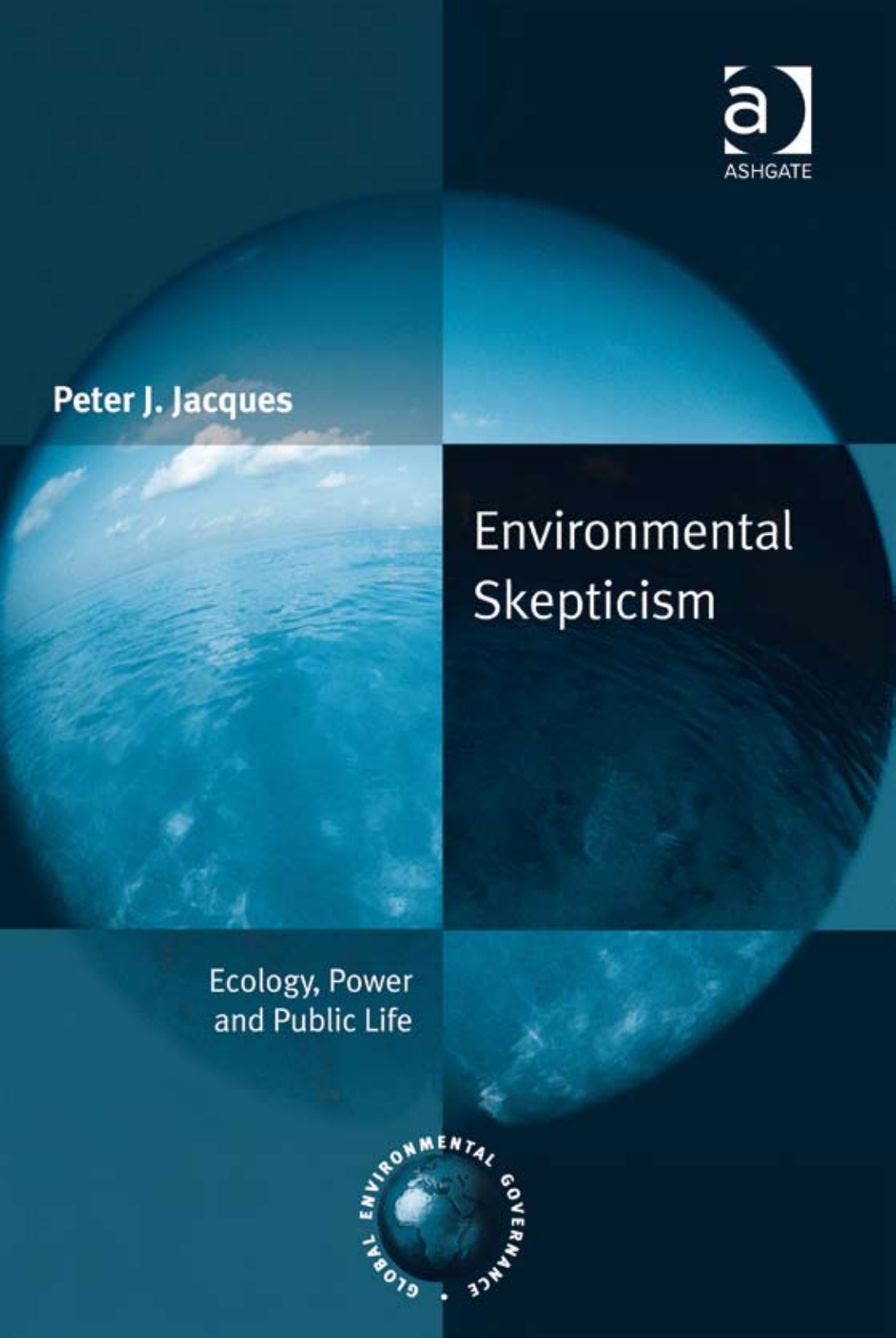
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Environmental Skepticism

Ecology, Power and Public Life

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Contents

To my children, Olivia and Lillian Jacques-Baker,
in hopes of a life full of meaning

About the Author

Peter Jacques teaches sustainability and environmental politics at the University of Central Florida in Orlando. He has written two other books: *Globalization and the World Ocean* (2006) with Altamira/Rowman and Littlefield, and *Ocean Politics and Policy: A Reference Handbook* (2003) with Zachary A. Smith through ABC/Clio. He has also published multiple academic articles on various environmental affairs from climate change to land use.

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Preface and Acknowledgements

Writing books, a friend said recently, is like giving birth. We all know that few give birth without others taking part somehow in the overall process. This book is born in the warmth of a supporting family and community of scholars that I am privileged to be a part of.

I would like to start by thanking my wife, Pamela Baker, who is starting her own life of writing. We work well together raising two amazing children, attempting to work, make social contributions, and be home with the family. Without Pamela, my life would be unbalanced, more impoverished. In that my life is good, it is because I get to spend it with Pamela, Olivia, and Lilly, as we explore the world together. Of course, any ethics I propose in this book, might rightly be traced to the love, ethical expectations, and support I received from my parents and sister, Ted and Bonnie Jacques, and Amy Chevalier respectively.

I also need to thank my friend and mentor Zach Smith at Northern Arizona University, who continues to press new environmental scholars into the world, and who started me on my way toward ecological thinking some time ago now. Also, my friend Carol Thompson at NAU who is an inspiration in her scholar-based activism; she continues to show that intellectual rigor and a life about justice go together quite well. Likewise, my friend Sharon Ridgeway has always been a stalwart support, a person who simply radiates peace.

In addition, I thank Riley Dunlap, who shares no blame for any errors of this book, for his work and conversations with me on the empirical article that is the foundation for this book and the construction of the data reprinted in Appendix 1 and 2, along with former graduate student, Mark Freeman.

