapter shows the “cultural and political work” (Aiken et al 1998, p.4) done in the form of the appropriation of bio-medical discourse to discipline identity and spatialize populations monolithically toward geopolitical ends. The next two sections, however, situate classic U.S. geopolitical texts within powerful discourses of science, gender and nature.

Classic U.S. Geopolitics: Text and Intertext

Most historical accounts of the development of militarism in the U.S., and what some refer to as a ‘national security state,’ privilege concrete, well-known events, such as the attacks on Pearl Harbor, as proximate causes. Hogan (1998), for example, generalized a (perhaps overly) broad shift in American consciousness as Americans began to realize that advancements in military weaponry meant they were no longer geographically insulated. In contrast, critical geopolitics literature has shown how geopolitical developments do not spring unproblematically from externally imposed stimuli like Pearl Harbor; Agnew and Corbridge (1995), for example, differentiate between geopolitical order and geopolitical discourse, arguing that they are in fact co-constitutive²¹. An important step along these lines has been a critical interrogation of the actual texts promoting Cold War militarism mentioned in the introduction, while situating these within the discursive context of the classic geopolitics of Sir Halford Mackinder and Friedrich Ratzel, among others (an agenda initiated by Dodds and Sidaway 1994).

²¹ Generally, geopolitical order refers to material and institutional geopolitical realities, while geopolitical discourse refers to the ideational factors, geographic imaginations and ways of knowing and communicating which formulate geopolitical order.

This paper adopts the same textual approach. Many pre-WWI opponents of militarism relied on long standing Jeffersonian cultural narratives stressing liberal individualism, values that would allegedly be eroded by a militaristic state. U.S. business interests overseas and the Monroe Doctrine notwithstanding, it took an ideological challenge to these discourses to amp up U.S. internationalism. This was found in President Woodrow Wilson's 14 points (1918), one of the first documents to declare a historically defined global mission for the U.S. and to suggest that domestic security depended on fulfilling that role (in the form of a rhetorical universalization of democratic values). Internationalism of course does not necessarily mean militarism, though later I will examine how this coincided with the 'preparedness' movement of the early 20th century, as codified by the National Security League, a movement which often deployed its own body metaphors to describe the state and its defense.

Military expenses as a proportion of the total U.S. federal budget did triple during the decade after WWII, thus the Truman Doctrine, George Kennan's *X-Telegram* (1947), and *NSC-68* are included here as essential in the construction of a militaristic modern geopolitical imaginary. After WWII, factions within the Truman administration advocating diplomacy and dialogue with the Soviet Union were drowned out by those, such as Kennan's, pushing a more hard line approach to security. In 1946, Kennan, a U.S. diplomat stationed in Moscow, delivered an 8,000 word telegram to Washington, casting the Soviets as implacably bent on world domination as a consequence of their historical and geographic position. Then President Truman was highly influenced by this line of thinking, and would later implement military aid programs to both Greece and Turkey, arguably to block Soviet access to the Mediterranean. Truman rhetorically simplified the

local political conflicts in those countries and extrapolated them to an alleged global struggle between freedom and tyranny; his Truman Doctrine became arguably the “first significant public statement of American Cold War geopolitics” (Ó Tuathail 1998, p. 48). Within the year Kennan would publish in *Foreign Affairs* an article titled ‘The Sources of Soviet Conduct’ (under the pseudonym ‘X’, hence it is often referred to as the ‘X-Telegram’) which further codified the Cold War policy of ‘containment’ of Soviet communism (Ó Tuathail 1998). In response to these documents, Soviet aggression in Eastern Europe, and the development of Soviet nuclear technology, Truman later sought policy advice from his newly formed National Security Council. In 1950, the NSC circulated to various government officials NSC-68, which outlined (but downplayed) several policy options before recommending “a rapid build-up of political, economic, and military strength in the free world” (NSC-68, re-printed in May 1993, p. 24). Historians have often credited NSC-68 with precipitating, as much as any other single document, Cold War militarism in the U.S.; Hogan (1998) refers to it as the ‘turning point’ in the development of the ‘national security state’²².

Critical geopolitics literature has been successful in exploring the intertextuality between classic, Cold War, and contemporary geopolitical discourse, typically showing how these texts were influenced by early political geographers such as Friedrich Ratzel, Halford Mackinder, and Isaiah Bowman. Agnew (2002) is especially adept at exposing the naturalist epistemologies of classic geopolitics. Agnew argues that many academic subjects developed in the late 19th century as a means of furthering national politics;

²² This term generally refers to a state in which the national security is elevated to the highest level of politics, meaning its provision is solely the jurisdiction of national security ‘managers’ and the scientific expertise they employ (Hogan 1998). It also implies a new, international role of government, and to the extent that it necessitates military build-up it can be seen as the ‘guns’ side of ‘guns-and-butter politics’.

anthropology was used to measure differences between human groups, history was used to develop nationalism through national historical narratives, and geography was used to map and portray “national territories to communicate the material basis of national identity in the burgeoning elementary schools of the era” (2002, p. 80). Geography was used to create national identity by invoking, for example, ‘blood and soil’ conceptions of nationhood and assuming a universal ‘spirit’ or ‘will’ to various social identities such as nation, class and race. Furthermore, argues Agnew, the use of scientific precepts in social analysis was a way of harnessing ‘expert opinion’ towards the preferred ends of the state by reifying a rigid distinction between facts and values. The discourse of geopolitics was thus reproduced as geopolitical reality by naturalizing conflict and national interest as part of the natural order of things.

For example, the afore-mentioned extrapolation of Darwinian evolutionary biology to human affairs was appropriated by the German geographer Ratzel in his ‘organic theory of the state’. Ratzel (1897) naturalized war by arguing that state expansion led to higher forms of culture in the same way that competition amongst animals allegedly led to more sophisticated ecologies. There did, of course, exist at the time challenges to Ratzel’s form of social Darwinism. Élisée Reclus and Peter Kropotkin, French and Russian anarchists respectively, both argued vehemently for the relevance of geography to peace rather than war. Kropotkin (1902) countered Spencerian social Darwinism by interpreting Darwin differently. Rather than extrapolating only competitive struggle to human societies, Kropotkin stressed the mutual cooperation between and among species as a dictate for how human societies evolve – an argument sometimes referred to as ‘peace biology’ (Crook 1994). Kropotkin is typically, and rightfully,

credited with going against the dominant intellectual currents of the time by resisting state legitimation of violent conquest. However, it is important that while ‘peace biology’ rejects naturalized violence, it does not reject nature as analogue as a basic epistemological principle, underscoring the hegemonic influence of naturalism in the 19th century²³.

That Ratzel’s ideas were crucial in 20th century German expansionism is now of course well documented, as is the observation that Ratzelian environmental determinism was influential in the development of early 20th century American political geography (see O’Loughlin and Heske 1991, Agnew 2002, Mamadouh 2004). In short, American geographers such as Ellsworth Huntington and Ellen Semple drew upon familiar analogical naturalisms. Semple, for example, argued that “man is a product of the earth’s surface” and that:

man can no more be scientifically studied apart from the ground which he tills, or the lands over which he travels, or the seas over which he trades, than polar bear or desert cactus can be understood apart from its habitat (1911, pp. 1-2).

While Semple refers to Ratzel’s organic theory of the state as “brilliant and far reaching” (1911, p. vi), she outwardly shunned Spencerian social Darwinism. She recognizes in the preface to her 1911 volume that Spencer’s ideas show up regularly in Ratzel (1897), but problematically reduces them to mere ‘scaffolding’ that when removed, left Ratzel’s theory perfectly in tact.

²³ In other words, while Haraway’s (1991) critique of animal sociology serves to excoriate Fukuyama’s (1998) contentions, it does not necessarily find common ground with ‘peace biology.’ Haraway argues for the emancipatory potential of understanding “how and why animal groups have been used in theories of the evolutionary origin of human beings” (1991, p. 12), implying a rejection of naturalism on an epistemological level, and thus Kropotkin’s as well as Spencer’s work.

Isaiah Bowman, an influential advisor to Woodrow Wilson at the Paris Peace Conference after WWI and an important foreign policy figure throughout both World Wars, also outwardly shunned Huntington's and Semple's determinism, but in a manner similar to Kropotkin's refutation of Ratzel or perhaps Semple's disavowal of Spencer. For Bowman, "it was the scientific 'neutrality' of naturalism that was most appealing rather than this or that biological factor per se" (Agnew 2002, p. 74). His influential book *The New World* (1921) still contained "overtones of social Darwinism as well as a modicum of racial prejudice" (O'Loughlin and Heske 1991, p. 40). In it, Bowman saw international aggression as inevitable and railed against post-war isolationism, arguing that aggressive U.S. internationalism and economic expansion were the only ways to achieve peace. Bowman's naturalistic framework was influential in defining the global mission outlined in Wilson's Fourteen Points.

Halford Mackinder's functional-material naturalism was also influential in shaping Cold War geopolitical discourse. Mackinder's (1904) well known 'heartland thesis' dominated geopolitical discourse in the early 20th century. During the interwar period, the influential American geographer Nicholas Spykman (1942) adapted Mackinder's argument to stress the importance not of controlling the 'heartland,' but of policing the 'rimland' around Eurasia – an admonition that would presage the Cold War containment policies precipitated by Kennan's work, the Truman Doctrine, and NSC-68. O'Loughlin and Heske argued that "there is little doubt that the immediate postwar policy analysts such as Kennan... were strongly influenced by the writings of Spykman and frequently used the language of Mackinder" (1991, p. 44).

Further Intertext: Nature, Gender, Colonialism

The embeddedness of Cold War containment policies in classic geopolitics is now fairly well traveled academic terrain. This chapter expands on this showing an even deeper intertextuality of geopolitical texts with yet broader discourses of nature, gender, and the state. For example, it is far from trivial that Semple regularly refers to human societies collectively as a 'he' that is subject to a feminized nature which

mothered him, fed him, set him tasks, directed his thoughts, confronted him with difficulties that have strengthened his body and sharpened his wits, given him his problems of navigation or irrigation, and at the same time whispered hints for their solution (1911, p. 1).

Semple is not directly referring to states, but the gendering of human political organization as male and nature as female has far-reaching intellectual precedents.

A significant amount of scholarship has shown that pre-enlightenment understandings of nature, while still gendered female, conceptualized it "as a living, nurturing organism. Work, culture, nature, and daily life were interwoven in a seamless web, and a nurturing, female identified earth was considered to be the root of all life" (Domosh and Seager 2001, p. 175). If such gendered understandings abated some forms of resources exploitations, they were nevertheless deeply implicated in oppressive and hierarchical social structures (Merchant 1989). The development of enlightenment rationality, complete with the construction of an all seeing subject independent of its object of observation as indicated in Agnew's (2002) first characteristic of naturalism, retained gendered notions of nature, but re-invented nature as a set of mechanical laws to be objectified, known, and mastered.

Domosh and Seager (2001, p. 176) characterize the gendered development of the modern social and physical sciences as such:

In the era of emerging modernism, *both* nature and women were cast as servants for the male scientific spirit...The new Baconian men of science struggled to subdue woman/nature, to know her secrets, to tame her wildness, and to put nature to work in the service of (male) human enterprise.

Haraway (1997) facetiously refers to these ‘men of science’ as the “modest witness,” who insisted that only an objective knowing observer could employ reason sufficiently to free mankind from nature’s wrath by carefully dissecting its (or her) machinations. Haraway shows how this modernist discourse excluded women from its founding narratives by referencing Robert Boyle’s 17th century demonstrations of the use of the air-pump to create a vacuum²⁴. Boyle, often considered the father of modern chemistry, insisted that the credibility of scientific experimentation depended on a division between public and private space, such that observation and results had to be managed in a public forum. As Haraway points out, however, what Boyle saw as ‘public’ was very exclusionary: women were kept out of the proceedings not because of a perceived lack of intelligence, but because they were thought to be too irrational to be a properly ‘modest’ witness.

This sense of independent reason has been crucial to narratives of state formation, and thus implicated in geopolitical discourse. Just as the independent reason of modernity was to free humanity from the confines of nature by mastering it, it was also to guide the way politically via the social contract. While Hobbes himself criticized Boyle’s exclusionary sense of ‘public,’ his *Leviathan* deploys this same independent reason to rescue human social life from an anarchic, mythic ‘state of nature.’ As Campbell (1992)

²⁴ She references Shapin and Schaffer’s *Leviathan and the Air-Pump* (1985) as an important starting point.

and Runyan (1992) persuasively argue, such discourses of danger operate as a constitutive 'other' against which the state is rationalized. As modernity dictates the social contract as the optimal path to a better life, nature and the state, and nature/culture binaries more generally, are found to be co-constitutive.

The gender exclusivity found in Boyle's work also informs narratives of state formation. Marston (1990) points out that Rousseau saw women as a threat to the social contract because they were allegedly too irrational to see it through, and thus relegated to the private sphere. Rousseau also used the gendered analogy of a 'stag hunt' to rationalize the social contract. In this analogy, a group of male hunters in a pre-cultural context set out to kill a stag. While the combined efforts of all the hunters is sufficient to do the job, any one hunter realizes more profit by instead pursuing a single hare for himself, causing the group dynamic to break down; one hunter feeds on a hare, and the stag escapes. For Rousseau, the social contract is a rational technology for equitable distribution. As Tickner (2001) points, women are left out of the foundational myths of state formation, deemed too irrational for the public, cooperative sphere.

The state, then, can be seen as the gendered expression of a male, cultured, eagle-eyed subject constructed in contradistinction to the female, irrational nature. The state is furthermore (as in Rousseau's stag hunt) an instrument for managing, rationalizing, and disciplining the ambiguity and wildness in an allegedly external nature. Post-colonial literature has shown this to be especially the case in the very imperialism justified by Ratzelian organicism. European imperialism was always legitimated by notions of racial superiority, but Gregory (2001) shows how colonists portrayed colonial natures as more brutal, less forgiving, and therefore in greater need of domination. In this case, colonial

nature served as an ‘Other’ against which European social and political life was defined. McClintock (1995) offers an example of this that helps set the context for a discussion of bio-politics and bodies politic in the discursive economy of geopolitics. McClintock shows how norms of cleanliness and bathing habits developed in 19th century Victorian society in contradistinction to the perceived ‘dirtiness’ of colonial ‘savages’. Soap, for example, was not only derived from colonial raw materials, but also marketed as a symbol of what made Victorian society more culturally advanced than their colonial counterparts. In other words, the very cultural advancement Ratzel claimed to be enabled by state expansion was manifested in the commodity fetishism of soap.

The normalization of cleanliness, sterility, and of a pristinely ordered social body in the Victorian period is therefore a crucial development in the construction of national identity. Foucault traces the development of the state to extra-territorial military projections under mercantilism and, simultaneously, internal expressions of the sovereign, as the social body increasingly becomes an object of discipline. Foucault cites as one of those internal expressions of the sovereign the “emergence of health and physical well-being of the population as one of the essential objectives of political power” (1980, p. 169-170), which coincided with this normalization of cleanliness and sterility in contradistinction to colonial ‘others.’ It appears, then, that the complex matrices of power disciplining bodies within the state are not unrelated to the domination of wild, feminized colonial natures, and thus quite important to geopolitical discourse. The next section demonstrates how this bio-politics of health was deployed as a legitimation strategy in geopolitical discourse in the form of metaphors of the body to describe the state. Analogical naturalism is shown to be a key component of how

geopolitical discourse is embedded within the emergent bio-politics of health in the 18th and 19th centuries.

The Bio-politics of Bodies Politic

This bio-politics of health are a form of what Foucault (1978) identifies as bio-power. His notion of bio-power was discussed more fully in chapter two, but in brief, Foucault distinguishes between two forms of bio-power: an “anatomy-politics of the human body” – a form of power associated with Foucault’s work on the prison – and a “bio-politics of the population” (1978, p. 139) - a form of power associated with Foucault’s work on sexuality. In the latter case, Foucault demonstrates how sex was converted into a discourse (rather than brutally suppressed) as a technique for the management of populations. The bio-politics of health emerged along with sex as an ensemble of practices, representations, and vocabularies harnessed toward the disciplining of populations. As Foucault puts it, “different power apparatuses are called upon to take charges of ‘bodies’” such that “the health and physical well-being of populations comes to figure as a political objective which the ‘police’ of the social body must ensure along with those of economic regulation and the needs of order” (1980, p. 170-171).