This book started out in research that was inspired by students that I have had the pleasure of working with at the University of Central Florida, teaching the class "Sustainability." I would like to specifically thank my students for their interactions, I have really learned quite a bit and I have been pushed to think hard about how much sense things I had taken for granted made.

I am glad to have had the wonderful interactions with series editors John Kirton and Miranda Schreurs, and Ashgate editor Kirstin Howgate. Each have been supportive, but also have served as important good-faith witnesses to the process of writing this book. Their role is quite important for the ecological demos. Madeline Koch and Margaret Younger at Ashgate have also been important friendly voices. All of the people involved have made publishing a book with Ashgate a pleasure.

Finally, I wish to offer gratitude to the several anonymous reviewers who made important observations, challenged me on ideas, and helped me to improve the work considerably. Some even argued I was not pushing the issue strongly enough, and this has made me really think about the project in different ways as well. Their

role too, is important in the ecological demos, where peer review serves as one example of a process for vetting knowledge claims.

Let me conclude by saying I do not expect that all of my propositions will be accepted here, and in particular, I know that the call to disrupt Industria will seem all too radical for many readers who will most likely live in core nodes of Industria and not want their lives disrupted. I wonder, though, just how disrupted we will feel if we do nothing.

Nonetheless, I ask that we see this book, as all propositions should be seen, as a conversation. All of the requirements I state for public discourse, I gladly accept for my own work. Let us start this conversation now with the virtues of fidelity to representation and humility in order to begin creating a more peaceful, sustainable, life together.

Introduction

While this book is specifically focused on environmental skepticism—a counter-movement built on the premise that global environmental changes have been grossly exaggerated, misguided, or maliciously fabricated—the book before you is really an exploration of the ecology of public life in a world system where capitalism is king married to the ontology of possession. Let me say from the start, that "skepticism" is a poor, inaccurate term for the social movement, but it is one that sticks for various reasons. Skeptics often refer to themselves as optimists, cornucopians, or as the "asset society" because they see society as consistently improving since the Industrial Revolution (Dunn and Kinney, 1996). However, some temperance is justified here. Environmental Skepticism does not actually present much skepticism or much unqualified optimism. There are at least two philosophical versions of skepticism: the supposed Cartesian skepticism that disavows knowledge, and ancient skepticism that disavowed belief and environmental skeptics hold neither view (Fine, 2000). Just as skeptics doubt the authenticity of environmental problems, they are equally committed and faithful—that is, *not skeptical*—to industrial political economy in capitalism, agriculture, and energy. Kysar (2003) points this out in his thorough review of Lomborg's (2001) *The Skeptical Environmentalist*. Kysar points out that Lomborg asserts an article of *faith* adopted from Julian Simon in that any worry we may have—sea level rise, grain shortage, groundwater depletion—will not pose real 'problems.'

> …the idea is that human ingenuity is limitless and that no individual feature of the environment truly is essential to human survival. After all, throughout history humans have circumvented apparent natural resource constraints by relying on technology, substitution, and adaptation—why should we have any reason to doubt that such triumphs will continue in the future (Kysar, 2003: 246)?

Environmental skeptics do not disavow knowledge or belief, since they attempt to answer "junk science" with the knowledge claims they think are more true (often which come from other skeptics); and, environmental skeptics are typically deeply rooted in layers of belief from the particular ideology of modern conservatism and sometimes the particular religion of evangelical Protestant Christianity. Nonetheless, the name "environmental skepticism" sticks in part because this is the name they claim for themselves (e.g., Lomborg refers to himself as the "skeptical environmentalist") and because they do want to disavow *something*, which we may think of as ecological reflection though skeptics might name such reflection "fear."

Another important term in the title of this book is "public." Public life is referred to as *our life together*. "Public" is *not* meant to bifurcate private from public. Feminist scholars have pointed out the social damage that occurs from making a hard distinction between private and public where privilege is assigned to men who then go "out" into the public, while women are constructed as actors confined to the private realm, harming their lives in both chambers of life lived. Clearly, a basic element of politics then is to determine with justice who is in "our" life—who and what will be counted in our associations.

Associations are the relationships and connections we make within a nascent, forming, or institutionalized community or between communities, but they are rooted in ideas, actions, interests, feelings, conversations, and senses that ground affiliation of one actor to others and a larger assembly ultimately bounded within planet Earth. It is unclear what limit there are to associations, but up to this point in political ecology, many scholars have pointed to the modern blindness that insists on only two heuristic molds of self-other: us/them, nature/culture, truth/values, etc. Thus, when we think of "our life together," the distinctions of public and private disintegrate as our intimate lives together are made up of non-intimate actors that are intertwined in the way our everyday lives operate. These relationships are woven into the fabric of families, neighborhoods, and these relationships then web outward into regional and international ecological systems and political-economic interchanges. Disentangling some private versus public life on this front becomes a fool's errand. Indeed, public life entails many circles of affiliation and dense layers of associations that create publics and larger, entangled assemblies.

Power in the above-mentioned modern system is reliant on a few critical elements, and studying environmental skepticism as a social (counter) movement puts some of these crucial aspects into relief. It is the very curiosity of environmental skepticism that draws our attention to it, and inspires the question of "why would a movement evolve against the reality or importance of environmental problems?" Our reflexivity is important. Who is threatened by our noticing and acting against global environmental problems? The answers to these questions are not immediately clear because they are both purposefully and structurally mystified. It has taken focused research to find satisfactory systematic answers to these questions, and this mystification creates a deep democratic problem. We see that, while environmental skeptics may be conspicuous, the *movement* behind it has remained inconspicuous, and reflexivity in public debate has therefore lacked some important depth, context, and ultimately insight. To arrive at more insight on the problems that environmental skepticism presents us, the skeptical project needs to be understood in a broader, more complex history and politics than the set of claim-counter claims format. This format disembodies history and meaning that might otherwise be pathways to more democratic and sustainable lives together.