Kay-Shuttleworth’s *The Moral and Physical Condition of the Working Classes* (1832) provides a stark example of this ‘policing’ of the social body. Kay-Shuttleworth traces what he sees as the moral dilapidation of the working class in the cotton industry of Manchester to England’s colonial contact with the Irish, who allegedly squander their earnings at the tavern and outstrip their food supply. Analogizing immorality as a

contagion, Kay-Shuttleworth laments the “contagious example of ignorance and barbarous disregard of forethought and economy, exhibited by the Irish” (1832, p. 7) which ‘spread’ into English working classes. Building a metaphor that would become crucial in geopolitical discourse, Kay-Shuttleworth then extrapolates the moral and physical health of the individual body to the social body. Individual bodies in the cotton industry of Manchester are abstracted by Kay-Shuttleworth into a generalized social body whose health is compromised by the Irish contagion. Moreover, just as the individual’s health can be protected through self-knowledge, industry, proper diet, etc, so such self-knowledge can help purify the social body as well. Thus Kay-Shuttleworth’s metaphor of the body to characterize a social collectivity goes so far as to universalize a social consciousness among what is often termed the ‘body politic.’ What was needed to facilitate this purification at the scale of the social body, however, was a set of statistics to tabulate, record, and thus improve upon the ‘moral and physical condition of the working classes’ – the very codification of a discourse on health as a means to police populations of which Foucault (1978, 1980) speaks.

Chadwick’s *Report on the Sanitary Conditions of the Labouring Population of Great Britain* (1842) helped create and normalize these statistics by using social survey data to correlate spatial location or occupation (e.g., cotton industry workers in Manchester) with life expectancy, thus abstracting people into spatial clusters. Poovey (1998) correctly argues that Chadwick’s work, and the proliferation of social survey data that it relied on, helped normalize the abstraction of individuals into ‘statistical persons.’ Chadwick labels these statistical persons as a ‘pecuniary burden’ imposed upon society because workers of a shorter lifespan are not as economically productive; like Kay-

Shuttleworth, he also analogizes society as a ‘body’ compromised by this abstracted ‘pecuniary burden²⁵.’ Chadwick’s work exemplifies how abstracted, national space is socially constructed as spatially uniform, measurable and interchangeable.

Such normalized abstractions are typical of what I refer to as ‘the bio-politics of bodies politic’, and turn out to be infused within historical figurations of geopolitics. Campbell (1992, p. 87) offers an excellent history of the use of body metaphors which warrants quoting at length:

...such accounts are manifestations of an established and tenacious discursive economy which provides the resources for representing difference as danger to the social, where the social is understood as a (naturally healthy) body. The continued efficacy of ‘the body politic’ as a trope for social order stems from two factors: (1) there is a well-established history of representing the social as a body that precedes the rise of the state in Europe; and (2) it is a figuration which authorizes and empowers the representation of danger to the social body in terms associated with the representation of danger to the physiological body.

The Kay-Shuttleworth and Chadwick selections are not the first documents to invoke metaphors of the body – Campbell traces the ‘discursive economy’ enabling such metaphors at least as far back as Christian feudal society. In fact, in Hobbes’ own writings on the social contract, he warns that the sovereign was less likely to be overthrown by external forces than by ‘intestine disorder’ in the form of subjects not willing to surrender authority to the sovereign; these subjects he likens to “wormes in the entrayles of a naturall man” (Hobbes, quoted in Campbell 1992, p. 67).

Thus we see the gendered narratives of state formation discussed earlier informing, and being informed by, body metaphors. These discourses of power are

²⁵ Poor conditions in houses of urban poor, for example, were thought to lead to health problems extended to the ‘social body’ via the ‘arterial system’, or waterways, of the city.

manifested in a gendering of the head of the body politic typically as male, with the torso typically female. The head is gendered male because it is alleged to represent the rational, cultured, man of science, whereas the torso is gendered female because it represents the irrational, organic woman who is given to impulse and is the source of animalistic urges. Enlightenment doctrine advancing the state turns on this very body metaphor of a rational head overcoming primitive, animalist urges of the flesh, or in terms discussed earlier, of a male, colonial disciplining of wild, feminized natures.

Haraway's (1991) explication of the role of bio-medical discourse in the colonial imagination helps illuminate the connection between body metaphors and 20th century geopolitical discourse: "Western medical discourse in colonizing context has been obsessed with the notion of contagion and hostile penetration of the healthy body, as well as terrorism and mutiny from within" (p. 223), enabling notions of the body as distinguishing 'self' from 'other.' This determination of self and other is crucially important as it is writ large at scales of the geopolitical. In contrast to Campbell (1992), who showed the prevalence of body metaphors in geopolitics, Martin (1994) offers a litany of examples of military metaphors in bio-medical discourse. For example, Ritchie's (1913) *Primer of Sanitation* employs the imagery of a castle with two outer walls for protection as a metaphor for the body's immune system. The interior of the castle is undifferentiated and unitary, and shown as being attacked from the outside (not doing the attacking itself). One wall is said by Ritchie to be there to prevent the spread of germs, the other to protect gateways into the castle from being infiltrated.

Martin (1994, p. 26-27) cites as further examples a 1947 Listerine advertisement warning that germs must be destroyed *before* they enter the body and spread and a 1955

Life magazine article depicting a fallen human body being attacked by small, sinister looking creatures, labeled cholera, polio, and plague, wielding swords and drill bits to infiltrate the body²⁶. By the 1950's, partly on account of media coverage of the Salk vaccine, and certainly indicative of McCarthyism, the metaphor of a monolithic castle defended from outside intruders morphed to include a vision of the castle's panoptic inhabitants. Martin cites a 1950 elementary school textbook admonishing children to "be on guard at all times" and to "keep fighting to destroy disease germs" (1994, p. 26-27), and a 1952 *Today's Health* article trumpeting the moral duty to teach school children proper vigilance over their bodies. The metaphor of the body as a military apparatus comes full circle in Pomeranz and Koll's *The Family Physician* (1957), which instructs wives and mothers on the moral virtues of keeping a clean, healthy home, and concludes with a chapter on protecting one's family from an atomic attack (by keeping a well stocked bomb shelter, etc.). Whereas Ritchie's (1913) depiction of a castle showed a monolithic inside, Hindley and King's illustrated book for children, *How Your Body Works* (1975), now shows a castle with various soldiers inside, all performing different functions toward fending off germs. This focus on the inner machinations of the body politic exemplifies the bio-political deployment of a discourse on health as means to discipline populations. The constant iterations of a monolithic self and seditious other in bio-medical discourse are also important parts of the "performative constitution of identity" that Campbell correctly argues is "the condition of possibility by which we have historically been able to perceive the state and its practices" (1992, p. 91).

²⁶ Some of which are lanced by syringes, representing the role of modern science in slaying these creatures and thus subduing nature.

A fuller analysis of Ritchie's work in particular proves especially instructive in showing the intertextuality of bio-medical discourse with classic U.S. geopolitical discourse. Ritchie (1913) begins by insisting that if a poisonous plant or a dangerous serpent showed up in a village, the obvious solution would be to destroy it rather than let it multiply. He continues in chapter two by describing the human body as an aggregate of cells, the health of which depends on the healthy functioning of individual cells and how mindful one is of avoiding poisons – again exhibiting a certain intertextuality with Kay-Shuttleworth (1832), who equated a functioning social body with an aggregate of healthy corporeal bodies. Chapter three re-iterates the spatial metaphor he began in the first chapter by inviting the reader to imagine a land free of disease, and then to imagine a “country and a people” living there in health and happiness. In the next chapter, Ritchie for the first time employs a metaphor of combat to defend this land: “between these germs and the body there is a never ceasing war” (1913, p. 11). He also refers to white corpuscles as ‘soldier’ whose job it is to kill germs, warns repeatedly that we must be watchful of these germs which lay dormant in our bodies before striking, and that a failure to do this would be “no more sensible than it would be sensible for the soldier in a fort to open the gates and lie down to sleep in the midst of their enemies” (p. 14).

The discourse of a seditious other threatening a more virtuous self informed to a large degree the increasing militarism of the WWI era. While universalizing a clear and unwavering set of moral values held by the American people, Woodrow Wilson in his 14 points decried the immorality of the other: “the only secrecy of counsel, the only lack of fearless frankness, the only failure to make definite statement of the objectives of war,

lies with Germany and her allies” (Wilson 1918). ‘We’ are said to be direct and of pure motive, ‘they’ are secretive and seditious.

But the notion that this immorality could spread like a disease and infect the American ‘body politic’ is revealed more directly in the literature of the ‘preparedness movement’ of the early 20th century, which lobbied President Wilson to increase military armaments and promoted U.S. nationalism. This movement was codified by an organization of wealthy lawyers, businessmen, and politicians called the National Security League (NSL). Founded by New York lawyer Stanwood Menken and having more than 50,000 members at its zenith, the NSL formed originally in 1914 to inventory the Army and Navy’s preparedness for war. Before breaking up gradually in the early 1920s, the NSL boasted membership scrolls including names such as Thomas Edison and Elihu Root. It endorsed Theodore Roosevelt for another presidential term while pressuring Wilson to enter WWI. Co-founder Henry Wisewood²⁷, for example, lambasted an initially reluctant Wilson, saying that the administration’s “subversion of the patriotism” of the American people had resulted in “an irreparable spiritual injury, analogous to that put upon a young girl who is robbed of her virtue” (Wisewood, quoted in Edwards 1982, p. 29). It is noteworthy that this metaphor is built upon discourses of power which gender the state as the male head purporting to guard the virtue of the feminine torso of the ‘body politic.’

The NSL’s literature also draws upon bio-medical discourse analogizing the body as national territory defended from seditious intruders. The poisons invading the land of the healthy of which Ritchie (1913) warns finds further expression in a pamphlet written for the NSL by Charles H. Parkhurst called *The Leper in the House* (1917). Parkhurst

²⁷ Who was heavily influenced by Alfred Mahan (Edwards 1982).

argues that “Bolshevism is not indigenous to American soil. It is a disease that, like influenza and cholera, comes from over seas, and with which no native-born American would be likely to be afflicted unless there were something about him congenitally abnormal” (1917, p.1). Lamenting the infiltration of these disease ridden immigrants into the social body, Parkhurst continues: “courtesy shown to infected interlopers is not only unpatriotic but treasonable” (1917, p.1). The NSL’s justification for entering the war was two fold: they argued that the sinking of the Lusitania was a direct attack against America, but also insisted that the German government

carried on throughout 1915 and 1916 a secret campaign against our domestic security and order, by fomenting strikes, hiring criminals to destroy munition plants and other property, subsidizing a propaganda of disloyalty among citizens of German birth [read: “infected interlopers”], placing spies in our offices of government, and organizing upon American soil unlawful conspiracies... (Hart 1917, p. 28).

Thus we see a couple of slightly different but related discourses in the preparedness literature of the NSL. The first is a spatial metaphor describing/disciplining the population as a unitary body guarding against infectious disease: the body politic. Its moral universalization is to a large extent based on the spatial abstraction of populations by health care discourses of the 19th and 20th centuries, as we saw with Chadwick (1842), as well as metaphors of the body as a defended fortress or nation-state. The second is the performative constitution of self and other as geopolitical texts such as the NSL’s constantly admonished citizens (often children) to be vigilant of those who would sew the “seeds of moral treason” (Hart 1917, p. 35). The vigilance of the individual parts of the ‘body politic’ can be likened to Kay-Shuttleworth’s (1832) insistence on all members of

society fulfilling their role for the sake of a healthy social body and resisting the ‘infection’ of Irish immorality.

This performative constitution of self and other by way of the detection and expulsion of internal conspirators was a major part of the NSL’s agenda; Wisewood once publicly insisted that members of the Women’s Peace Party should have their citizenship revoked for failure to support military armament. The NSL was even successful in getting a number of university faculty dismissed for disloyalty (Edwards 1982). This form of disciplinary power was codified in the NSL’s ‘Committee on Patriotism Through Education.’ This committee, which was officially sanctioned by the U.S. secretary of the Interior and the Federal Commissioner of Education, had as its goal the promotion of American Nationalism among school children. Towards that end, the committee promoted citizenship classes in schools, reviewed textbooks for pro-German content, bankrolled a regular circuit of speakers, and donated 28 tons of printed material to 300,000 teachers nationwide (Edwards 1982). The latter included both the above cited handbook by Hart (1917) and Sperry’s (1918) elaboration of German induced conspiracies euphemized as *The Tentacles of the German Octopus in America* (another naturalistic metaphor). Committee chairman Robert McElroy of Princeton University believed that children had a natural instinct toward community, and that teaching them discipline would “give the unity of thought which is necessary to unity of action” (McElroy, quoted in Edwards 1982, p. 98), again suggesting a spatially abstracted national self.

One way the committee inculcated this discipline was to teach proper hygiene, which brings us full circle back to Ritchie’s metaphors of the body and the state, the

immune system and militarism. As if these metaphors were not direct enough in *Primer of Sanitation*, Ritchie (1941) would publish a high school biology textbook expounding the importance of biology to human affairs. His volume is not official NSL literature, but it does draw on similar themes. For example, Ritchie repeatedly trumpets the social utility of the ‘scientific mind’ – recall Haraway’s (1997) ‘modest witness’ – in its ability to separate superstition from hard facts²⁸. Ritchie warns that advancements in telecommunications of the time made it easier to spread false propaganda and mobilize the ‘masses,’ but that the ‘scientific mind’ can help safeguard against such ‘tyranny.’ Though he is not overly specific, his work relies upon the naturalist metaphor of an enlightened male head repelling the ‘tentacles of the German octopus’ (though now in a WWII context) from inciting labor unrest, German nationalism, and women’s suffrage movements in the more emotive torso of the body politic.

Also, Ritchie (1941) argues that biology is relevant to human affairs because it proves innate human desires toward hierarchically organized social cohesion. As such, he excoriates those whose “group loyalty is weaker than the desire for personal gain” and who “live as parasites on the labors of others” and lamenting instances when “personal advantage prevails over group welfare” (p. 976). Here again Ritchie distinguishes an abstracted moral unity from the parasitism of individuality. For Ritchie, the role of government is to protect the social body from such parasitism or individual pursuit of power (by, for example, promoting ‘cohesion’ through the teaching of biology and/or

²⁸ Ritchie (1941) also draws on images of the ‘other’ as superstitious and unscientific, stating that India is “fettered with a belief in a hereditary caste system” and china “lives in dread of flying dragons and demons” (p. 16). He opposes this to the scientific enlightenment lifting the U.S. out of such superstition. Although they do not take on Ritchie directly, feminist and post-colonial authors such as Haraway (1989; 1997) and McClintock (1995) unveil the gendered discourses of power involved in such accounts, as discussed earlier.

hygiene); his concluding chapter maintains that “government is strictly a biological undertaking” (p. 980).

It is important to note that although Ritchie makes no *explicit* connections between biological health and geopolitics, theories of intertextuality, especially as outlined by Kristeva and Barthes, recognize the existence of meaning quite apart from authorial intention. Recall from chapter four Frow’s (1990, p. 47) quote that intertextuality as an analytical tool explores the “complex network of codes with heterogeneous and dispersed forms of textual realization.” Kristeva’s formulation of intertextuality is in part drawn from Jacques Lacan’s concept of intersubjectivity²⁹, and is used (by Kristeva and myself) to argue that textual discourse is not ‘contained’ within texts, but is diffused broadly throughout society. As such, the overlap between biomedical and geopolitical discourse is the exact point of horizontal and vertical intertextuality that only partially overlaps with authorial intent and, moreover, is an important legitimating resource for geopolitical practices.

This abstraction of society into a unitary body with interworking parts is the intertextual link between a bio-politics of health on the one hand and classic U.S. geopolitical texts on the other. After WWII, the Truman Administration greatly increased the military budget, integrated the armed forces, and created the Central Intelligence Agency and the National Security Council (NSC) with this abstraction of a ‘body politic’ as a significant legitimation strategy. Truman justifies his plan to offer military aid to Greece and Turkey – the first of what would become massive levels of international

²⁹ Intersubjectivity refers to the idea that the human subject is socially produced such that self/society is a false dichotomy. For this reason, Lacan has argued that authors are written as much as they write. Though Barthes (1977) does not draw on Lacan, his now famous ‘death of the author’ thesis also sees the authorial subject as a social construction.

military aid during the Cold War – with a mixed metaphor of, again, parasitic others infiltrating and exploiting weakness in the social body, which, in this case, is further analogized as a sort of national garden: “the seeds of totalitarian regimes are nurtured by misery and want. They spread and grow in the evil soil of poverty and strife” (Truman 1998). Isolationists in Congress began to be discredited, and, according to Hogan (1998), entire political careers began to hinge on expressions of militarized masculinity. Again we see the rational, all-knowing head (or state) alleging to defend the virtue of the feminized torso (or nation) of the body politic.

Kennan’s *X-Telegram* (1947) reduced both the U.S. and the Soviet Union into two diametrically opposed spatial abstractions: ‘our’ historically determined unity of purpose versus an unfeeling “Soviet Psychology” (p. 575) that is emboldened by perceived weakness in the U.S. He also employs a mixed metaphor of bodies and gardens to describe the evolution of the Soviet Union into a totalitarian state. Over time, Kennan argues, the organs of the Soviet polity that did not serve the purposes of internal suppression “withered on the vine,” while the “organs of suppression” became “vastly swollen” (p. 571). Kennan’s historical account of the Soviet Union thus draws heavily on the Ratzelian notions of the state as an organism that must either grow or atrophy over time. In other official documents, Kennan repeats familiar tropes of foreign infections feeding on weakened tissue: “world communism is like a malignant parasite which feeds only on diseased tissue” (Kennan, quoted in Campbell 1992, p. 28).

NSC-68 is replete with the same spatial abstractions and binarism³⁰, and advocates massive military build-up for a number of reasons. The authors³¹ re-iterate

³⁰ Rosenberg’s (1993) discourse analysis of NSC-68 outlines 3 dominant discourses: 1) narratives of the consequences of inaction, 2) the authority of historical circumstance, and 3) binary opposition.

Mackinder's heartland thesis by assuming the 'Kremlin design' as unwavering domination of the Eurasian land mass, and juxtapose the Soviet 'slave state' with American freedom. They also insist that the U.S.'s most potent weapon is national consensus and unity of purpose not seen in the 'slave state.' In order for this to be effective, however, they insist on the government's role in educating the population about foreign affairs so as to give rise to a 'national will,' a policy which repeats NSL doctrine and Ritchie's (1941) insistence on government as a strictly 'biological undertaking.' Also, like the NSL's 'German octopus,' NSC-68 argues Soviet infiltration of U.S. schools, labor unions, churches and media as a means to create confusion and dissent in "our economy, our culture, and *our body politic*" (NSC-68, re-printed in May 1993, p. 52, emphasis added).

The spatial abstraction of a body politic infected by the seditious other was used to legitimate militaristic policies. NSC-68 insisted that a democracy had to compensate for its relative weaknesses with a superior show of force. This was manifested in a number of ways during the Cold War, but, critically, the U.S. policy of 'containment' to prevent the chimerical 'domino effect' was particularly informed by bio-medical discourse. Despite a lack of geographic evidence in support, notions of the domino effect presumed a spatial diffusion of political ideology horizontally from state to state, much the same way a cold virus might spread from person to person. Dean Acheson, Truman's Secretary of State, illustrated the metaphor of the domino effect as:

Apples in a barrel infected by one rotten one, the corruption of Greece would infect Iran and all to the east, It would also carry infection to Africa through Asia Minor and

³¹ Who are several, but most notably Paul Nitze, then chief of the Policy Planning Staff in the State Department.

Egypt, and to Europe through Italy and France...(1969, p. 219).

The idea of containing this infectious spread is akin to the quarantine of a village or a house infected with plague, a common disciplinary technique in the emerging bio-politics of the 17th and 18th centuries. Here again we see the intertextuality of geopolitical and bio-medical discourse; the performative constitution of national self and foreign other in Cold War containment policy is enabled by the discursive constitution of ‘healthy’ bodies in relation to quarantined ones during the 17th and 18th centuries, with naturalistic metaphors as the link between the two.

Notions of germs festering in open or weakened areas of the body are also a legitimating discourse for foreign economic and military aid during the Cold War. Former Secretary of Defense and World Bank president Robert’s McNamara’s (1968) book *The Essence of Security* draws on the same metaphors found in Kay-Shuttleworth’s (1832) work, in the sense that they both suggest that idleness, lack of hygiene, or poor living conditions are conducive to infections of immorality from other lands – Ireland in Kay-Shuttleworth’s case, the Soviet Union in McNamara’s. McNamara argues that poor conditions around the world conduct the spread of communist oppression, and that alleviating poverty would halt this spread. Thus McNamara is able to equate economic development policies in his role as World Bank President with national security in his role as Defense Secretary. These policies took the form of the security assistance and civic action policies outlined in chapter two. He explains foreign civic action as “using indigenous military forces for nontraditional military projects, projects that are useful to the local population in fields such as education, public works, health, sanitation and agriculture” (1968, p. 150). He then cites medical and dental facilities as positive

outcomes of civic action. The vision of sanitation and healthy corporeal bodies as leading to stronger, more virtuous social bodies is thus an important discursive resource in the modern geopolitical imaginary.

Concluding Remarks

This chapter brought work on military metaphors in immune system discourse (e.g., Martin 1994) into conversation with work on immune system metaphors in geopolitical discourse (e.g., Campbell 1992). The point was to show their intertextuality by tracing their deployment in classic U.S. geopolitics, and to examine the dual discourses of a spatially abstracted body politic and the performative constitution of national self as the body is disciplined to expel its foreign other. Body metaphors naturalize conflict in approximately the same way that Fukuyama's (1998) use of primate sociology does, by reifying essentialized categories (recall that only male chimpanzees practice 'realpolitik'). Body metaphors enable and are enabled by that 'singular abstraction' (Williams 1980) of nature as threatening 'other' and work to discipline populations. As argued in the introduction, this takes the form of the construction of 'imagined communities' (Anderson 1991) and the erasure of internal differentiation in what is often abstracted into 'the people' (Marston 1990).

I also argued that these naturalist metaphors and abstractions are crucial legitimation strategies for discourses of developmentalism, geopolitical 'containment' of the domino effect, and militarism in the second half of the twentieth century. This is important to my overall argument that environmental security is embedded within and constrained by previous discourses of environment and security for at least a couple of

different reasons. First, chapter two showed how these discourses (legitimated by naturalist metaphors) are implicated in the production of environmental insecurity in the first place. Second, the fact that the vertical and horizontal intertextuality of environment and security discourse is so crucial to the production of modern geopolitical imaginaries means that Deudney's (1999) call to "bring nature back in(to)" political analysis misses the mark. Literature on environmental security is, in other words, a continuance (albeit a qualitatively different one) of many of the same discourses that were so informative of Cold War geopolitics, rather than being a re-introduction of them. The final chapter will draw a thread through these arguments and specify how environmental security is informed by the metaphors and intertextuality discussed in this chapter. Before that, however, the next chapter examines neo-Malthusianism because it is one of the most prominent discourses informing environmental security.

Chapter Six: Race, Class and Sexual Politics in 20th Century Malthusian Revivalism

Introduction

As pointed out in chapter three, the discourse of neo-Malthusianism is a crucial element of environmental security. Most historical accounts of neo-Malthusianism place its ‘revival’ squarely within the modern environmental movement and its attendant discourses of the ‘population bomb’ (e.g., Ehrlich 1968). Moreover, as Rome (2003) argues, environmentalist discourse was predicated upon notions of global survivalism against an impending ecological disaster, and the modern environmental movement found much of its purchase in the anti-war movement of the 1960s. For these and other reasons, the environmental movement of the 1960s and 1970s was an important precursor to environmental security.

This chapter argues that while debates about the ultimate ‘limits’ of population growth, resources, and ecological doomsday scenarios are an important historical context for environmental security, these debates have a history of their own extending well before the 1960s. In other words, given the observations about vertical and horizontal intertextuality and Barthes’ use of semiotics made in chapter four, any history of neo-Malthusianism tracing Malthus’s ‘revival’ to the environmental movement misses the mark somewhat. The point of this chapter is to situate 20th century Malthusian ‘revivalism’ within other social movements and literatures, such as women’s reproductive rights, eugenics, geopolitics, and ecology.

While most histories of the modern environmental movement see it as a time of Malthusian revival, a few environmental historians, namely Perkins (1997), Linnér

(2003) and to a lesser extent Gottlieb (1995), trace this revival to the post-WWII era. The first section of this chapter explores two major texts of that era: Fairfield Osborn's *Our Plundered Planet* (1948) and William Vogt's *Road to Survival* (1948), both of which claimed population-resource imbalances as the proximate cause of both World Wars. An analysis of these texts is important to this dissertation because of their central role in the construction of an influential resource-security discourse during the early Cold War³².

While this is important, section two of this chapter analyzes neo-Malthusianism in a yet deeper historical context. This section is divided into four parts. The first part examines the moral and sexual politics of neo-Malthusianist versions of the movement to decriminalize birth control. Gordon's (2002) history of the birth control movement in America sources the origins of that movement to the mid 19th century, and explains how and why neo-Malthusianism became an important element of birth control politics. According to Gordon, in the history of birth control, neo-Malthusians differed from Malthusians only in the sense that they believed in the use of science to circumvent the disastrous effects of 'natural' sex drives; both neo-Malthusian birth control advocates and their critics, however, saw overpopulation as the result of the immoral lack of sexual restraint. I add to this by showing that the overall assumptions of reproduction as a matter of sexual morality are informative of later, more ecologically oriented versions of neo-Malthusianism.

The second part of section two argues that the moral and sexual politics of reproduction cannot meaningfully be separated from class interests and debates about eugenics. While certainly not all, perhaps not even most, birth control advocates invoked

³²Osborn in particular "set off an intense debate in the late 1940s and early 1950s about population, resources, and technology issues" (Gottlieb 1995, p. 37).

Malthus, those that did were largely concerned with *who* reproduced as much as total reproduction. I show how many of the early attempts to empiricize fundamental population-resource relationships were largely derivative of class-oriented eugenics. While critiques of neo-Malthusianism during and after the modern environmental movement often held that it was a fundamentally racist discourse, the third part of section two further historicizes this claim by showing neo-Malthusianism during the inter-war period as a direct reaction to concerns (largely in the field of demography) about the geopolitical implications of differential population growth rates around the world. The fourth part of section two examines how post-war neo-Malthusianism was influenced by discourses of scientific managerialism, and how the scientific attempt to prove an empirical link between population growth, scarcity and conflict was driven largely by state-oriented geopolitics. These four parts are combined into one section in order to draw a thread between them all and into the work of Vogt (1948) and Osborn (1948).

The penultimate section shows the importance of all of the above by relating it to the post-war harnessing of science by the state. I argue that neo-Malthusianism was manifested in a number of forms. Although it did not automatically lead to American plant-breeding science, for institutional, political and financial reasons neo-Malthusianism was appropriated toward investments in Green Revolution technologies. Also, post-war neo-Malthusianism's legacy of scientific managerialism led to its manifestation in neo-liberal conservation organizations such as Resources for the Future. Finally, the concluding remarks help transition this chapter into the final chapter of the dissertation.

I. Post WWII Neo-Malthusianism - Osborn (1948) and Vogt (1948)

In 1952, *The New York Times* editorialized that:

In the last ten years we have witnessed a revival of the Malthusian doctrine that the world's population is increasing more rapidly than its supply of food, minerals and other commodities considered necessary for the maintenance of a high standard of living. We owe this revival to Fairfield Osborn ('Our Plundered Planet') and to William Vogt ('Road to Survival') who have been followed by economists, public health officials and governments with predictions of misery (quoted in Linnér 2003, p. 58-9).

As this paper indicates, this 'revival' was not specific to the 1940s and early 1950s, nor was it specific to these two authors. Osborn (1948) and Vogt (1948) did not completely 're-invent' Malthus after a century or so of absence. Nevertheless, they justify their specific versions of this revival as explanations of the existence of two world wars in as many decades, and as crucial to policy discussions concerning post-war aid to Europe and other development schemes. Though they were contemporaries who often exchanged input and material³³, Osborn and Vogt took slightly different approaches and invoked different legitimization strategies in their work. Vogt was clearly the more radical of the two, and although he explains a myriad of human conflicts as population-resource imbalances, he more readily attacks corporate culture and ideologies of expansion and progress in his analysis. Osborn is more centrally Malthusian in his outlook, and, as the son of the prominent founder of the New York Zoological Society, he had a wider readership and more influence with business, political and media officials of his time. Both clearly argued for a reading of history as reflective of fundamental relationship between humans and resources.

³³ Osborn (1948) credits Vogt (1948) in his acknowledgements (but not vice versa).

Osborn (1948) took a regional approach in explain the deteriorating environment of different continents. In the process, he attributes both World Wars, the Mexican Revolution and even the collapse of the Mayan Empire to imbalances between growing populations and natural resources. Osborn begins by describing humanity's 'plunder' of global resources as "the other war, the silent war, eventually the most deadly war" (1948, p. vii). According to Osborn, "its spawn are armed conflicts such as World Wars I and II. Its eventual results, if present ways remain uncorrected, point to widespread misery such as human beings have not yet experienced, and threaten, at the end, even man's very survival" (1948, p. ix). Near the end of his book, Osborn (1948, p. 200-201) generalizes:

Finally, when will the truth come out into the light in international affairs? When will it be openly recognized that one of the principal causes of the aggressive attitudes of individual nations and of much of the present discord among groups of nations is traceable to diminishing productive lands and to increasing population pressures? Every country, all the world, is met with the threat of an oncoming crisis.

While the beginning and end of Osborn's book rely on a global abstraction of 'mankind' and its relationship with nature, the majority of his book (as is the case with Vogt) relies on abstractions of specifically *national* carrying capacities³⁴. For example, in his discussion of India's "internal enemy" (p. 99) of overpopulation, Osborn hyperbolizes:

A recent observer serving with the Royal Army Medical Corps in World War II attempted a detached pint of view on what he saw in Calcutta in 1943 and 1944. To him it appeared that in that city the dogs had the best time of it.

³⁴ In other words, 'we' translates as all of humanity at some points in the book, while 'our' and 'their' translate as the United States' or, for example, India's particular interests in other parts. The implicit assumption that carrying capacity could be segmented along political lines is noteworthy here.

They could and did eat human flesh before city authorities could carry away the bodies of those who died of famine in the city streets. They fought with relatives of the dead for possession of the bodies. In Calcutta at that time if you stood in well with the authorities your dooryard might just happen to be kept free of corpses (p. 100).

The vacillation between global and national scale abstractions is important to Osborn's conception of resource scarcity as a cause of international war. As he moves from the national to the global, he describes the international system as a collection of actors that *would* interact more rationally *if* they kept a better balance with their particular national endowments.

Osborn's preferred metaphor for understanding nature is a 'machine' with component parts working in unison³⁵. Much of his explanation of international war as reflective of human-environment relations is itself couched within metaphors of war or battle *by* humans *on* nature. It is, for example, the "wounds on the land" inflicted when Mexican national parks were "invaded" (p. 170) by various business interests that are at the core of Mexican social conflict. Osborn laments the "attacks" (p. 182) by timber and cattle grazing interests on the American West as leading to "the ultimate death of the land" (p. 183)³⁶. He further describes them as "body blow(s)" (p. 180) which are "as deadly ultimately as any delayed-action bomb" (p. 181). As a final example, rather than this "pitched battle with nature" (p. 146), he suggests "getting along with nature, instead of fighting with her after she is in revolt" (p. 147).

³⁵ This machine metaphor has a long history in Western conceptions of nature. Nevertheless, Osborn (1948) claims that "through most of man's history [nature as machine] has been totally disregarded. It is the cardinal principle in the recently developed sciences known as 'conservation'" (p. 48).

³⁶ Osborn and Vogt both predominantly focus on population growth as the driver of environmental destruction, but were not absolute about that (not nearly as absolute as Ehrlich (1968) was for that matter). Periodically they do focus on capital and cultures of progress, as in these examples.

Vogt (1948) takes a similar approach to Osborn in the sense that he provides a regional assessment of the global environment and argues that the course of human history is reflective of human-environment relationships. He begins his book by generalizing the ecological formula $C=B:E$, where C = carrying capacity, B = biotic potential and E = environmental resistance. He advocates a conception of this formula at the planetary scale, and warns that “if we continue to ignore these relationships, there is little probability that mankind can be long escape the searing downpour of war’s death from the skies” (p. 17).

At various points throughout his book, Vogt (1948) argues that these relationships were fundamentally causative of a wide range of conflicts, including the American Civil War, the Mexican Revolution, domestic troubles such as crime, illiteracy and the existence of the Ku Klux Klan, World Wars I and II, and the Japanese attack on Pearl Harbor³⁷. In the latter case, he relates the attack directly to issues of food shortages with the chapter subtitle “The Japs Who Came to Dinner” (p. 216). He also extrapolates this history into the future, with prognostications even more cynical than Osborn’s. For example, he describes Great Britain in the 20th century as “one of the most tragic instances of a wide disparity between numbers of people and carrying capacity” (p. 70). While directly citing Malthus, he predicts massive English and, for the same reasons of overpopulation, Chinese famines. In the latter case only, Vogt portends coming ‘lifeboat ethics’ debates, claiming:

There is little hope that the world will escape the horror of extensive famines in China within the next few years. But from the world point of view, these may be not only desirable but indispensable. A Chinese population that

³⁷ Vogt (1948) also claims that corn has created more human misery than syphilis because it has led to soil erosion while allowing human populations to grow.

continued to increase at a geometric rate could only be a global calamity (p. 238).