My own early reaction to skepticism in graduate school, I am embarrassed to say, reflected this lack of insight and I fell headlong into the "science trap" (see Terms). The author's personal reaction was to marshal a point-counterpoint parade of facts and science, and for some time after Lomborg's (2001) *Skeptical*

Environmentalist, the author had been working with Cambridge University Press on just such a rejoinder, impotent as it was. If biodiversity is eroding, we could marshal more authority to defeat claims that biodiversity loss was just another part of the "litany" of myths and lies told by environmentalists and environmental scientists. In class, this is easily demonstrated through peer-reviewed work in conservation biology journals, and the same goes for climate change, trace chemical exposure, stratospheric ozone depletion, etc. A more critical pedagogy, however, might use the same material but with a slightly different aim. Instead of assigning articles and imposing the hammer of authority, such articles can be used as a set of corroborations that have gone through several steps—they have good faith witnesses in journal editors experienced in the field, a vetting process in peer review, and an explanation of how they make these claims (transparency in their process). These are the same articles, and they still communicate the same information, but instead of having to simply accept their conclusions, we can see these as propositions and proposals of compelling knowledge that have been subject to important filters *meant to avoid deception, fraud, and corruption*. These problems still occur and no process will ever be likely to eradicate academic dishonesty. And, of course, disciplines and scientists get things wrong like the rest of us, but the systemic processes make the claims more credible and they demand more attention because they are compelling—not because we must accept their claims as discovered truth. Even without dishonesty, different policy implications and pathways will always be suggested, even when the scientific conclusions are agreed upon.

Nonetheless, other thinkers and scientists had initial reactions to environmental skepticism that resembled my own, and in several important science journals, vaulted scientists argued counter-point to the skeptical points, and while the evidence placed before the skeptics was so much more compelling than the evidence, arguments and venues of the skeptics, the skeptics themselves were empowered by the way the controversy was legitimated, lengthened, and fueled—and continues to be fueled. And, even while scientists could show why skeptics were, on the whole, wrong and many scientists were alarmed by the skeptic's fast and loose work, the publics were nonetheless dismayed and confused *about the nature of the debate*. When it comes to climate change, the many publics in the United States have been convinced for some time (across party and ideology) that climate change is real and something must be done—but they have also believed for some time that *scientists have been evenly divided* over the matter and so have been stopped at the gate of public action.

For example, in three polls between 1997–2007 most Americans believed climate change was occurring, but when asked if they thought, "most scientists agree with one another about whether or not global warming is happening," *a majority perceived* "a lot of disagreement" (Nisbet and Myers, 2007 at 451–2). The conservative George W. Bush administration was quite empowered by this indecision, allowing it to pull out of the Kyoto Protocol in 2001 and regain election three years later without any substantial backlash. Perhaps, this is what the

science trap lends itself to—a thin and irresolute reactionary discourse that leads social action into an identity crisis faced with authoritarian exploits or nihilistic ambivalence.

All of this indicates that scientism, or the use of Enlightenment and proposed objective science as if it were the only tool in our civic toolbox, is not the answer. The skeptical environmental counter-movement is a civic problem and in dealing with the propositions from the counter-movement we are forced to reach down to the bedrock issues of epistemology, identities, articulation and other core work for politics. To use scientism as a hammer against the screw of skepticism will split the wood of public life into splinters or it will immobilize the hammer. Scientism is a modernist tool that will haplessly re-shuffle the old exclusions—and we all know that the "master's tools will not dismantle the master's house" (Lorde, 1984). But, this is skepticism's great victory. As a counter-movement, it has used the structure of scientism effectively by evoking a scientistic response in a way that legitimates point-counterpoint discourse that has no effective avenue for closure, except perhaps through the fatigue of the skeptics, the scientific community, or the publics. Without civic context, the publics (especially in the United States who are the core hosts of the skeptics) have no way for them to feel like they can fairly and critically evaluate the controversy. The "I'm right and they're wrong" dialogue has baffled fair-minded and interested citizens. What to do? Relying on individual citizens to be able to do their own research into more and more complicated modern imbroglios is also not the answer either because, especially with the internet, we may have plenty of information, but this does not give us the tools to sort information. It may be unpopular to say this to direct democracy scholars and activists, but democratic social action must not assume that everyone can be actively involved in critical and reflexive evaluation of material. Key presentation of information will still occur in mass media, through television, newspapers, and news-related websites. Work in mass media must be especially careful in working out how it evaluates what is presented. But, again, hope here is riddled with paradox—we have self-starter websites of news at the same time that restrictions on ownership of media allow for greater and greater concentration across media. Perhaps transparency of who each spokesperson is responsible to, and the inclusion of key good faith witnesses outside the specific media outlet, like editors who give clearance to an article, may make some difference. In other words, maybe we could develop a network of independent editors. A fee is paid into a pot of money outside the media outlet, such as to a union, and the independent editor then becomes responsible to the union—perhaps the union has public hearings on controversies. The independent editor works neither for government or industry, but provides the insurance that the processes of the reporting and the material pass this test. Maybe a union is not the answer—perhaps these editors work like justices of the peace, elected; or maybe there is a jury system deciding on abuse; but they are responsible in some way to the public. Surely we could think of many ideas of how to get around the problem, but the point is that we as individual citizens cannot be expected to get to the root of something like the counter-

movement (which took the author several years of intensive labor). But, we can start to provide important critical checks and processes on what is proposed as knowledge claims in a world that regularly turns to (specific kinds of) knowledge claims for reference because media representation of information now has not been reflexive enough in the example of treating think tanks. We can hardly rest on the assumption that the complex nature of ideology and global problems will be less mystified than it is now. Perhaps a system of accreditation, like that in place for hospitals, could provide some relief and validation of media representation, judging its fidelity to the material. The point is to have some stronger options for thinking and discussing problems.

Much of this fits what Latour calls the work of political ecology. Political ecology here refers to the development of what I call the "ecological demos" in Chapter 6, and is important because learning and being mindful of ecology is itself a form of subversive resistance (see Sears, 1964; Jacques, 2005).

The argument regarding the ecological demos assumes that discourse is a path to democratic interaction. But, it is clear that much of political ecology and the ecological propositions being made in the world today are not only subject to assault from the counter-movement, but to pressures from the dominant paradigm of economistic politics in globalism and modernism. Industrial society is not *allowing* the discussion to take place (try to ask to see the "kill floor" of a slaughterhouse while holding a camera). This means action must take place before productive discussion will likely be possible. In response, this book ends by arguing that we cannot just talk our way out. This is something that reviewers of this book have challenged (in that in prior drafts, this book seemed to be making the case that we can talk our way out). This challenge has changed the proposition of the book—and such a change is something virtuous about the academic vetting process. Discussion is key, but many discussants are not allowed in the door. Action then must force a larger discussion. Violence is opposed on principled and on pragmatic grounds (though one can understand why some radical greens who believe that the only way anyone will hear their voice is through sabotage), but it is time to seize the machinery and insist on a more sane and humane life together. There is little to suggest that core powers in the world system will listen until the system is disrupted, for example through the use of persistent, non-violent civil-disobedience through well-orchestrated sit-ins and physically occupying imperiled commons, and strikes. Strikes, in the United States, have been largely neutered, and this has allowed business to drive a spike right through worker demands, making most of us subservient in many ways to people who care only for growth and expansion, less for child care, mangroves, or sustainability. As one reviewer of this book puts it—it may be that once we are confronted with some of the conclusions of this book, a radicalized *anti*-movement against the counter-movement and against industrialized life is one of the only ways to halt what has corrupted our notions of progress and human purpose.

Once there is a space for discussion, then, perhaps we can make discussion a more viable platform for the ecological demos. The ecological demos has a

democratic place for science and knowledge, humane treatment of others including non-humans, and defends the commons as a key source of our life together. According to Latour (2004), political ecology is in a unique place to "bring the sciences into democracy," as indicated by the subtitle of one of his more important books, *The Politics of Nature*, and we can do this without throwing out facts or values but rather see these as the conditions of a political life. Latour's arguments have a large influence on the thinking in this book, and one point he makes is that we have been fully stuck in binary oppositions *even when we argue against them*. If we think of the environment as some "thing" out there, then there is nothing but Science (his word for scientism) to describe it for us, contrasted by values, religion, and ethics that provide our moral compass in what to do about these dead facts. We are then aware that with this familiar modern set of dualisms, constructivism and post-modernism critiques objectivism by noting that we filter knowledge through an impressive array of social lenses making everything we know "social." Latour argues that this is actually more modernism where we are still seeing the world, in this case as either all facts (nature) or all values (social). The emancipating answer is not to reify through scientism or neglect through relativism, but to focus on the character and context of our associative connections in the world, where anything can be an actor, and anything can be associated. Any number of associations may occur. When we entertain propositions from the sciences and other voices to indicate biophysical reality, it is not just a proven fact or a pure social imaginary. We have the power in public life to negotiate and evaluate the meaning of propositions for associations in public discourse. *Propositions are claims to be considered, and as such they are also injunctions to listen to the claimant*. But not all propositions carry the same weight, because propositions are not only filtered through social imaginations (like language, paradigms, ideologies), but they are weighed by corroboration, multiplicity, good faith witnesses, currency, and fidelity. We are able to be fair, *and* we are able to judge, and our public life need not be the flotsam that is subject to capricious nihilism or the hegemony of scientism. We can do better.

Associations constitute possible versions of the Good Life so that the character of the Good Life is determined by the character of our associations. If we articulate "nature" as a thing, as some dull heap to protect, we are then dependent on scientism to mute political discourse and the Good Life at the same time. Indeed, Latour argues we should "let nature go" because in the history of the word, "nature" has never meant anything but separation. For these reasons, Latour argues that Western modernity, which is positioned through rational control and separation of nature never actually gets away from it—and therefore, ironically, "we have never been modern" (Latour, 1993). Since "nature" has served as trope that cues modern dualisms, it is argued that this politics of exclusion is not the answer to environmental skepticism or to questions about the Good Life.

Indeed, the more compelling response to the counter-movement is an evaluation of the associations asserted by the counter-movement and its thematic propositions for a Good Life. In the ecological demos, if the propositions and discourse for what connections to make are uncorroborated, and actors are unconsulted or arbitrarily

dismissed, the propositions are unpersuasive and we can democratically bring corrosive discussion to an end. If we use more Science/scientism to confront the counter-movement, its actors will continue to mimic this scientism and we are left a public discourse that neither the public nor many elites can be expected to parse out. Indeed, evidence from studies discussed in Chapter 1 show that policy elites, the elite media, and even some environmental scholars have been unable to dig into the roots of the counter-movement to effectively understand what it is about, where it comes from, and its organized themes. An ecological demos, or political ecology, offers a way of democratically handling this problem and other ecological quandaries by proposing important foundations to democratic public discourse to help us judge claims and meaning as they relate, ultimately, to our life together.