That Vogt sees Chinese famines as calamitous *only* if they reach across international borders clearly has moral and racial implications which are central to many critiques of neo-Malthusianism. These implications will be explored further in the next section. For now, it is noteworthy that Vogt was empirically wrong about the famines, as pointed out a generation later by Harvey³⁸ (1974). He was also wrong in his prediction of a major decline in the American standard of living (given the post-war economic boom) and (somewhat more outlandish) suggestions that major pulp wood shortages could erode freedoms of the press.

Vogt calls overpopulation “one of the most powerful causes of war” (1948, p. 239). At times Vogt calls on the same metaphors of battle and conflict as Osborn to describe this relationship, as with the ‘searing downpour’ quote above and the invocation of the imagery of a mushroom cloud (specifically referencing Hiroshima) to illustrate the effect of human population growth on the environment. Vogt, however, relies more often on the same mixed bio-medical and garden metaphors discussed in the previous chapter as legitimization strategies. For example, Vogt uses the metaphor of the single human body needing food for energy to illustrate the need of civilization for power. As part of his explanation of carrying capacity, he then uses a garden metaphor to explain the differential capacities of various lands to supply that power: “Just as the productive capacity of individual gardens varies, so do the productive capacities of nations and continents” (p. 21). Vogt sees the link from population-resource imbalances to

³⁸ Harvey (1974) does not actually refer to the predictions of English famine, but points out that where Chinese starvation did occur it was due to distributional and political-economic issues, not overpopulation. Harvey’s now oft-cited paper was predominantly a critique of the ideology of neo-Malthusianism, and only references Vogt (1948) briefly.

international conflict as the movement of expanding populations into more resource abundant areas. He uses a further bio-medical metaphor to explain how this process both led to WWI and temporarily obscured the fundamental reality of which Malthus had earlier warned:

Had the parasite of European industrial development not been able to sink its proboscis deep into new lands, world history would have been very different. Enormous populations, heavy industry, social and economic pressures could not possibly have developed into the great carbuncle that exploded as World War I (p. 69).

Although both Osborn and Vogt are short on solutions to what they see as looming crises, Vogt does repeatedly trumpet the ability of science (and particularly draws on the recently established Soil Conservation Service) to solve problems, though the precise role science was to play was a matter of major debate. For Vogt, scientists could see the fundamental natural basis of human affairs in ways that politicians and lawyers were simply not trained to see. He felt that a broader training in the sciences among all sectors of society would consequently change society's core values, and cites the work of ecologist Aldo Leopold and geographers Isaiah Bowman and Peter Kropotkin in this regard.

If the claim made by *The New York Times* that Osborn and Vogt precipitated a 'revival' of Malthusianism in the post-war period is true, then it is only to the extent that Osborn's and Vogt's political connections and wide readership brought the population-resource debate *more fully* to public consciousness. They were far from the first authors to invoke Malthus's name as a means of re-envisioning American society. For example, both Osborn and Vogt cite Guy Irving Burch and Elmer Pendell's (1945) *Population*

*Roads to Peace or War*³⁹. Burch and Pendell (1945) take aim at President Roosevelt's 'four freedoms' in the Atlantic Charter by declaring in one chapter title that "Freedom from Want Requires Population Limitation" and, in another, that "Freedom from War Requires Population Limitation." They argue that if the U.S. is itself "infected with a mild case of overpopulation" then Europe "must be a very sick continent and much of Asia in the last stages of the disease" (p. 26). Also, because the link between resource scarcity and war was a "truth as old as the human race itself" (p. 44), all post war reparations and political commitments were doomed to failure because they did not address population issues (as also argued by Vogt and Osborn). As another example, in 1925 Raymond Pearl observed in *The Biology of Population Growth* what he saw as a revival of neo-Malthusianism within the previous five years, while in 1923 Edward East's *Mankind at the Crossroads* observed a "considerable amount of publicity" (p. 7) for the neo-Malthusian movement – well before *The New York Times* declared a post-war Malthusian revival in 1952. The purpose of the next section is to explore more fully the precursors to post-war neo-Malthusianism.

II. Neo-Malthusian Discourse in the Pre and Inter-War Period

Perkins (1997) broadly differentiates between two types of neo-Malthusianism, one developing out of the discipline of demography and focusing on the economic consequences of population growth, and a newer, predominantly post-war

³⁹ Which was sponsored by the Population Reference Bureau in Washington, DC. It is also noteworthy that the geographer Ellsworth Huntington (mentioned in the previous chapter) endorses the book on its front cover.

focus on ecological relations⁴⁰. Linnér (2003) critiques this characterization, arguing that the two strands were “complexly intertwined” (p. 147). I not only concur with Linnér on this point, I would add that they were situated historically within other strands of neo-Malthusianism winding through debates about sex and morality, the family, social class and eugenics, race, and the role of science in politics.

Moral and Sexual Politics

Debates about birth control, women’s reproductive rights and sexuality undoubtedly have a longer history than debates over Malthus’s work (see Gordon 2002). Nevertheless, neo-Malthusianism in the late 19th and early 20th centuries, rather than being entirely relegated to popular ridicule and obscurity as some histories of it would suggest, was often deployed in competing claims about the moral condition of society with respect to reproduction.

In 1877, an organization called The Malthusian League formed in London with the objective of spreading “among the people, by all practicable means, a knowledge of the law of the population, of its consequences, and of its bearing upon human conduct and morals” (Malthusian League 1911, p. 47). The League had an inter-European board of Vice Presidents and chapters throughout much of Europe. The London chapter circulated a periodical called *The Malthusian* among its membership, and also produced a ‘handbook,’ in its fifth edition by 1911, with the purpose of showing that “an *excessive increase of population* is the source from which [misery and want] arise” (Malthusian League, 1911, p. 4). Although their literature purports to be directed toward helping poor

⁴⁰ Osborn (1948) in fact believed that “population pressures have long been recognized as one of the major cause of war” (p. 41) but only recently had people begun to see population as a cause of scarcity. This chapter’s review of Malthusian literature does not support this view, but it does indicate that Osborn saw in the 1940s a *new* articulation of Malthus.

families, the League also introduces its argument with a focus on the consequences of overpopulation for the wealthy (and, again, with mixed garden and medical metaphors):

...overcrowding, semi-starvation and squalor are the fruitful sources of disease which scruples not to travel beyond its birthplace and to infect the homes of the wealthy. Modern society may be fitly compared to a magnificent palace reared in a miasmatic swamp, which fills the air with its death-dealing exhalations (p. 3).

According to *Time Magazine* in 1925, the League sponsored a series of Neo-Malthusian and Birth Control Conferences to promote birth control amongst the poor, reaching Paris in 1901, The Hague in 1910, Dresden in 1911, London in 1922 and New York in 1925 (*Time* 1925).

The League's efforts were met with derision from those who saw birth control as an artificial interference with natural processes – to deny reproduction was to deny God. In Europe, Nitti (1894) and Ussher (1898) both excoriated neo-Malthusianism. Ussher's argument is based largely on moral and theological grounds, but directly calls on Nitti's more political-economic critique in support. Many such critics were actually true followers of Malthus, and criticized neo-Malthusianism on grounds that Malthus himself endorsed only late marriage or abstinence, but not birth control. They thus saw neo-Malthusianism as distortion of Malthus, and to that extent were Malthusians rather than neo-Malthusians. In the U.S., for example, M.P. Dowling (1915) argued:

The only preventive check recognized by Malthus himself was that no man should marry till he could support a family; but others taking up his contention ... drew inferences he would have repudiated. Unconsciously they abandoned the field of political economy and set themselves up as authoritative teachers of morality, which in their hands assumed a pagan bias. The theory was worked out so as to convince the poor that squalid abodes, low wages, inability to find employment, want and

wretchedness, were not the result of misgovernment, intemperance, absence of thrift and a hundred other removable causes, but that the ills of humanity were due to the fact that there are too many people in the world (p. 5-6).

Dowling terms this distortion of Malthus in support of birth control ‘race-suicide’⁴¹. Race-suicide refers to a movement between 1905 and 1910 which opposed birth control on grounds that healthy, robust reproduction was a matter of allegiance to the one’s race, and that birth control advocates were ‘race traitors’ (Gordon 2002). While the combination of theological and political-economic argumentation here is interesting, it is yet more relevant to this dissertation that neo-Malthusian critics relied upon empirical assessments of population-resource relationships to further their moral claims on reproduction. Dowling, for example, continues:

...the facts are against the theory that the earth is inadequate to support the growth of population. The United States, even with the wasteful methods of farming now in vogue, could feed hundred of millions... There is still plenty of elbow room left on the globe (1915, p. 6-7).

Movements in the early 20th century United States to decriminalize birth control found in neo-Malthusianism a discourse conducive to compelling social change. The National Birth Control League, for instance, sponsored literature, penned by Princeton professor and member Warner Fite, criticizing the ‘race-suicide’ camp and deploying neo-Malthusian ideas toward the decriminalization of birth control. While many histories of 19th century Malthusianism cite agricultural production in North America as the primary reason for Malthus’s ‘disappearance,’ Fite (1916) focused instead on the role of Darwinian evolutionary biology in the figuration of human beings as part

⁴¹ Dowling credits the coinage of the term ‘race-suicide’ to Theodore Roosevelt. Gordon (2002), however, clarifies that while Roosevelt was a major proponent of the race-suicide camp, the idea that he coined the term was only a popular myth at the time.

of an animalistic struggle for survival. Fite argues that while sympathetic contemporaries of Malthus believed in the use of reason to suppress sex drives toward better social outcomes, Darwinism re-figured “sexual instinct [as] a sacred provision of nature for the perpetuation of the race” (p. 4). The ‘race-suicide’ camp, then, was based on a theological commitment to an ultimate design of nature which included sexual reproduction⁴². Fite then supports birth control based on a non-Darwinist, secular rationality. Neo-Malthusianism, rather than being relegated to obscurity, was deeply implicated in debates about moral and sexual politics, and whether God and nature or human reason provides the proper guidelines. This is crucial to any understanding of a 20th century Malthusian ‘revival’ in the sense that neo-Malthusianism first developed as a moral critique of sexual instinct⁴³. As will be shown, this informed ensuing population-resource discussions to the extent that population growth was discussed in terms of an immoral, unsuppressed sex drive.

For instance, Burch and Pendell (1945) open their chapter on birth control with a quote from John Stuart Mill via C.V. Drysdale, the long time president of The Malthusian League of London: “Little advance can be expected in morality until the producing of large families is regarded with the same feeling as drunkenness or any other physical excess” (p. 68). High rates of reproduction were, in other words, fundamentally immoral. Burch and Pendell cite Freud to claim a generalized psychology of population growth, in which society collectively ignores the problem because they see Malthusian

⁴² As stated in the previous chapter, much of the Christian establishment did incorporate Darwinism to some degree into its dominant narratives.

⁴³ To be clear, the ‘race-suicide’ camp was not arguing that sex was ‘natural’, but rather that *only* sex leading to procreation was natural, and ‘artificial’ contraception was against God’s design and thus immoral. To that extent, Fite (1916) perhaps provides a bit of a straw man argument against Dowling (1915) and other ‘race-suicide’ authors.

warnings as a repression of sexual urges. They argue that “in [men’s] subconscious minds that phrase ‘population pressure’ means, ‘Even in marriage there can be no sex release.’ The inferred frustration creates a sort of phobia⁴⁴” (p. 61). Burch and Pendell’s post-war engagement with Malthus is therefore based on an understanding of population growth as an immoral inability to overcome natural drives for the sake of society.

It is in this context that much post-war neo-Malthusianism removed individual reproducing persons from the broader political-economic, cultural and social milieu within which they make decisions about sex and family size, and instead reduces these decisions to matters of unchecked libido. Walter Pitkin’s post-script to Burch and Pendell’s (1945) book, for example, opines that “reckless breeding has become strangely like a social cancer” (Pitkin 1945, p. 132). This concept of reproduction as recklessly immoral rather than socially, politically, and culturally situated is copied by Vogt (1948), who cites Burch and Pendell (1945) liberally. Vogt argues that Puerto Ricans reproduce “recklessly and irresponsibly” (p. 76) and contemptuously subtitles his discussion of Italy “The Virile Italians” (p. 206). Vogt describes Indians as breeding with “the irresponsibility of codfish” because in India “sex play is the national sport” (p. 227). He later laments the costs to the U.S. in terms of foreign aid due to the “untrammelled copulation” (p. 228) of most of Asia. This reductive understanding of population growth is inherited from a conception of population control as the rational mastery of natural sex drives *as a matter of personal morality*. It is also a crucial part of the discourse of neo-Malthusianism in the sense that it helps obscure the role of political economy in producing scarcity by reducing scarcity to a function of human nature.

⁴⁴ Also that “human beings almost would rather suffer the evils of overpopulation than to remain continent and celibate during the earlier period of their lives when the sex urge is the strongest” (p. 71).

Eugenics and Class

The conception of population growth as a conflict between enlightened morality and primordial sex drive was also characteristic of early 20th century debates about eugenics. At the time, concerns abounded that population control measures would only limit the size of affluent families, but that poor families were not sufficiently enlightened or moral enough to adopt such measures, leading to radical changes in social class structure. In *Neo-Malthusianism and Eugenics* (1912), C.V. Drysdale (quoting former Malthusian League founder C.R. Drysdale) responded to these concerns by claiming that “morality and civilisation were in constant conflict with the inhumanity of nature, and *rational* selection was clearly an infinitely better agent for obtaining an improved stock than the over-production of half-starved multitudes” (p. 6, italics in original). In other words, Drysdale was taking aim at Darwinist conceptions of nature and reproduction, claiming that neo-Malthusianism provides a moral endorsement of limiting not only reproduction, but limiting *who* should reproduce. By the ‘inhumanity of nature,’ Drysdale is referring to “the rapidly breeding lower animals” of the working class and the inability of Darwinian natural selection to keep them in check; ‘rational selection’ is a direct reference to a rational displacement of Darwin. As such, Drysdale claims that eugenics was always part of The Malthusian’s League’s agenda, and concludes that “neo-Malthusianism and Eugenics are one and the same thing⁴⁵” (p. 22).

⁴⁵ Though he qualifies this by saying this is only the case with negative, rather than positive, eugenics. The former involves the limitation of reproduction among lower class, while the latter involves massive reproduction among the upper class as an instrument of ‘racial hygiene.’ Drysdale advocates negative eugenics, but as a neo-Malthusian abhors positive eugenics.

Isaacson's (1912) *The Malthusian Limit* also deployed neo-Malthusianism in support of eugenics. He starts with a fairly standard explanation of Malthusian doctrine, and argues:

It has been the fashion for a generation of political economists to pooh-pooh at Malthus and talk about the boundless possibilities of lands yet unknown, and of improved methods of cultivation, and the irrigation and reclamation of unproductive districts. But voices are beginning to be heard on the other side (p. xxii-xxiii).

These 'voices' include then recent projections of a global limit to population growth and Isaacson's own exhortation that "the whole race must face the problem of how to limit its numbers to the figures which can make the best use of the world's natural resources" (p. xxvii).

Isaacson is therefore one of the first neo-Malthusians in the 20th century to focus on the ecological relations of population growth, particularly at the global scale. Though he introduces the problem as fundamentally a matter of population and resources, the rest of his book is based on eugenics. His mechanism for avoiding future catastrophe is the creation of a 'static condition' of the human race, in which the birth rate is held constant with the death rate (and below carrying capacity). His mechanism for achieving this static condition is the deliberate social engineering of different roles for different social classes. Isaacson first distinguishes the urban and agricultural classes, the former being largely of lower moral fiber and physical prowess, and the latter being naturally of better 'stock' and crucial to national strength. He then advocates the establishment of a 'surplus' and a 'fecund' class, loosely corresponding to the urban and agricultural classes, respectively. The trick for Isaacson was to govern surplus and fecund classes according to different moral codes. The surplus class would be allowed to marry, but should be

considered exempt from dominant Christian mores of procreation; conversely, “the task of the fecund class is to supply men” (p. 32). The purpose of this scheme is to intentionally alter class structure so that individuals could be deliberately shifted from one class to another depending upon such factors as physical prowess, performance in school and moral behavior.

The notion that this type of social engineering served the ends of an overall population-resource balance helps illuminate the critical role of social class and eugenics in 20th century Malthusian revivalism⁴⁶. East’s *Mankind at the Crossroads* (1923) was intended as scientific appraisal of the biological relationship between population growth and “migrations and wars,” “famine and disease,” “prostitution and divorce” and “poverty and distress” (p. 6)⁴⁷. East readily admits in his preface, however, that his work originally started out as a piece on eugenics, and only later developed into an endorsement of neo-Malthusianism. Pearl’s (1925) book had broadly the same scientific aims as East’s. Despite claiming his work as “purely objective” (p. 210), however, Pearl justifies his study partly on the observation that “the ‘wrong’ kind of people have too many children, and the ‘right’ kind too few” (p. 158). Pearl also presented his analysis of differential birth rates based on class at the Neo-Malthusian and Birth Control Conference in New York City mentioned earlier⁴⁸.