For example, it is inconsistent with democratic principles to simply use established technical work conducted in peer-reviewed journals (skeptics tend not to publish in this venue) to dismiss environmental skepticism and its propositions. But, it is just as unwise and imprudent to count the skeptical claims as having equal merit with more established discourse subject to vetting and plurality. Such a normative claim is not only based on comparing skeptical claims to the larger body of work found in sciences, but based on normative evaluation of discussions. To evaluate skepticism we should not only ask how the skeptical points fit in the already established literature—which we can see as propositions that have various levels of corroboration, not absolute Truth, but we can also ask "who are the good faith witnesses (who answer the constant question of parochialism)" and what other voices using different ontologies and perspectives concur? Who is consulted in the skeptical discourse? What kind of publicity and transparency characterize skeptical processes and organization? What is the depth of multiplicity found in skeptical corroboration? And, at what point are these discussions subject to closure? The answers to these questions profoundly impact our public life, which is to say they have something to do with how we live together on a changing world, and these questions provide a map to creating a more enticing political ecology.

N. Katherine Hayles (1995) makes the observation, for example, that over time, if a proposition is compelling it will garner corroboration from other perspectives and other approaches to knowledge. In short, if something is true enough, it will not be hostage to one omniscient perspective, but will be embodied in the observations and insight of multiplicity. Environmental skepticism completely fails on this count—in studying the counter-movement we see that the skeptical counter-movement is almost, if not entirely, maintained and proposed by contemporary conservative elites that come almost entirely from the United States (some in the UK) and zero from the Global South. If global ecological changes, like biodiversity loss, were inauthentic then United States conservative elites would not be the *only* ones to say as much. Conversely, if biodiversity loss is real, we would see parallel propositions from a multiplicity—which of course we do—from the claims of conservation biologists around the world to peasant agriculturalists to indigenous peoples to hunters to ranchers and an extraordinary plurality. Scientists are still

essential for the ecological demos, but we have quickly dispensed with scientism through this approach to be discussed in more detail in Chapter 5.

Importantly, our life together can be made up of any number of any kind of actors. Latour includes anything that connects to something else as an actant (Latour, 1994), not just humans, and not just living creatures either. Among other reasons, actants are "any entity that acts in a plot" (Latour, 1994: 33), and these stories are filled with compounded conditions where there are no simple subject-object distinctions. He makes the distinction between actants and actors, in that actors are those actants that take on a "figurative or non-figurative role ('citizen,' 'weapon')" (ibid). This book will not make this distinction though and simply refer to actors. However, the important point is that the universe is "full" inasmuch as it is replete with associative possibilities. This is quite different from the stripped down Western model that has only permitted humans important space and recognition. Worse yet, the Western mind has historically not included even all humans either. Depending on the social circumstances, like the pre-Civil War South in the United States, or the Apartheid era of South Africa, only some humans have been allowed access into the side of the dualism with agency. In political spaces where such dualisms are in action, only the side constructed with agency can be recognized and therefore participate in discussions. The modernist has only ever seen a self or an Other, and this is not right, fair, or beautiful enough to be compelling.

The view of the full universe is consistent with non-Western perspectives in several ways. For example, in Buddhist thought, the self is indistinguishable from others in the way that it is made-up of many non-self parts—protons and electrons, empty space between them, food that passes through us. To reconcile the self we are forced to acknowledge that there are relationships that extend far beyond what Enlightenment individualism allows for, and which make this modernism radically exclusionary. Similarly, living things are made up of non-living parts—carbon, trace minerals and elements, water—making our distinction between living and non-living actors also problematic.

Take, for example, the full universe found in most indigenous ontologies. When working as a social worker serving developmentally disabled people (a social group that has been ravaged by the prejudice of a stripped down universe), I served a boy who lived at the bottom of the Grand Canyon on the Havasupai reservation. "Havasupai" means "people of the blue green water" and this is explained by the fact that the water running through the reservation, which forms other-worldly water falls and lagoons, is a crystal clear Caribbean blue-green color.

When you travel down into the Canyon, you are surrounded by the stone walls of millennia, and the walls of the canyon mediate and condition your existence as you descend into the Canyon. Beyond that, anyone who has been to any part of the Grand Canyon and stayed long enough to try and contemplate its immensity, depth, and richness is usually quite affected by it. Even in the sterile halls of bureaucracy at the United States National Park Service that manages visitors around the Canyon speaks in reverent tones of the Canyon on its website. The Park Service introduces the Canyon (unwittingly, subconsciously?) as an actor: "A *powerful* and inspiring

landscape, the Grand Canyon overwhelms our senses through its immense size" (US National Park Service, 2008, online, emphasis added).

Imagine a group of people that has lived hundreds of years around the Canyon rim and within the embrace of these walls. If even a moment around the Canyon mediates your life experience and maybe even your identity, try to imagine how millennia after millennia in the Canyon might affect a closely knit group, understanding that various peoples have lived in the Canyon for at least 12,000 years. Imagine millennia of life around and in the Canyon, where the walls are the immediate horizon, directing water, sun, animals and plants, all of which themselves have their own parts and mediations from in and outside the Canyon. Indeed, in the Havasupai general store, there was a three-dimensional model of the Canyon hung on the wall, and it had faces embedded in the representation of rocks because in Havasupai the Canyon is filled with agency and power. The Canyon is directly tied to the people who live there and the Canyon has participated in the lives of Havasupai families longer than the United States has formally existed. To reduce the Canyon to dead rocks reduces the embodied stories that make up life for the people there as well as the ecology of other living things dependent on the Canyon geology. The point is, though, that just because Western modernism has imposed a suffocating set of dualisms on the world, there are still other ways to imagine the world around us. Clearly, there are many people who recognize actors that are ignored or muted in modernism, and we should approach defining/limiting what an actor is with generous humility and an assumption of our own parochialism. This book assumes that the more full our universe, the more rich, layered, demanding, and democratic our life together will be, and ultimately, this book uses the problem of environmental skepticism to reflect on this good public life.