Vogt (1948) and Osborn (1948) do not directly mention eugenics, but they do at times rely on a class-oriented language. Vogt, for instance, refers to timber and grazing

⁴⁶ Even the Voluntary Parenthood League, formerly the National Birth Control League, published a pamphlet called *Babies and Unrest* which blamed labor strife among the working class on the lack of education about how to match family size to income (Stopes 1923).

⁴⁷ Edward East was, incidentally, a geneticist credited as a co-inventor of hybrid maize seed as part of government efforts to increase food production before WWI (Perkins 1997).

⁴⁸ Pearl (1925) also regularly criticizes the ‘race-suicide’ camp.

interests as “worse than paupers” because they use public subsidies while “destroying the means of national survival” (p. 145). Vogt more directly refers to class and eugenics when he cites a suggestion by political commentator H.L. Mencken⁴⁹ to offer ‘sterilization bonuses’ as a means of population control. Vogt offers this justification:

Since such a bonus would appeal primarily to the world’s shiftless, it would probably have a favorable selective influence. From the point of view of society, it would certainly be preferable to pay permanently indigent individuals, many of whom would be physically and psychologically marginal, \$50 or \$100 rather than support their hordes of offspring that, by both genetic and social inheritance, would tend to perpetuate the fecklessness (p. 282-3).

Such references to class lend credence to suggestions that Malthusian revivalism, even when purportedly in the interest of ecological survival, was not purely about balancing resources and populations in the abstract, but was in many ways concerned with *who* it was doing the reproducing.

Race and Geopolitics

Malthusian revivalism also cannot be entirely understood without examining race. While Vogt (1948), Osborn (1948), and later neo-Malthusians do not refer directly to race when they condemn population growth, post-war neo-Malthusianism was still situated within ongoing debates about the security of the white race in the face of global population growth. Sprout and Sprout’s (1965) now classic text on environmental determinism, for example, reviewed debates in the 1950s about whether geopolitical power would shift along with regional population trends. These debates have a long history inseparable from neo-Malthusian discourse. For example, as a means of checking

⁴⁹ Mencken’s biographers have often noted his racist and anti-semitic attitudes. Incidentally, according to Edwards (1982), Mencken wrote glowingly about the National Security League (discussed in the previous chapter).

population growth in the tropics, Isaacson (1912) suggested extending his primarily class-based eugenic scheme to the global scale, with Western Europe as the ‘fecund class.’

East (1923) also spends a significant portion of his book dealing with differential population growth rates at the global scale. He devotes an entire chapter refuting the notion that the white race was in danger of being overwhelmed by other races on several different grounds. He cites geographer Ellsworth Huntington to argue that the oppressive climatic conditions of the tropics render its populations too docile to affect political change, and later argues that only when they have a degree of ‘white blood’ in them do non-whites even attempt to create social change. He then cites a number of studies of the time in order to statistically show that ‘white blood’ biologically creates higher IQs and fewer cases of retardation. Finally, he also employs neo-Malthusianism to allay common American fears that population declines (alleged at the time) in countries with predominately white populations would lead to infiltration and domination by booming non-white populations. East argues that the white race would inevitably stay in balance with its resources and retain power, while the ‘population saturation’ of other races would render them powerless. The blatant racism of East’s neo-Malthusian argument helps show why race cannot be meaningfully separated from any account of Malthusian revivalism.

If demographer Warren Thompson’s *Danger Spots in World Population* (1929) was less blatantly racist, it does leave open the possibility of war induced by differential population growth rates globally. While Thompson does not claim an overall global overpopulation, he does argue that certain areas – specifically Central Europe, the Western Pacific and the Indian Ocean area – have populations in excess of their resource

bases. These are what he labels ‘danger spots,’ and, for Thompson, much of (then) modern warfare resulted from the diffusion of population from these areas to areas of resource ‘surplus.’ Thompson argued at the time that people of “backwards” (p. 6) nations were increasing and starting to feel entitled to the resources of other territories, perhaps contributing to the kinds of fears that East (1923) disputed. While Thompson’s analysis was less alarmist than Vogt’s and Osborn’s work of a generation later, and while he wrote in terms of population growth differentials rather than an overall global population crisis, as a leading figure in the field of demography his work contributed to a basic categorization of world population into areas of burgeoning masses ‘out there’ threatening peaceful populations ‘in here.’

And it is this geopolitical imaginary that informed so much of post-war Malthusian revivalism, from Vogt and Osborn through literature of the environmental movement. This is evidenced in Vogt’s afore-mentioned characterization of Pearl Harbor as “The Japs Who Came to Dinner” and his assertion that Chinese famines are necessary to prevent an international ‘calamity.’ Words like ‘backwards’ and ‘ignorant’ are peppered throughout Vogt’s, and to a lesser extent Osborn’s, texts. Vogt, for example, refers to “the backward billion of Asia” (p. 228) and generalizes Africans as ‘ignorant’ of ecological relationships. He argues that “malaria [along with sleeping sickness] has actually been a blessing in disguise” (p. 28) for Africa⁵⁰ because it keeps populations in balance with resources, and claims that “one of the greatest national assets of Chile, perhaps the greatest asset, is its high death rate” (p. 186) for the same reason. After comparing Indians to codfish, Vogt characterizes India as “steeped in superstition,

⁵⁰ Vogt’s chapter on Africa treats it as one large, undifferentiated land mass. It is perhaps not a coincidence that this chapter, in contrast to the rest of his book, is also not divided into subsections.

ignorance, poverty and disease. Mother India is the victim of her own awful fecundity” (p. 227).

Osborn is less blatantly racist and does argue against any biological basis for race or nationhood. He does, however, argue that ancient Greek times were better because at least the slaves were better fed, and explains colonialism as the conquering of “even recently uninhabited” (p. 4) lands. In the latter instance, he not only fails to explain how these lands were ‘uninhabited’ but laments the notion of ‘conquering’ the New World because it reflects conflictual relationships between humans and nature. In Osborn’s account of colonialism, in other words, he emphasizes the moral issues involved with abstracted notions of ‘conquering’ nature while completely ignoring actual conflicts between Europeans and indigenous populations of the Americas.

Scientific Managerialism and the State

While neo-Malthusianism in the first half of the twentieth century was subsumed within debates about morality, class and race, during the inter-war period it also increasingly became the object of scientific empiricism, and central to the harnessing of science towards the ends of the state. Vogt (1948) and Osborn (1948) both sought to use scientific data to prove empirically the relationship between resources, scarcity, and war - what Linnér (2003) refers to as ‘catastrophe empiricism.’ Linnér (2003) also points to three important influences on Vogt’s and Osborn’s efforts in this regard. First was the influence of Aldo Leopold’s ‘land ethics’ critique throughout the 1930s and 1940s. All three men were in regular and amiable contact with each other, and Vogt and Leopold in particular often exchanged ideas and helped each other publish their work (Linnér 2003). Vogt and Osborn both were particularly enamored with Leopold’s *Game Management*

(1933), especially the notion that more scientific management of resources can lead to better social outcomes. While for Leopold this was often a spiritual or quality of life issue, for Vogt and Osborn conservation was a matter of security and stability of the nation. Osborn, for example, refers to conservation as “the final test for our nation” (p. 178). Vogt consistently trumpets the then recently created Soil Conservation Service and its land classification scheme, referring to the sustainable yield of resources as a “means of national survival” (p. 145). He also extends this rhetoric internationally, arguing that “backward” countries cannot by themselves achieve a harmonious balance with nature, and thus “if we want to live in a world of peace,” the U.S. must extend these managerialist techniques to “the more retarded areas⁵¹” (p. 110-111).

The second major influence was the emergence of a ‘new ecology’ in the 1930s and 1940s with a normative emphasis on an ecological equilibrium of nature. Vogt and Osborn’s texts are riddled with references to a human ‘balance’ with nature, with the equation $C=B:E$ as a prime example⁵². This ‘new ecology’ also drew concepts from economics to further stress ecology as a system of interworking parts, even borrowing terminology such as ‘ecological efficiency’, ‘producers’, ‘consumers’ and referring to nature as ‘resources’ or ‘stock.’ Worster (1994) writes on this at length, arguing that this new understanding of ecology reflected (or in a textual sense, had intertextuality with) economic and societal imperatives of its time. In particular, Worster claims that it reflected the managerial ethos of new Fordist production regimes, and that it was necessary to emphasize cooperation rather than conflict in nature (e.g., Kropotkin rather

⁵¹ Vogt uses Peru as an example, arguing that they do not “see their country as it is” (p. 183), implying that only science is capable of a ‘true’ assessment of resources.

⁵² Vogt refers directly to a “living web” within which “man” is subjected to ecological equilibrium (p. 85-6).

than Darwin or Spencer) given the labor strife of the time. In his plea for a rational management of natural resources, Vogt applies a management model to the whole of Latin America: “In Latin America, even such elementary data as resource inventories are nonexistent. No business could hope to survive without inventories” (p. 159). Osborn is even more direct. For example, he regularly refers to nature as (often national) “assets” (p. 141) or “natural riches” (p. 166) with an “economy of nature” (p. 119), and refers to Europe’s “rich soils” as part of its “heritage” (p. 151-2).

The third influence that Linnér (2003) cites is the tendency towards naturalistic explanations of human social and political life (as discussed in the previous chapter). Linnér argues that these explanations developed out of the new field of demography (Linnér cites Warren Thompson’s book mentioned above as an example) and developed into the field of human ecology by the 1950s. Writing in the 1960s, Sprout and Sprout (1965) argued that human ecology had become the dominant analytical perspective underpinning realist perspectives in International Relations. Human ecology is also closely related to cultural ecology and ecological anthropology, which both arguably influenced contemporary environmental security literature (Peluso and Watts 2001).

What I would add to Linnér’s analysis is that the ‘catastrophe empiricism’ and scientific managerialism of post-war neo-Malthusianism is rooted in much more than ecology and demography. For example, while a number of critiques of the Paris Peace Conference after WWI argued that it exacted overly harsh reparations from Germany, the classical economist John Maynard Keynes invoked Malthus to argue in 1919 that it failed

to grapple with population-resource disparities as the underling causes of war. He explains Europe's troubles in these terms:

In continental Europe the Earth heaves and no one is but aware of the rumblings. There it is not just a matter of extravagance or 'labor troubles'; but of life and death, of starvation and existence, and of the fearful convulsions of dying civilizations (2004, p. 54).

Keynes also argues that "the great events of history are often due to secular changes in the growth of population and other fundamental economic causes" (p. 63). Keynes begins with the same narrative of the history of Malthusianism that Vogt, Osborn and numerous others since have employed— that New World resources and the promises of industrialism led entire generations of people to discount Malthus's prescient warnings in the late 19th century. According to Keynes, however, Europe in 1914 was "greatly in excess of the numbers for which a livelihood was available" (p. 72), and cites these population figures as a "danger to European order" (p. 63). WWII, for Keynes, was fundamentally reflective of population-resource imbalances.

Keynes' analysis is primarily demographic and economic, focusing mostly on the relationship between population and quality of life. This work was for Keynes a key component of managing the international political economy and keeping the peace. Nevertheless, his link between population-resources and WWI is speculative, with only vague references to 'fearful convulsions of dying civilizations.' East's (1923) and Pearl's (1925) work were about proving these links empirically, presaging the 'catastrophe empiricism,' in Linnér's (2003) terms, of a generation later.

Pearl (1925) in particular attempts a scientific explanation of why population growth is "always a major cause of war" (p. 2). For Pearl, "the problem at bottom is

clearly a biological one, requiring, to be sure, for its solution the application of appropriate mathematical methods” (p. 4). Pearl’s method is the application of the scientific study of individual organisms (which can be controlled in laboratory conditions) to entire human populations. He does this by standardizing an equation for the growth of all populations, including the populations of cells within an individual lab rat, a pumpkin, and a tadpole. This standardized equation, according to Pearl, can be graphed as an S-curve (which appears graphically as the population curve of demographic transition model). For example, the cells constituting an individual baby rat divide and multiply over a period of time as the rat consumes the resources (food) available to it. The increase in the ‘population’ of cells constituting the rat eventually levels off as this population comes into balance with its environment (i.e., the rat stops growing). After showing the same curves with a pumpkin and a tadpole, Pearl makes a jump to a community of yeast cells; although he concedes that he is making a leap to a collection of separate organisms, he argues that the same principles apply because yeast reproduces by the same process of cell division. Vogt relies upon this same theme, consistently analogizing human populations in terms of a single human body (as discussed earlier).

Pearl’s extrapolation of these principles to human populations (after first moving to fruit flies) is a classic example of naturalism in the social sciences. He argues that it is significant that the same curves apply to the populations of Sweden, France, the U.S., and Algeria (which he discusses at length throughout the book). The latter part of the S-curve is a ‘natural’ balancing of resources and population; interestingly, Pearl subsumes *both* intentional population limitation through birth control *and* the outbreak of

war under ‘natural’ laws of population biology. Human misery is not necessarily inevitable, but war is. Furthermore, technological innovation does not change the fundamental shape of the curve, but rather only shifts it one direction or another. Pearl argues that it is the *shape* of the curve that is fundamentally expressive of human relationships with resources, and it was the lack of understanding of this relationship that made Malthus *look* wrong.

This ‘scientific’ analysis of the link between population and war is an important part of the governmental harnessing of science in the name of national security. In an argument very similar to that made by Keynes, Burch and Pendell (1945) claim that WWII resulted from a lack of incorporation of this scientific knowledge into international diplomacy after WWI. They directly argue for an inventory and proper management of U.S. resources as a means of avoiding future war. Vogt and Osborn both echo this argument, and stressed that scientists were trained to see population-resource balances more clearly and thus were better ‘keepers’ of this inventory. Vogt hails Gifford Pinchot and Hugh Bennett (of the U.S. Forest Service and Soil Conservation Service, respectively) as great American patriots because of their ability to manage its resources.

III. Population-Resource Theory in the Early Cold War

As pointed out by Pickering (1995) and Barnes and Farish (2006), the period of WWII through the early parts of the Cold War was a time when scientific practice was nationalized as a means of state security, fused with government and academic institutions, and radically altered (into what Barnes and Farish (2006) refer to as ‘big science’). Science was increasingly incorporated into political decision making. Barnes

and Farish (2006) importantly point out that this was not restricted to the weapons-making research in the ‘hard’ sciences, but was also extended to the social sciences, including (more specifically) a more functionally oriented understanding of human geography. To this I would add that the construction of an empirical link between resource scarcity and war (‘catastrophe empiricism’), and the scientific management of natural resources prescribed as a nostrum by Vogt and Osborn, among others, was an important part of this “epochal change” (Pickering 1995).

The role of science in this regard, however, was not universally agreed upon. For example, Osborn’s and Vogt’s holistic approach to science, which advocated the direct incorporation of science into policy, was in contrast to traditional notions that science was not ‘real’ unless it was highly specialized and non-advocatory. More importantly, although Vogt and Osborn both championed scientific enterprise, it was more as a way of showing the importance of balancing population and resources, rather than as a way of producing more food overall. Both believed that increased food production led to yet higher populations and increased food demand. Vogt, for example, argued that “by a distortion of the Promethean myth, we gobble our own liver and congratulate ourselves on a good meal” (1948, p. 146). This view was in contrast to the belief in the use of science to foster the ‘green revolution,’ in large part as a hedge against communist expansion in developing countries. To the extent that the population-resources question was a crucial dimension of the increasing use of science as a national security imperative, there existed at the time a broad split between neo-Malthusian discourse, characterized by Vogt and Osborn, and a Promethean discourse, characterized by wartime director of the Office of Scientific Research and Development Vannevar

Bush. The latter discourse saw scientific progress inevitably leading to greater food production and human comfort.

The empiricization of post-war neo-Malthusianism took a number of theoretical forms. Perkins (1997) refers to what he calls the Population-National-Security-Theory (PNST) as a model circulated during this time to justify investments in Green Revolution technologies. PNST further connected various centers of knowledge, including demography, resource conservation, and geopolitics. The model looked like this (Perkins 1997, p. 119):

Overpopulation → Resource Exhaustion → Hunger → Political Instability → Communist Insurrection → Danger to American Interests → War

Linnér (2003) calls the same thing ‘resource-security theory’ (and it is this term I shall use in this dissertation). Regardless of its name, it was both highly influenced by the managerialism of conservation science and extremely influential in foreign policy affairs. According to Linnér (2003), many of the government workers in the (Keynesian) New Deal programs of the 1930s were also employed in post-war foreign aid programs. Gifford Pinchot, for example, was instrumental in the development of the UN Scientific Conference on the Conservation and Utilization of Resources in 1949 on the grounds that “conservation is a basis for permanent peace⁵³” (Pinchot, quoted in Linnér 2003, p. 26). President Truman advocated the conference directly on grounds that it supported his foreign policy goals of containing Soviet communism.