Each chapter is organized around a proposition, stated at the beginning of the chapter and elaborated upon throughout that chapter, and summarized at the end of the book. This is important, because part of the ecological demos is to start organizing claims around propositions that are not framed as the "Truth" to be pitted in contradiction to some polar opposite. This book is subjected to the same demands. Thus, each chapter contains core propositions which will either be more or less compelling based on the evaluative conditions for public discourse: is there any perplexity? Is there corroboration across other ideological expectations? Is there any vetting of the claims that occur outside of the author's own parochial interests (this answer is "yes," this book was peer reviewed by anonymous and insightful scholars who actually gave important acceptance, rejection and feedback to some claims, and the book is quite reformed from the first draft). Are there good-faith witnesses to the process of making the propositions (again, "yes," as there are several layers of very insightful and helpful editors at Ashgate who also have helped to reform original thoughts). How do the book's propositions fit within already-institutionalized (say, other peer-reviewed academic literature) propositions? These evaluative questions can not all be answered immediately, but it is suspected that if these questions about the book's propositions are taken

seriously, then the discussion that comes out of this book would be more democratic than if we were to rely on the bludgeon of scientism.

The first chapter of this book proposes that environmental skepticism is a social counter-movement. The chapter takes pains to couch the counter-movement in social movement theory in the context of other US movements opposed to the expansion of protective ecological policies and values. One important caveat and qualification to the entirety of this book, is that examples of skeptical writing are used to illustrate themes within the larger skeptical project, and individual skeptics adhere to varied parts and themes. Few skeptics will adhere totally to each theme or aspect of the larger project. For example, when discussing ideology, scholars of ideology understand that people hold mixed perspectives that cover a range of commitments, with some individuals so committed that they cannot even imagine another way of seeing the Good Life (ideologues), while others are much less committed for whatever reason. One example of this internal complexity in the counter-movement is the commitment to evangelical Protestant Christianity. Some skeptics appear more libertarian and more interested in skepticism as a political economic defense against regulation (e.g., Bate, 2003), while others are deeply committed to both the libertarian values combined with the evangelical Christianity (e.g., Coffman, 1992; Huber, 1999; Dunn and Kinney, 1996). The evangelical skeptics do appear to be entirely from the United States. Still other skeptics make both libertarian and ethical claims, but do not use Christianity as the structure for ethical reasoning (Beckerman, 2002; Dunn, 2004; Meyer, 1979). As such, this book only investigates themes of the counter-movement and does not attempt to answer specific claims of individual skeptics as a general rule. Of course, sometimes even contradictory positions are marked out by individuals. Thus, none of this book's discussion should be read as saying that all skeptics are committed to exactly the same details. That said, however, there is remarkable consistency in the skeptical program and there are extremely coherent themes that are discussed in detail.

The first chapter describes, among other things, why most of the public in the US has been and continues to be mystified by the skeptical movement, and why this is not the fault of the public *per se*. As such, this is the only empirically oriented chapter, whereas the rest of the book folds the proposition from Chapter 1 into openly normative and speculative analyses. Such normative and speculative work is important, because such work is aimed at meaning and core social concerns about democracy, wisdom, science, knowledge, power, and perhaps, peace.

The first chapter also describes how opposition to ecological associations, ethics and civics has adapted to survive in several ways. One tactic was to hide the fact that it was indeed an opposition counter-movement, and the other was to use think tanks as political insulation. After the chemical industry's transparent attacks on Rachel Carson failed in the early 1960s, the counter-movement has effectively used think tanks to insulate direct private interests to clothe its claims in intellectualism and frame skepticism as a public interest against "junk science" and "radical environmentalism." Yet, even as Carson alerted and helped

institutionalize the prominence of environmental problems in the United States' psyche and the United States even placed key environmental protective laws in place, environmental crises became "deepened, diversified, and domesticated" (Buell, 2003: xviii). Buell argues that we developed a new sense of normalcy within apocalypse, which opened avenues for reactionary conservative politics. Tactics of the counter-movement were born in the anti-regulatory efforts of the smoking industry that realized that creating doubt was the way to establish conflict and lock the policy-making system (see Buell, and Chapter 2). These smoking industry strategists noted in the 1990s that industry should not attempt to defend itself but instead create the impression of a grassroots movement. They knew that, "No matter how strong the arguments, industry spokespeople are, in and of themselves, not always credible or appropriate messengers" and that they would have to create front groups to obscure industry ties and interests and conflate them with public interests in "sound science" (Monbiot, 2006, online).

This evolution of the antagonism to ecological propositions, such as those offered against Carson, probably failed initially because these attacks were launched directly by the chemical industry and lacked credibility since it was obvious the attacks were motivated by private interest against ecological scrutiny. Anti-environmental movements have changed and evolved since then to obscure these problems of credibility, which provides a major problem for public discussions attempting to sort out what propositions are more credible. This book contextualizes the counter-movement with other environmental opposition movements in the United States to demonstrate how these movements have evolved and learned from their successes and failures. As such, this chapter provides one of the first accounts of anti-environmental movements to weave in skepticism into a continuous history.

The second chapter attempts to look into the heart of power in politics through political ecology. This chapter proposes that the skeptical counter-movement fits within a nested complex of hegemony and the political economy of Industria which reject the core ideas of political ecology. This book leans heavily on several critical influences. These influences include Bruno Latour noted above for his notions of political ecology and the public life, Ulrich Beck's ideas of globalization, Bill Hipwell's "Industria hypothesis" and Val Plumwood's ecological feminist ethics. Beck provides a way to position the historical ideas of modernism and modernity which are central to the values of the skeptical counter-movement. Hipwell articulates a cogent explanation of industrial society as it is extended in a connected political economic and spatial world system. The industrial world system is both predatory and expansionary, and the author believes the Industria hypothesis goes a long way in explaining the structure of power in the world.

Much of modernity's power (say, in the martial power of nation-states or industrial/financial capital) is justified through well rehearsed hyper-separations and now familiar dualisms that post-modernists, scholars of neo-colonialism, feminists, and ecological writers have long identified, e.g., nature/culture,

rationality/emotion, science/politics, male/female, self/Other. Plumwood's critical deconstruction of these ethics is incredibly compelling mostly because she offers a remedy to our ethical problems in what she calls the "ecological self," which fits particularly well with Latour's analysis in important ways. The ecological self calls for an ethic as life lived in difference and virtue that neither erases nor subsumes the other, but which extends recognition to the other. This recognition changes the [O]ther to an other.[1] Further, this book elaborates and considers the concept of hegemony as a consent to core power centers that remakes the world in its own image. Short of consent, the subjects of hegemony must be disciplined to obey, and with increasing global scrutiny on changing ecology the counter-movement attempts to discipline scientists, public policy makers, and the public into silence. For example, asking questions that indicate a need for regulation on firms was dismissed by skeptic Dixie Lee Ray as "regulation science" (see Ray and Guzzo, 1993) now described by skeptics as "junk science" and counterposed to "sound" science (see Herrick and Jamieson, 2001). All of these conditions imply that resistance to core powers and to Industria lead political ecology and its rejection of consent to use and exploit other actors as instruments, allowing for their wanton disposal. In sum, this chapter explains not only how ecology and power interact in world politics, but it moves the context of the United States skeptical environmental counter-movement from domestic politics into the context of transnational politics.

Chapter 3 discusses the civic-ontological position of environmental skepticism. In this chapter it is proposed that part of the civic program of environmental skepticism is the denial of importance and connectedness of industrial powers to the ecological world, and ultimately the erasure of non-human others through what is termed "deep anthropocentrism." Deep anthropocentrism works to help us understand "how" skepticism can justify some of its empirical claims because if the only thing in the world that matters in the world is human life, as many skeptics claim or imply, then changes in the ecological world are literally invisible, unimportant, or even desirable. Deep anthropocentrism is differentiated from what we might call "enlightened anthropocentrism" that still places humans at the center of the moral universe, but still finds value in ecological goods and services that support human societies. Thus, one difference between these two strains is that deep anthropocentrism rejects protective ecological efforts on ethical grounds, with some arguing that humans have "no" rightful ethical commitment to non-human nature, and any environmental protections must serve direct and immediate human needs. "Enlightened" anthropocentrism usually accepts environmental protections, like preserving rainforests, because of eventual or expected future benefits to people. The chapter then continues by framing the counter-movement as both a civic and ontological project. The civic project of denying the reality

1 Capitalized, "Other" refers to an actor constructed without agency; without capitalization "other" refers to agents in the world who are recognized but are not the self or some respective internal group.

or importance of environmental change is to resist the potential for increased responsibility, regulation, liability and change to the core elites in Industria. By rejecting the reality or importance of environmental change and science, the concern that the Global North is consuming not only its own ecological space, but the space of that in the South, or the peripheral zones in Industria, is effectively neutralized without the conspicuous act of actually saying as much.

Also, since this chapter deals with ethical and ontological propositions from the counter-movement, some of the most important skeptical claims about justice and ethics are given consideration. One such claim is the accusation that rich environmentalists from the North are killing African babies by restricting industrial science and mechanisms, like DDT for malaria.

Further, the issue of a material and economistic civic project implies a materialistic and economic purpose for the counter-movement. However, this is only part of the story. Reducing the counter-movement to simple profiteering is a grave error. Research from prior work summarized and explained in Chapter 1 shows that the counter-movement is organized by elite conservative actors within conservative think tanks (CTTs). This implies, and is edified by the substance of writing from skeptics, that skeptics are writing from a position to which they often have a deep commitment that reaches beyond the utilitarian motives of profit. This part of the chapter proposes the likelihood that the counter-movement contains an ontological commitment described by C.B. Macpherson as "possessive individualism." Inasmuch as skeptics hold on to this position as ontology, then ecological politics and discourses that treat sustainability seriously threaten not just the profits of Big Oil, but the actual identity of these elites. This makes the battle one of existence and something that is much more fevered and impassioned than one over simple profit.

Chapter 4 re-politicizes some of the embedded bio-politics in modernism and environmental skepticism. Bio-politics offers a way to re-politicize "security" as more than an effort to protect material survival, but ontological significance. The chapter specifically proposes that the counter-movement represents a particular kind of threat to ontological security of specific groups. While the counter-movement has many authentic and committed conservative voices, various discourses are evaluated in this chapter for fidelity to representation. *Discourse in the counter-movement indicates that the counter-movement represents the interests of the global poor and disenfranchized, and these discourses are found to be misrepresentative and inauthentic.* Here we see how the counter-movement frames the periphery in the Global South as undeveloped, indigenous peoples as savage elements of the state of nature needing to be civilized, women as hysterical emotional characters needing reason and management, and non-human nature (Earth Others) as the penultimate instrument for disposal. The framing of these actors as Others then prepares us for their use and annihilation, and it is hard to estimate a larger loss of security than this. Thus, inasmuch as the counter-movement insists on separating out some people from others, and humans from non-human nature in order to exploit both, it is violent. All of these issues are

born in the throes of discourse about public life—the discussions we have about our life together—which we can use for insight as much as we can in comparing which scientific propositions find more support.