⁵³ Importantly, Pinchot also often linked progressive era conservation to the national interest.

Vogt and Osborn opposed Truman's foreign policy goals when it came to aid to Greece and Turkey. Osborn was particularly adamant that food aid programs were self-defeating because ultimately "nature holds the trump card" (1948, p. 103); Vogt was somewhat more flexible on the matter, only begrudgingly conceding the necessity of food aid purely "in self-defense" (p. 147). In contrast, Vannevar Bush, who had become a leading policy figure in terms of the nexus between science and national security, argued that while population and technological ingenuity were both "bursting upwards," plant-breeding science was sound policy because "science gets there first" (Bush, quoted in Gottlieb 1995, p. 37).

Bush was intensely critical of both Osborn and Vogt. Rockefeller Foundation president Chester Barnard, on the other hand, was impressed with Vogt's argument, and openly questioned the efficacy of the Foundation's long-running efforts to increase food production. According to Perkins (1997), although the Rockefeller Foundation had a broadly neo-Malthusian outlook, their financial investments in plant-breeding science (beginning in the 1930s), and their institutional connections with industry and government, prompted a dismissal of Barnard's concerns. Rather, the Foundation incorporated the Promethean discourse of Vannevar Bush and funded the Mexican Agricultural Program (MAP) in 1949. This was the first of a series of pilot programs to invest in the diffusion of Green Revolution technologies overseas. After MAP's initial success, the Rockefeller Foundation duplicated such programs in Columbia in 1950 and India in 1952. These programs were also supported by the U.S. Agency for International Development under the mandate of Truman's 'Point Four' program. Perkins argues that national security was the driving force behind MAP, and "American plant-breeding

science thus became part of the cold war's defense of capitalist political economies" (1997, p. 139). Perkins is correct, but it should be noted that the creation of new markets for agricultural products internationally was also a driving force behind the Green Revolution.

Meanwhile, the post-war neo-Malthusianism of Vogt and Osborn was manifested in the establishment of the Conservation Foundation (CF)⁵⁴ and Resources for the Future (RFF). The initial impetus behind the planning and creation of the CF was a 1947 meeting of the New York Zoological Society, attended by (among others) Vogt, Aldo Leopold, the ecologist Charles Elton, and the geographer Carl Sauer, all on Osborn's invitation (Linnér 2003). The above participants all served on the Foundation's first advisory council. Despite the general anti-Promethean stance of this group, the CF was financially underwritten largely by the Rockefeller Foundation. "The CF placed population and resources at the center of the conservationist discourse, while seeking to make linkages between industry, government, and universities in promoting better resource management" (Gottlieb 1995, p. 38). The CF was active through the late 1940s and 1950s before merging with the World Wildlife Fund in the early 1960s.

Though current literature in geography on governmentality would argue that this occurred much earlier (Hannah 2000, for example), Sprout and Sprout (1965) wrote in the 1960s that the inventory of resources and landscapes in foreign and domestic countries had become a central function of modern government after WWII. One important example of this is the publication of *Resources for Freedom* (1952), written by the President's Materials Policy Commission (at President Eisenhower's request) as a comprehensive assessment of the physical materials available for national use. The report

⁵⁴ The current Conservation Foundation was established in 1972 and has entirely different roots.

explicitly describes conservation as national ethic because it can help ward off the communist ‘threat.’ The authors also begin the report by claiming this resource inventory as necessary for economic growth and free enterprise, and (somewhat curiously) add that although “we cannot find any absolute reason for this belief [in economic growth]... to our Western minds it seems preferable to any opposite, which to us implies stagnation and decay” (1952, p. 3).

This report was part of the genesis of *Resources for the Future*. It provided the original impetus behind the organization of a major Mid-Century Conference about the most effective use of natural resources toward U.S. economic growth and military preparedness. The conference was organized by a number of leading conservationists, including Osborn, and executives from a number of resource related trade associations and corporations, such as the American Petroleum Institute, the Farm Bureau, Standard Oil and Newmont Mining. The organization of the conference also led to the establishment of RFF, whose focus at the time was on the use of scientific expertise in resource management but also on population control and military preparedness (Gottlieb 1995). Although RFF’s work has since focused largely on market-based initiatives for ensuring environmental quality, their web site currently situates the history of RFF squarely within the publication of *Resources for Freedom*.

In 1956, the Industrial College of the Armed Forces (ICAF), in a project headed by Benjamin Williams, produced a series of reports called *The Economics of National Security*. Volume VI of this series was dedicated to natural resources, and was heavily based on *Resources for Freedom*. Mostly it repeated the earlier calls to take stock of natural resources as a means of buttressing military efforts. What this report added,

however, was that the misuse or otherwise degradation of resources abroad was itself a threat to U.S. interests (as opposed to advocating conservation in terms of a broadly conceived national ethic or for military preparedness). Williams (1956, p. 47) discusses how depleting resources leads to conditions in the developing world which threaten the U.S.: “Today, starvation and poverty are prime factors contributing to political instability in many countries which threaten the peace of the world. Wherever such conditions exist, they are exploited by world communism.”

IV. Concluding Remarks

The observations made in this chapter are crucial to the overall argument that environmental security is highly informed by 20th century environmental and geopolitical discourses, rather than being a ‘new’ post-Cold War phenomenon. For example, Dalby’s (2002) critique that environmental security ‘bifurcates’ the world into essentialized categories (the ‘masses’ creating the problem, and those suffering from it) is given historical depth by reviewing the role of race and eugenics in Malthusian revivalism and arguments about the role of science in foreign policy and national preparedness.

While chapter five illustrated the importance of discourses of nature to geopolitical discourse, this chapter has shown that a significant portion of environmental discourse is informed by discourses of national security. For example, Vogt saw population-resource balances as the means with which Europe ‘blackmails’ the U.S. into giving aid, and that the sacrifice of natural resources is the only means to insulate the U.S. from war. Furthermore, notions that nature somehow ‘left’ geopolitics after the Cold War miss the mark in light of the observation that the construction of theoretical links

between resources and conflict was a significant part of the governmental harnessing of science towards national security. These links had a long history in discourses of sexual morality, class, and race, and also provided the groundwork for Cold War geopolitics and the Green Revolution.

The purpose of the final chapter is to continue this narrative through the environmental movement and the post-Cold War era, showing how various invocations of environmental security would construct different notions of ‘threat.’ These notions of threat range from environmental degradation as a general threat to U.S. political and economic interests, to environmental degradation as an instigator of direct violent confrontation, to notions that the planetary biosphere itself, as the basis of American prosperity, should be held as the referent of security. As such, it will show how the co-constitution of environment and security discourse, as explained in both chapters six and seven, bears a vertical intertextuality (in Kristeva’s terms) with environmental security literature.

Chapter Seven: Intertextuality, Myth, and Environmental Security

Introduction

The purpose of this chapter is to situate the post-Cold War literature on environmental security within the discourses examined in the two preceding chapters. As I suggested in the introduction to this dissertation, in order to understand the social construction of ‘environmental security’ as a body of literature it is important to address a number of questions. For example, why does most of the literature critiquing environmental security (what Levy (1995) would identify as ‘third wave’ literature) encircle only policy proposals to link environment and security or empirical assessments of relationships between the environment and security as their object of analysis? In other words, why is so much of the securitization rhetoric of the environmental movement (or a number of other discourses) left out of the analysis (as is the case with Barnett (2001), for instance)? Also, given Deudney’s (1990) call to ‘bring nature back in(to)’ the social sciences, and given that even Kaplan (1994) cites Homer-Dixon’s (1991) support of this call, how and why did nature come to be understood as having ‘left’ the social sciences in the first place?

These issues are also manifest in purportedly ‘new’ suggestions to incorporate environmental concerns into national security objectives shortly after the Cold War. For example, Deputy Assistant Secretary of Defense for the Environment William Parker reported a realignment of Defense Department priorities in an article in *Defense* entitled *Environment Moves to the Front Burner* (1990). Myers (1993) articulated his vision of ‘ultimate security’ as part of what he calls a “thinking dividend” (p. 30) enabled by the end of the Cold War (a version of what many would term the ‘peace dividend’). Later,

Secretary of State Warren Christopher suggested (erroneously, as chapter six made clear) that the links between resources and conflict were not understood during post-WWII political re-alignments and development policies, but that because these links were *now* understood, they could be incorporated into post-Cold War foreign policies. These are only a few examples of such suggestions. The question for this chapter is, then, what can the observations of the previous chapters tell us about the precedents of this normative linking of environment and security? What does it entail, and how is it informed and constrained by previous environment and security discourses?

As a means of answering the above questions, this chapter will employ the semiotic tools outlined in the methods portion of this dissertation to show the intertextuality of those discourses. To this end, the second section of this chapter first briefly reviews chapters five and six, but focuses on how the contents of these chapters exemplify Kristeva's (1980) notion of vertical intertextuality. The third section of this chapter focuses on Barthes' (1982) semiotics of myth-making, which I employ as something roughly similar to Kristeva's horizontal intertextuality. I do this first by showing how this sheds light on how the metaphor of the body politic helps construct the myth, as a mode of signification, of the domino effect and containment. I then extend a similar analysis to the securitization rhetoric of Ehrlich's (1968) *The Population Bomb*, and how this mode of signification represents a form of intertextuality between environment and security discourse.

Vertical Intertextuality

The characterization on the part of Deudney (1999a) and Homer-Dixon (1991) that an understanding the role of nature in human political life was prevalent in the classic geopolitical work of Ratzel, Mackinder, Mahan and others, but waned shortly after WWII and throughout the Cold War, only to be re-visited in environmental security literature, assumes a Cartesian authorial subject and linear history. This assumption can be critiqued using the work of Kristeva (1980) and Barthes (1977, 1982), as discussed earlier. In short, Kristeva's vertical intertextuality suggests that texts are constrained by previous texts such that they reproduce the social exclusions of the past. Barthes' notion of the author's 'death' suggests that meaning emanates not from authorial intention, but from the dominant cultural codes with which the reader consumes the work. This chapter's focus on the semiotics of myth shows how the environmental basis of social (in)stability was naturalized in a lot of social-scientific work even if, arguably, fewer authors actually wrote about it (e.g., it did not 'go' anywhere even if the author did).

Consequently, much of the literature discussed in this dissertation perpetuates the social exclusions discussed more specifically in chapter five in the form of spatial abstractions enabled by metaphors of the body. In that chapter, I discussed how these metaphors construct "the people" (Marston 1990) as a unity of inter-working parts toward a common goal – the continued health of the body politic. This effacement of variation and competing interests within the populace characterizes parts of the literature discussed in chapter six and in this chapter. Vogt (1948), for example, openly excoriates individual self-interest and praises identification with collective goals, comparing conservation to a card game that will be lost if the players fail to know the rules. Both he and Osborn

(1948) follow Gifford Pinchot in advocating conservation as a particularly *national* ethic. Later environmentalists such as David Brower (1981) and Al Gore (1992) would perpetuate this abstraction in ways that will be detailed in the following section.

Therefore, the spatial abstraction of a nationalized self is *one* form of exclusion perpetuated by population-resources literature. Chapter five traced much of this spatial abstraction to the work of Kay-Shuttleworth (1832) and Chadwick (1842), which analogized the social body as the aggregate of healthy individual bodies. These works suggested that the maintenance of social health was the key to preventing the infiltration of foreign contagion (the Irish, in Kay-Shuttleworth's case), and that the lack of morals among the working classes provided the proper conditions for this infiltration. Much of what they suggested, then, was the rational maintenance of parts of the social body toward preserving an allegedly healthy, unified society. This is a theme that was also perpetuated in the eugenic assumptions of many early 20th century neo-Malthusians, as discussed in chapter six. Isaacson (1912), for example, advocated the direct manipulation of social class along reproductive lines. This classist, rationalist maintenance of the *who* of reproduction (or the maintenance of all body parts toward social health) was then traced through ensuing neo-Malthusian literature. It is a form of social exclusion further perpetuated in later environmental and environmental security literature. For example, Ehrlich's *The Population Bomb* (1968) directly advocated government management of reproduction. Though he acknowledges the political impracticality of such measures, Ehrlich's preferred mechanism for population control was the addition of a chemical to public water systems to suppress fertility. Citizens wishing to reproduce would then have to file paperwork with the government to obtain the antidote to the chemical additive.

Though he does not advocate eugenics, Ehrlich's proposal of government manipulation does border on eugenic arguments, especially considering his justifications that citizens of poor countries are incapable of responsible birth control on their own and that such a measure would also enable the production of more male children, thus further reducing population.

Ehrlich's (1968) work is often considered the quintessential neo-Malthusian text of the 20th century, and, as will be shown later, is crucial to environmental security. It also can be shown to perpetuate another social exclusion common to neo-Malthusian literature: the reduction of human reproduction to innate sex drive (and the mastery over it) at the expense of the social, political and cultural context within which reproduction takes place. As chapter six argued, this exclusion is based within a moral critique of sexual instinct by early 20th century neo-Malthusians, who saw the technology of birth control as a means for human society to transcend the 'natural laws' of reproduction (because, allegedly, no amount of reasoning would convince the poor to stop reproducing). Much of Ehrlich's argument is based on this understanding of reproduction. His discussion of the differential reproductive rates of 'developed countries' and 'undeveloped countries' is followed immediately by an explanation of the genetic evolution of reproductive instinct. Ehrlich argues that because people inclined to reproduce pass on this instinct more readily (by definition) than those without such an inclination, "the urge to reproduce has been fixed in us by billions of years of evolution" (1968, p. 29). Consequently, population growth occurs because "intervening in the birth rate goes against our evolutionary values" (1968, p. 34). The point here is not about whether Ehrlich is empirically right or wrong about the genetics of sexual instinct, but

rather the highly reductive way in which he talks about sexual reproduction. Sex, child-rearing, and parenthood are uncritically assumed as facts of evolution, rather than seen as social constructions. His fairly radical proposals to intervene in the birth rate are seen, again, as a way of transcending Darwinian evolution. Furthermore, this can be seen as a moral critique because population growth is, to Ehrlich, only endemic to ‘undeveloped countries’ and is regularly referred to as a ‘cancer’ on civilization⁵⁵.

That such neo-Malthusian arguments exclude sexual reproduction from cultural, economic and political contexts is a crucial part of the naturalistic framework of environmental security. As chapter six pointed out, Linnér (2003) shows how the work of demographers Warren Thompson and Raymond Pearl influenced the development of human ecology, which was also influential in the Rockefeller Foundation’s agricultural programs and was cited by Sprout and Sprout (1965) as the dominant theoretical assumption of the field of International Relations. A great deal of work in human ecology assumes human conflict as an auto-response to population-resource imbalances and a form of human social evolution, a theoretical model which, as argued extensively by Peluso and Watts (2002), survives in Homer-Dixon’s ECACP and Baechler’s ENCOP research as well as Kaplan (1994) and Myers (1993).

The point here is not to re-hash this argument. Rather, it is to show how intertextuality and Barthes’ semiotics of myth as theoretical tools help clarify these arguments by showing how such exclusions contribute to the linear causality of ENCOP and ECACP. Homer-Dixon (1991), for example, openly eschews naturalist epistemology,

⁵⁵ He also rejects plans to relieve population pressure by populating other planets on grounds that because population explosions would occur on board the space ships, only ‘responsible’ members of society could go, which would unfavorably select for ‘irresponsible’ people on Earth, which further illustrates the moral implications of Ehrlich’s work.

but he and Deudney (1990, 1999a) both want to ‘bring nature back in(to)’ the social sciences. Homer-Dixon (2003) furthermore analogizes population pressure as a “deep tectonic stress” (p. 91) underpinning human conflict. I argue that environmental security literature is deeply informed by naturalist epistemology which, rather than having ‘left’ the social sciences, was mythologized in the form of metaphors of nature as an underlying causal structure of society. In this myth, nature’s incontrovertible laws (sexual instinct or population-resource dynamics, for instance) are the basis upon which society operates, and are the first step in a chain of linear causality. Its very characterization as *myth* in Barthes’ (1982) semiotic structure helps show why Homer-Dixon does not see this particular spatial metaphor of ‘deep tectonics’ as particularly naturalist, and why Deudney sees naturalism as ‘dying’ along with its authors, so to speak.

Horizontal intertextuality, or the Semiotics of Myth-Making

Barthes’ (1982) semiotics of myth can also help show the intertextuality of the geopolitical discourse discussed primarily in chapter five and the environmental and neo-Malthusian discourse discussed primarily in chapter six (and above). In my discussion of methods I used the metaphor of the body politic and Harry Truman’s ‘total war’ rhetoric to provide an example of the semiotic structure of myth. It looked like this:

1. Body (signifier)	2. Nation (signified)	
3. Body politic (sign) I. Signifier		II. National unity of inter-working parts (Signified)
III. Truman’s ‘total war’ myth (Sign)		

In this case, the body politic metaphor is the first order semiological system which is depoliticized or “frozen into something natural” (Barthes 1982, p. 116) and thus

serves as a signifier for the second order semiological system (in bold), or myth, of a ‘total war’ to contain Soviet aggression. Chapter five elaborated on the construction and naturalization of this myth, in particular by showing the intertextuality of geopolitical and bio-medical discourse. I also argued that this intertextuality was implicated in the construction of a myth of the ‘domino effect’ of the spread of Soviet communism and the ‘containment’ policies justified as a form of quarantine. The semiotics for this would look something like:

1. Infection ⁵⁶ (signifier)	2. Soviets (signified)	
3. Communism as contagious (sign) I. Signifier		II. Domino Effect (Signified)
III. Containment/Quarantine in foreign policy (Sign)		

In this case, the myth of containment is built on the naturalization of the bio-medical metaphor. I also maintain that these signs are not produced simply as labels for a natural, pre-discursive reality, but rather, as chapter five argued, help create the myth of a nationalized ‘self’ and a seditious ‘other.’

It is important to this dissertation that a significant amount of environmental discourse is also based on this sense of national identity and we/they binaries. Progressive era conservation (along with post-war neo-Malthusianism) was often cast as a *national* ethic, and it is this era of conservation (and in particular Roosevelt) that Parker (1990) invokes to justify his ‘front burner’ declaration. As another example, President Jimmy Carter famously referred to his proposed energy transition as “the moral equivalent of war” (as quoted in Brown 1977, p. 13). The famous environmentalist David Brower

⁵⁶ This is, specifically, in Dean Acheson’s (1969, p. 219) terms.

(1981) argued that environmental change was the single biggest threat to the U.S. and actually fueled the superpower rivalry, and saw the failure to conserve resources as the result of individualism rather than an identity with collective goals. His solution is an extension of patriotism to natural resources in the form of a universal conservation ethic.

Perhaps the most noteworthy example of the importance of national identity to discourses of the environment is the portrayal of population growth as a threat to U.S. national security. Overpopulation arguments frequently suggest that Western enlightenment and scientific rationality allows developed world peoples to transcend Malthusian laws, or at least to circumvent primordial sexual instinct, while developing world peoples are subject to Malthusian laws because of a lack of modern faculties. Such arguments, in other words, are based on a construction of an 'other': 'we' transcend nature, while 'they' do not. Kaplan (1994), for instance, is explicit about his belief that the "economic, educational and cultural standards" of the West allow westerners, in contrast to West Africans, to "tranquilize" (p. 73) their aggressive instincts. Ehrlich's (1968) work was somewhat less direct, though he did neatly divide the world into problem and non-problem areas, and suggested beaming educational videos via satellite into rural African villages extolling the benefits of birth control and agricultural conservation. In terms of the latter, he supports (albeit tentatively) research on high yield varieties of wheat crops in Mexico, and credits Lester Brown's research in his role (at the time) as the administrator of the International Agricultural Development Service. Both Brown and Ehrlich were hopeful that these technologies could create an "agricultural revolution in Asia" (Ehrlich 1968, p. 107) in which rural farmers abandon traditional practices in favor of 'improved' seed varieties and modern techniques.

Virtually all of the neo-Malthusian literatures discussed in this dissertation presuppose a certain animalistic ‘other’ in contradistinction to the enlightened, ordered western society. Though this is certainly crucial to an understanding of the intertextuality of environmental and security discourse, it only partly explains how population growth and/or environmental change came to be seen in terms of a threat of violent conflict to the nation-state. A semiotic analysis of the myth of the ‘population bomb’ helps to show this development. Ehrlich’s bomb metaphor can be analyzed in Barthes’ (1982) system in either of a couple of different ways. One way would look like this:

1. Bomb (signifier)	2. Population growth (signified)	
3. Pop. Growth is like a bomb (sign) I. Signifier		II. Bombs are important threats to security (Signified)
III. Population change is a threat to security (Sign)		

The first order semiological system here is the use of the bomb as a signifier for population growth. This metaphor then operates as a signifier in the second order semiological system, or myth, that rapid population change represents an externally imposed, potentially fatal threat to security. Given that modes of signification are often reflections of their own social and political contexts (recall Bakhtin’s notion of ‘dialogism’), it is also extremely relevant that Ehrlich first invoked this signification in the midst of the Cold War, and more specifically during the Vietnam War. The signification of population growth as a direct military threat to the U.S. is thus highly informed by the binary logic of Cold War geopolitics. This can be seen throughout Ehrlich’s text, as he regularly links population growth and war (as does David Brower in the preface), and invokes a quote to this effect by Pope Urban II which, importantly, can

also be found in Osborn⁵⁷ (1948) and Burch and Pendell (1945). He also employs militaristic and highly gendered language in this regard, advocating abortion as a “highly effective weapon in the armory of population control” (p. 88) and excoriates family planning groups for “pussy footing” (p. 88) in their support of it. While Ehrlich disagrees with a National Agricultural Chemical Association characterization of anti-pesticide groups as communist sympathizers⁵⁸, he does so by equating pesticides to the threat of communist infiltration⁵⁹ (as opposed to actually challenging Cold War logic). The system of significations in the above chart seems almost obvious, but I argue that as a theoretical tool it is useful to analyze the intertextuality of environmental and security discourse: the notion of overpopulation as a direct physical threat in this context is based on a naturalization or depoliticization of the bomb metaphor.

Another important observation in this regard is the securitization rhetoric implicit in this mode of signification. That is, the ‘population bomb’ seeks to elevate the population issue to one of pre-eminent concern (i.e., all other issues are irrelevant unless *this one* is solved) in order to legitimate interventionist population policies. Hannah’s (2006) discussion of the use of the ‘ticking bomb scenario’ as a form of power/knowledge to legitimate torture is useful here. Hannah argues that this scenario’s discursive power draws from the “expanding-point topology” of the ticking bomb. He contrasts this with a “proportional-point topology” typical of daily social and political life, in which the capacity of any individual agent to materially affects its surroundings is assumed to be proportional to the physical scale of that agent. In an “expanding-point

⁵⁷ Ehrlich in fact cites Osborn (1948) in his bibliography, but not Vogt (1948).

⁵⁸ And so it is also worth noting that the NACA promoted pesticides as a major weapon in the ‘containment’ of communism.

⁵⁹ Ehrlich also traces pesticide use directly to overpopulation; more people means more agriculture which means more pesticide use.

topology,” however, the destructive capacity of the agent far exceeds its physical scale and its “normally modest sphere of expected effects” (2006, p. 628). The incongruence between the ability to police terrorists and their technologically empowered expansive topology therefore is a major legitimating resource for the war on terrorism. This analysis of expanding versus proportional topology is only one part of Hannah’s analysis of the ‘geographical imagination’ of terrorism, but it is the part most useful for the analysis of population bomb mythology.

The second way to insert the population bomb into Barthes’ (1982) analytical structure would look like this:

1. Bomb (signifier)	2. Population growth (signified)	
3. Pop. Growth is like a bomb (sign) I. Signifier		II. Ticking bomb scenario (Signified)
III. Overpopulation issue is of pre-eminent importance (Sign)		

Hannah’s analysis of the topology of the geographical imagination of terrorism does not carry over *perfectly* into this analysis because the geographic imagination of overpopulation relies less directly on an internal expanding point topology than would be the case with terrorism⁶⁰. Nevertheless, as the above chart indicates, the suddenness and destructiveness of the ticking bomb – as is reinforced by the familiar j-curve representation of population growth reproduced in most texts concerning population - is an important legitimating resource in interventionist population policy. The 1969 edition of *The Population Bomb* even has a picture on the cover of a bomb with a lit fuse and a

⁶⁰ Another potential difference is that with terrorism the ticking-bomb scenario is *somewhat* less metaphorical because of the existence of actual bombs. Nevertheless, the imaginative capital of the ticking bomb scenario far exceeds the presence of actual ticking bombs, hence it is still basically metaphorical. Hannah’s (2006) point was not necessarily about metaphor; mine is.

caption that reads “the population bomb keeps ticking.” This is, as with the above chart, a mythical mode of signification based on the reduction of the original sign to “depoliticized speech” (Barthes 1982, p. 132), and is how Ehrlich (1968) justifies, for instance, adding sterilizing chemicals to public water or mandating sterilization of some Indian men (which he advocates).

This characterization of population growth as a pre-eminent national security issue, rather than an issue of poverty or gender equality, is informative of a significant amount of environmental security literature. While Brown (1977), for example, does not necessarily advocate directing the military toward environmental concerns, his securitization of environmental issues is very much couched within a war rhetoric and he regularly stresses the urgency of environmental (particularly energy) issues. Brower (1981) advocates investment in conservation technologies as a way to “encourage our and Soviet disarming, and help diffuse the population bomb” (p. 10), with the implication that population growth could be an underlying cause of nuclear war.

In 1987, the World Commission on Environment and Development coined the term sustainable development largely to incorporate environmental concerns into development discourse. Though this was arguably driven by the preservation of the political economy of development, its own purported justifications included the elimination of security threats emanating from environmental degradation. In its opening chapter, for example, it states:

The deepening and widening environmental crisis presents a threat to national security – and even survival – that may be greater than well-armed, ill-disposed neighbours and unfriendly alliances. Already in parts of Latin America, Asia, the Middle East, and Africa, environmental decline is becoming a source of political unrest and international

tension. The recent destruction of much of Africa's dryland agricultural production was more severe than if an invading army had pursued a scorched earth policy (Brundtland 1987, Pp. 6-7).

This quote is clearly positing environmental degradation as a threat to national security, but it is also important that it uses metaphorical language to provide an image of environmental change as an 'invading army' crossing national borders.

Some accounts of the emergence of environmental security literature mention the WCED report, but most do not, and to that extent fail to see environmental security as embedded in development discourse. Nevertheless, one of the lead advisors on the commission was Norman Myers, who later published *Ultimate Security* (1993), a book which is often considered one of the quintessential texts of environmental security. Myers opens by recounting his experience on the commission and credits himself for convincing the commission to adopt environmental security as an important focal point. Myers is very direct about sourcing environmental degradation to poverty-inducing overpopulation in developing countries. He then outlines four linkages between environmental degradation and national security. In the first linkage he baldly shows the economic impetus behind environmental security, arguing that, since environmental degradation and poverty are co-constitutive, and since the developing world by 1993 had become an important market for western products, environmental degradation was a threat to western economic interests. He states, "developing world poverty has become a luxury that we can no longer afford" (p. 26). His second linkage is the by now familiar script of environmental change leading to political instability (read: communist insurrection) which allegedly can spread into the developed world⁶¹. His third linkage is the notion that

⁶¹ He also uses a health metaphor to explain the concept of security (p. 32).

environmental problems themselves can cross political borders, and actually claims (incorrectly) that global warming has been caused primarily by cattle and rice paddies in Asia. His final linkage is the possibility of environmental refugees crossing national borders.

All four of Myers' linkages exhibit the various semiological systems discussed in this chapter. They all assume social and political life, especially conflict, as a direct reflection of environmental conditions and script the genesis of insecurity as 'out there' affecting the 'in here.' Furthermore, he credits former Secretary of Defense and World Bank president Robert McNamara's *The Essence of Security* (1968) with the original linking of development and security. I argued near the end of chapter five that McNamara's analysis relied upon a metaphorical assumption of developing world poverty as bodily weakness allowing the spread of communist contagion, and I illustrated this by charting the semiological myth of the domino effect earlier in this chapter. Myers' concept of environmental security is indistinguishable from sustainable development discourse and is highly informed by Cold War geopolitical imaginaries.

While the WCED report is not often enough discussed as part of environmental security literature, Mathews (1989) is often considered the seminal piece on environmental security, and in many ways can be seen as another expression of sustainable development discourse. Mathews focuses on population growth as "the core of most environmental trends" (p. 193) and worries that because of explosive population growth in the developing world, "by the end of the 1990s the developed countries will be home to only 20 percent of the world's people, compared to almost 40 percent at the end of World War II" (p. 163). She points this out mostly to say that developing countries

will consequently become important on the international agenda, while acknowledging that their added numbers does not mean additional political power (due to poverty). This however, only implies that the developing world should only be of concern if they have high populations, and, more importantly, tacitly admits shifting power is the basic issue of concern. She also refers to tropical reforestation as “endemic” (p. 165) to Central America, Asia, and Africa. All of this indicates that her invocation of environmental security is based on a binary imaginative framework in which “their” growth and ensuing environmental change is worrisome because it affects “our” power status. This is important because of how this script is punctuated. For Mathews, this is population growth and environmental change that *begins* naturally ‘there’ – hence it is ‘endemic’ – and moves ‘here.’ This is also why the semiotics of the bomb and infection are important; her script draws on dominant Cold War punctuations of threat/security relationships and, for all its discussion of ‘redefining’ security, her paper never really transcends the Cold War definitions of the term. This is perhaps most evident in her discussion of Haitian refugees, in which “there is no question that... many Haitians were *forced* into the boats by the impossible task of farming bare rock” (p. 168, emphasis added). Mathews may empirically be correct that soil erosion has caused problems for Haitian farmers, but the point is that she posits nature as an agent ‘forcing’ the human action which allegedly threatens the U.S. (while adding that Haitians are ignorant of the reasons for their plight).

Though Gore (1992) rarely actually uses the term environmental security, his book perhaps mostly directly shows the intertextuality of post-Cold War environmental discourse with Cold War geopolitics. He begins by clearly stating that his study of the arms race influenced his thinking about environmental degradation as a threat to global

civilization – recall the above discussion of expanding-point topologies and ticking bomb scenarios as a securitization technique. Along these same lines, Gore uses military terminology to explain environmental problems by creating three categories: ‘skirmishes,’ such as toxic waste dumps, ‘regional battles,’ such as acid rain, and ‘strategic conflicts,’ such as climate change. After discussing population growth and showing the above-mentioned j-curve, he very directly compares environmental degradation to nuclear war in its effects. As further examples, he describes environmentalists as “resistance fighters” in an “epic battle” (p. 269) for the environment, and compares this battle to the defeat of Hitler.

In this latter case, Gore (1992) in fact says that these are not simply analogies, but that current environmental ‘battles’ actually are continuations of the resistance to fascism. Certainly these are ultimately analogies whether Gore considers them so or not, but this does raise the issue that these are not subtle metaphors underpinning Gore’s assumptions, but rather he is acknowledging his own use of military nomenclature to prioritize the environment. However, this no less exemplifies the construction of a second order semiological system, or myth, upon the naturalization of a first order sign (Gore’s military metaphors) simply because Gore is so forthright about it. Recall from the methods discussion that Barthes (1982) explains that this naturalization of the link between original signifier and signified (in Gore, bomb and population or bomb and environmental degradation) is not a matter of purposely hiding any political intentions. Rather, it is a matter of experiencing this linkage as “innocent speech” (p. 118), such that what is socially produced is rendered as ‘natural.’ This means that Gore need not be discrete in his metaphorical language, because myth operates by rendering this language

as ‘just a metaphor.’ Furthermore, Gore’s securitization myth has very real consequences. His preferred way to operationalize environmental security is through what he calls the Global Marshall Plan, a direct reference to post-war development and reconstruction efforts which were part of Soviet containment. Gore’s version is arguably a euphemism for globalized neo-liberalism, as he lists as its main components the spread of ‘free’ markets and democracy, the transfer (e.g., sale) of conservation technologies to the developing world, and an international system of economic incentives for conservation (he is underspecific about these, but they would include, for example, pollution permit trading schemes). His Global Marshall Plan, then, appropriates discourses of global environmental disaster based on a securitization myth to legitimate neo-liberal trade policies.

Kaplan (1994) also invokes Cold War geopolitical discourse⁶². He favorably compares Homer-Dixon’s *On the Threshold* (1991) to Kennan’s famous ‘X’ article, in particular suggesting that Homer-Dixon’s work could engender a new era of ‘containment,’ only now containing the spread of environmentally induced chaos. Kaplan’s geopolitical assumptions are thus very informed by Kennan’s Cold War geopolitical assumptions⁶³ and the myth of the domino effect. In fact, to the extent that environmental security can be seen as an extension of Cold War geopolitics to the environment, it is largely on account of the geopolitical inferences that Kaplan draws from Homer-Dixon⁶⁴.

⁶² A point which Dalby (2002) has already made, hence my comments on Kaplan will be somewhat brief.

⁶³ Though, perhaps ironically, even Kennan retracted some of his characterizations of Soviet aggression later in his life.

⁶⁴ Homer-Dixon himself is often noncommittal about the normative linking of environment and security in terms of state policy.

Kaplan also seems to make the same assumptions of an infiltrating enemy leading to dissent and breakdown of social cohesion that the National Security League and numerous cold warriors did. Rather than, for example, lamenting the invasion of Haitian refugees, Kaplan fears the lack of social cohesion and identity with the nation-state itself might spread to the U.S. and destabilize what he sees as an already crumbling national unity. He openly worries about American black caucus leaders communicating with African leaders and a then-recent story about black journalists at the *Los Angeles Times* complaining about the newspaper's African coverage (or lack thereof). These blatantly racist assumptions indicate that the containment myth, in either Cold War geopolitics or Kaplan's version of environmental security, is as much about a nationalist preservation of the socially constructed "we" as it is about direct physical attack. For Butts (1999), as mentioned in chapter three, environmental security programs in Africa were largely about promoting African national identities. Either way, much of environmental security is based on promoting a notion of 'stability' – rather than justice, equality, or even democracy – via identification with the state in order to create markets and globalize neo-liberal trade structures.

And it is in that sense that environmental security, while being operationalized in official or quasi-official state policy in different ways, is ultimately an extension of post-war developmentalism and sustainable development as Cold War geopolitical strategies. Sherri Wasserman-Goodman (1996), as Deputy Under Secretary of Defense for Environmental Security⁶⁵ during the Clinton Administration, described her vision of

⁶⁵ The creation of this position early in the Clinton Administration was a manifestation of environmental security discourse. The position is now called Deputy Under Secretary of Defense for Installations and Environment, and is now directed more toward health and safety, remediation, and conservation measures at domestic military installations.

environmental security as a form of preventative defense (pointing to a previous speech by Secretary of Defense William Perry), which, like Gore, she traces to development programs such as the Marshall Plan and the Green Revolution.

Former Secretary of State Warren Christopher (1996) described the environmental ‘threats’ to U.S. national interests in two ways: 1) that environmental problems themselves can cross borders and directly affect Americans, and 2) that natural resource management is critical to ‘stability’ (which he leaves undefined) and “to pursuing our strategic goals around the world.” He cites water in the Middle East and the thawing of Arctic ice as examples, as well as the fact that while DDT is banned in the U.S., it still presents a health hazard because it can easily spread across borders (which is, of course, quite true). Crucially, in the latter case he punctuates the ‘beginning’ and ‘end’ of this environmental threat by not mentioning where the DDT was manufactured, why it was used, or in fact any of the social, economic and political relations involved in the pesticide industry. This punctuated script is, as discussed above, common to environmental security and is a spatial strategy toward legitimating foreign interventionist policies (as is argued by Warner (2000)).

It is also important to point out that it is an important legitimation strategy for creating foreign markets and for the globalized neo-liberalism advocated by Gore (1992), Myers (1993), Wasserman-Goodman (1996) and others discussed above. Christopher (1996), for example, continues that “protecting the environment also opens up new business opportunities,” citing a \$400 billion international market for environmental technologies. He gives as an example the contract offered to an American firm (at the time) to manage fisheries and protect fresh water supplies in Uganda, Tanzania and

Kenya. Many of these technologies are sold overseas by the Strategic Environmental Response and Development Program (SERDP), created in 1990 to provide environmental managers and technicians with the advanced data gathering and remote sensing technologies of the military, but harshly criticized by Barnett (2001) as being a manifestation of the profit motive behind environmental security. As a final example, both Christopher and the *National Security Strategy* of 1996 cite NAFTA environmental side agreements as important components of environmental security.

Finally, the Department of State (2001) defines environmental security strictly in terms of protecting access to natural resources (mostly non-renewable mineral resources) and dissolving threats to U.S. economic interests (broadly defined). The Environmental Protection Agency (1999) defines it in somewhat broader terms as “the process whereby solutions to environmental problems contribute to national security objectives” (p. 1). The latter document suggests the importance of identifying ‘hot spots’ around the world which might threaten “political or economic stability or peace” (p. 1). It focuses on a number of case studies as examples, including Haitian refugees and the Aral Sea disaster, but later in the document cites access to Caspian Sea oil as a major issue of national security. It also employs the image of a mushroom cloud on the cover of the publication. Environmental security as a policy of the state, while driven by economic interests and centered mostly on access to resources and the development of foreign markets, relies on the securitization myth of an impending environmental doom as its legitimating discourse, and is thus in many ways a manifestation of the intertextuality of environmental and security discourse.

This chapter has argued that the normative linking of environment and security starting in the early 1990s, though it took many forms and was voiced from varying parts of the political spectrum, had clear historical precedents. In fact, part of the point of this dissertation is that this linkage is a political act in itself which mobilizes certain discourses of power, such as development, sustainable development, and neo-liberalism. Environmental security is a mode of signification used to normalize or naturalize these mythical visions of how the world ought to exist. The final chapter of this dissertation will sum up the main points and offer a few remarks on the relevance of this research to current debates and avenues for future research.

Chapter Eight: Conclusion

Concluding Remarks

Homer-Dixon (1991) made what has become a very standard argument that environmental security was a product of the end of the Cold War. What he added to this, however, was an argument that it also resulted from the development of equilibrium theory in the physical sciences. For Homer-Dixon, scientific insights that nature achieves ‘balance’ within certain ‘thresholds’ led to greater interest in applying them to human-environment relations. Clearly he is at least partly correct about this; modern scientific discourse is of course a very influential component of social discourse. The problem with this is that it assumes that scientific enterprise has simply unveiled an ontological given and led to a more enlightened understanding of civilization and nature. This dissertation recognizes that scientific knowledge itself is often a product of social discourse – in this case, the environment-conflict thesis is informed and constrained by neo-Malthusian and Cold War geopolitical discourse.

In other words, this analysis recognizes that, in Frow’s (1990) terms, “discourse is co-extensive with the social” (p. 52). Notions of nature, threat and security do not have universal meanings produced by a Cartesian, authorial subject, but are products of the cultural conditions within which they are received by readers. For example, while she did not use the language of Bakhtin, Frow, Kristeva or Barthes, Martin (1994) suggested that the development of the Salk vaccine in 1954 to cure polio was related to early Cold War McCarthyism, in the sense that it focused media attention on the inner workings of the various parts of the body. As I pointed out briefly in chapter

six, the Voluntary Parenthood League's 1923 pamphlet *Babies and Unrest*⁶⁶ cited concerns over early 20th century labor strife as support for its neo-Malthusian and pro-birth control argument. It portrayed the 'threat' of overpopulation as a threat to national resources, but in this sense defined resources as human and labor resources of the working class (e.g., overworked housewives meant discontented laborers at the work place). Kristeva (1980) focused Bakhtin's notion of dialogism on texts by coining the term intertextuality, and this dissertation has employed this idea to trace how the discourses informing environmental security have evolved in various texts throughout the 20th century.

The specific mechanism I used to tease out and show the effects of intertextuality is Barthes' (1982) semiological analysis of myth. This tool has been valuable to show the naturalizing or dehistoricizing capacity of language. The myths of the 'body politic' or the 'population bomb,' for example, serve to make the linking of 'body' and 'politics' or 'population' and 'bomb' into simply an illustrative technique of language, or *only* a metaphor, which obscures the inherently political act of making that linkage in the first place. This helps explain why Homer-Dixon (1991) claims to eschew naturalist epistemology while authoring a body of work riddled with naturalistic assumptions and why Deudney (1990, 1999), among others, sees nature as having 'left' the social sciences after WWII.

In the former case, Homer-Dixon's extension of this 'new' science of balance or equilibrium to human conflict is an extension endorsed only by an assumption of human society as fundamentally animalistic, or as 'growing' out of nature and thus limited by it. This can take the form of a spatial metaphor, such as Homer-Dixon's own

⁶⁶ Authored by Stopes (1923).

notion of overpopulation as a “deep tectonic stress” (2003, p. 91). Or it can take the form of metaphors of human society as a system of inter-working parts like the human body, or a notion of human reproduction as purely biological and driven by the evolution of sexual instinct. Regardless, obscuring the political quality of these metaphors and assumptions is what normalizes the extension of this equilibrium theory in science to an examination of a generalized ‘how’ of environmental conflict, as Homer-Dixon (1991) proposes. His use of process tracing (2003), as discussed in chapter three, *is* a naturalist epistemology and is informed by the very metaphors of tectonic stress he uses.

Environmental security as a power/knowledge formation is therefore both ‘written’ by history and discourse and ‘writes’ space (recall the geo-power discussion of chapter two). For example, Homer-Dixon (1999, p. 7) offers as a generalizable model of environmental conflict the following:

Environmental Scarcity → Social Effects → Violent Conflict

While Homer-Dixon acknowledges ‘intervening variables,’ broadly defined, this model of linear causality is a 1990s version of the post-war Population-National-Security-Theory (Perkins 1997) discussed in chapter six. That chapter traced the textual history of neo-Malthusianism in the 20th century in order to better inform how this model was produced. It showed how neo-Malthusianism developed out of debates about racial survival and eugenics. It further showed how neo-Malthusianism reduced human reproduction to a matter of evolutionary instinct, and how morality was seen in terms of the repression of that instinct. The exclusion of reproducing individuals from their cultural, economic and political contexts was argued to be informative of these models of

linear causality in which nature is always seen as a starting point. I then illustrated how post war neo-Malthusianism was implicated in investments in green revolution technologies as well as the development of the field of human ecology and the conservation NGO Resources for the Future.

Chapter five showed how naturalism in the social sciences and metaphors of the body help create an 'imagined community' of interworking parts, a social construction deeply implicated in the constitution of 'self' and 'other' at geopolitical scales. This chapter has added to that by showing how this metaphorical language is implicated in the domino effect or containment myth. This myth is crucial to the legitimation of post-war development programs, such as the investment in the green revolution. Development was often imagined as a global effort to use science and reason to transcend nature's laws, or, in Robert McNamara's words, an effort by "man" to "raise his reason above his animality" (1969, p. 158). To the extent that development was an instrument of containment, or quarantine, it was itself a normative linking of environment and security well before the term environmental security was introduced.

But this discourse has real, tangible consequences, as seen in the cases studies discussed in chapter two. Rostow's take-off model and neo-liberal trade policies, for example, were shown to be implicated in the disputes over oil in Nigeria and Ecuador (Watts 2001) and land invasions in Chiapas, Mexico. As Shiva (1991, 2002) points out, green revolution agriculture has induced serious water scarcity issues in South Asia and the Aral Sea region. I also showed how development assistance for the creation of the Korup National Park in Cameroon has contributed to violence between residents and

rangers of that park, and how Cold War military assistance helped prolong the Angolan civil war and fueled current conflicts over diamonds.

Post-Cold War environmental security is allegedly a response to many of those very ‘threats.’ Parker’s (1990) *Front Burner* announcement uses a very broad, abstract notion of environmental threat to justify environmental security initiatives, but then focuses mostly on compliance with environmental regulations at domestic installations. His paper in fact is an argument for greater DoD control over methods of compliance (as opposed to EPA oversight)⁶⁷. Other publications operationalized environmental security in different ways, from the construction of water desalinization plants in the Middle East (EPA 1999) to African Civic Action (Butts 1999) to NAFTA side agreements. This final chapter has shown that, regardless of its policy form, environmental security is based on a punctuated script of environmental threat emanating ‘there’ and coming ‘here’ (like Haitian refugees). Gore (1992) is only the most explicit about his version of environmental security being an extension of post-war development and Cold War containment policies. This dissertation has shown that environmental security, rather than being a re-directed focus borne of a lightened defense burden, is an only slightly modified version of previous environment and security discourse, both in terms of the naturalist epistemology and semiological structures upon which it is based and the specific policies that it advocates.

⁶⁷ Some of what Parker calls ‘environmental security’ is the remediation of military superfund sites that the DoD was legally required to remediate anyway. To that extent, environmental security can be seen partly as the incorporation of environmental discourse in order to maintain DoD control over military operations. Parker is tacitly requesting more congressional funds and flexibility to ward off EPA oversight.

Relevance to Contemporary Debates and Issues for Further Research

Because environmental security has meant so many different things to so many different people, a study of it has implications for a number of current debates. For example, even in what is often referred to as a post-911 context, Schwartz and Randall (2004) of the Pentagon engaged with the issue of climate change as a security threat in a manner with many of the same trappings that I have identified in the environmental security literature. The connection they make between changing climate and conflict is based on an extremely unsophisticated and undeveloped notion of the causal role of nature in human conflict. They uncritically assume that once human population exceeds its carrying capacity then conflict ensues automatically as a mechanism to bring population back in balance with resources. They argue that modern government and science has temporarily allowed human to overcome these natural laws, but if climate change were to suddenly lower carrying capacity, then society would be reduced to a previously 'savage' state of conflict, as "once again warfare would define human life" (p. 17). Moreover, they worry that because wealthier countries have a higher carrying capacity, less wealthy countries would be disproportionately impacted and would develop a "severe have, have-not mentality" (p. 16). Their primary concern then is that these countries would take aggressive action toward the United States. Some of their proposed policies in response include developing more predictive climate change models, developing a vulnerability matrix to identify potential sources of danger, developing strategies for better water management, and exploring geo-engineering technologies to control the environment. Climate change is a complex problem that is and should be addressed by government, but since rigorous theory underpins effective policy,

understanding the highly reductive assumptions made in this Pentagon report is important to proper policy action. This dissertation is also relevant to debates about any of the particular issues cited in the previous chapter as matters of environmental security, such as Haitian refugees, conflicts over Caspian Sea oil, the Aral Sea, or environmental conflict resolution measures in free trade agreements.

In the latter case, the social or environmental effects of neo-liberal trade policy are rarely, if ever, accounted for under the rubric of environmental security (environmental security, after all, is essentially a neo-liberal discourse). The Environmental Change and Security Project of the Woodrow Wilson Center for International Scholars in Washington, DC purports itself as a forum for interdisciplinary discussion on policy-related environmental security research. In some ways it has accomplished this, but its search for ‘root’ causes of environmental insecurity has not generally included analyses of neo-liberalism as implicated in the production of environmental insecurity (and has certainly not critically examined the various discourses of environment and security which inform its very mission). The ECSP’s efforts in the name of interdisciplinary collaboration have mainly focused on bringing together defense department and military establishment conceptions and operationalizations of environmental security and academic analyses of environmental security. The ECSP’s annual report typically includes, in the former category, commentaries about the military’s role in disaster response (as a security objective) or securing resource stocks abroad, and in the latter category, either academic analyses of correlations between population, resource decline, and conflict, or commentaries on the potential of transboundary resource management for promoting peace. While bridging government

and academia is in principle a worthwhile goal, this particular combination potentially reduces environmental security to an academic legitimization of interventionist foreign policies and globalized neo-liberalism – part of what Warner (2000) calls “an emerging concept of control.”

The state is not generally an effective institution for environmental management, and therefore environmental policy should not be centered on the state. In that sense, although I have been critical of much of Barnett’s (2001) notion of ecological security (it is borderline indistinguishable from traditional environmentalism), I agree with his call to focus environmental security away from the state. He does this primarily by replacing the state with the planetary biosphere as the ‘penultimate’ referent of security through which individual persons are rendered secure, and by focusing on notions of local scale, participatory democracy in environmental governance. Both of these lines of policy discourse are important, but the latter is a more fruitful direction than the former. Part of the effective policy rising out of rigorous theory mentioned above would be the signing of the Kyoto Protocol by the U.S. to protect the biosphere, because, even if its signing would have different meanings for different people, it would implicitly acknowledge the complicity of Western norms of consumption in the climate problem (rather than focusing on overpopulation or the agricultural practices of the global South). The biosphere in and of itself is perhaps too broad of a scale to be a meaningful referent of security, but its protection is important because climate change clearly has implications for local and regional scale security issues. Rather than focusing on securing resources for state defense purposes, a more progressive policy discourse would be informed by environmental and distributive justice literature. It would focus on the social relations of

resource extraction rather than on how to secure that extraction for the sake of capital accumulation. It would, for example, advocate fair trade instead of free trade, public access to water instead of privatization, and focus on ensuring sustainable livelihoods rather than agricultural and resource industries subsidies.

Along these lines, the most appropriate next step in terms of research will be a focus on national identity in environmental politics. This dissertation is thus relevant to a future research agenda which would seek to elucidate both theoretical and empirical relationships between the environment and nationalism. Future research questions will ask, for example, how and in which cases nationalism is causative of environmental conflict, how it operates as a constraint on environmental dispute resolution, or whether there are instances when nationalism can facilitate resolution. Also, what role does geographic scale play in this? In other words, how does globalization affect lived experiences of environmental insecurity at more local scales, and how do states mobilize nationalist rhetoric in the name of resource extraction, commodification, or in some cases protection? Does this mobilization further produce neo-liberal subjects, and if so, how? How and why have nature or landscapes operated as cultural resources in the construction of national identity? My future research will combine both textual and case study approaches to addressing these questions, and will contribute to both critical geopolitics and political ecology literature. This dissertation has fundamentally been about these intersecting issues, and is one part of a longer research trajectory that will further explore nationalism, citizenship and the environment.

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