Chapter 5 argues that among the potential consequences of an impoverished civic life and a public discourse, is civilization collapse. Specifically, this chapter proposes that global society is threatened with paralysis through discussions dominated by efforts like the counter-movement. Paralysis in the face of evolutionary pressures and changes in the lives of a transnational, globalized people threatens to bring collapse or collapses. On one level, it is possible to make an ontological argument from the prior chapters on associations, that we are already seeing a massive civilization collapse by asking what is "civilization?" If we are seeing our world full of associations that include non-humans, then the biodiversity loss currently under way through the Sixth Great Extinction is a collapse. However, the chapter goes beyond this, since ontological arguments are defeated by simple manipulation of definitions, so we need something a bit more considered—though the ontological argument for collapse is true enough. Instead, the propositions of a host of diverse voices from archeology, history, sociology, and as diverse as the board of the Bulletin of Atomic Scientists and the *Book of Hopi* about the ultimate dangers of modernism and the race for blunt economic and technological growth are all given consideration. None of the discussion here is to indicate that collapse is pre-determined. In fact, transnational society is complex and unpredictable, and new directions and system regimes can emerge out of unexpected places (see for example Holling and Gunderson, 2002). However, to come out of regime shifts and catastrophic changes in a system the most sustainable approach is not to attempt to control life on earth or the disturbances we see in these systems, but to live life with a bit more humility about the nature of change and what we can know. Mitigation and adaptation to global environmental changes is a necessary skill for surviving together, and deciding how to approach this must be included in workable discussions for social action across transnational communities.

The final chapter discusses some possible remedies to the problems of Industria, empire, and the counter-movement. One solution to a malignant public life is the ecological demos that offers a more democratic conception of knowledge, the other, and the ecological spaces that we commonly use and inhabit. These remedies include defending commons from enclosure, where essential systems that support life are defended against possession and elite consumption. Another remedy comes from recognizing our processes of being segregated from people and Earth Others, and to refuse the consent necessary for the world industrial system to proceed. Further, in development of the ecological self, we extend recognition to other beings, and see that all life exists within a unity, not sameness or Other. Such unity is the course for peace and ethics that can sustain the Earth in a more pragmatic way, but in a more profound way these are pathways to what Latour calls the "progressive good common world" where we build inclusive

associations in public life (our life together) between the human and the non-human.

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Chapter 1
Science, Nature, and Environmental Skepticism

Concentrated power in world politics is made up of ideas that become normalized, supporting material resources, and institutions (rules) that reinforce the latter two. The material resources all come from ecology, yet the conditions of ecology are usually underappreciated in politics as a *source* of power. Similarly, "political ecology" is perhaps as underappreciated as the area of thinking where such exploitation is born. Therefore, not only are non-human actors necessary for establishing, maintaining, and reproducing power in world politics, political consent for the use and distinction of nature versus modern civilization and culture is a political requirement of this accumulation.

As ecological sciences and a global set of environmental movements continue to cast attention on global environmental changes, power in the world capitalist-system must continue to discipline us from taking these threats seriously if the system itself is to continue in its current form. This discipline is one important role of "environmental skepticism" which casts doubt upon the reality and/or importance of environmental problems. This book will examine and comment on the way discipline and hegemony work to mute substantial democratic discourse in world politics through the tensions brought to bear by the skeptical environmental counter-movement. However, in the end, the larger aspiration of this text is to draw attention to the crossroads of public discourse, science, and ecology in world politics.

In this chapter, the context of environmental opposition in the US, and the empirical observation that environmental skepticism is a coherent counter-movement to environmentalism are presented. This chapter will move from explaining what environmental skepticism is, to its function as a global anti-environmental counter-movement and the key elements of its preoccupation besides the rejection of ecological science. Finally, the chapter will set the course for the rest of the book in characterizing what the environmental skepticism counter-movement means for politics and public life.

What is Environmental skepticism?

What oddity is environmental skepticism? Why the moniker? In this section this book will explain what environmental skepticism's primary claims are, and how they are different from what we have seen before in opposition to the modern

environmental movement. Then this chapter will begin to pull apart some of the lessons and layers we can see in this new approach to challenging environmental protection.

Environmental skepticism is a position that rejects the authenticity of (especially global) either varied or single issue ecological problems. This means environmental skeptics challenge the reality and/or the importance of environmental change, and to do this, skeptics often cast their critiques toward ecological sciences. Michael Coffman's discussion below argues the representative claim that ecological concerns have been generated by what he calls "pseudoscience:"

> None of the wild claims against DDT was ever substantiated… 'The technique' says Dixy Lee Ray [another skeptic see Appendix 1] 'of making unsubstantiated charges, endlessly repeated, has been used successfully against asbestos, PCBs, dioxin, and of course, Alar'(Coffman, 1994: 35).

Thus, science making claims against modernity's tools is the quintessential "pseudoscience" for skeptics like Dixy Lee Ray and Coffman:

> Perhaps the most important outcome of Carson's book and the ban on DDT by Ruckelshaus [then the United States Environmental Protection Agency administrator] was that it gave credibility to *pseudoscience*, where mere theory and observations become scientific fact (ibid, emphasis in original).

Skeptics believe that "junk science" is done to serve either a naïve or purposefully malicious political program to grow fear as a tool for control:

> In the quest to fulfill hidden political agendas, it is now legitimate to use pseudoscience to create emotion and hysteria and focus political pressure to disparage genuine scientific evidence. As in the case of the Alar scare, pseudoscience relies on distorted information based in alarmism. Such alarmism is designed to scare Americans into taking radical action… (ibid).

The standard skeptical outlook certainly rejects the idea that ecological problems threaten modern civilization and its sustainability (see Jacques, 2006b). Implicitly, this tells us that one of the defining themes in skepticism is a confidence in the continuity of modern civilizations and this results in skeptics sometimes being labeled as environmental "optimists" or "cornucopians" because in rejecting major ecological problems as real/unimportant, they see increasing life spans and affluence in the world. Therefore, the world is getting better all the time. Unfortunately, since we are accustomed to dichotomies, the reflex is then to cast those who see ecological problems as real and important as opposite: pessimists. This pejorative term works in favor of skeptics because few people want to be labeled by a pejorative, and we often fail to unearth "pessimists" and "doom and gloom" as purposeful frames.

When Cambridge University Press published Bjørn Lomborg's (2001) *The Skeptical Environmentalist*, much of the skeptical program was brought back into academic discussion partially because of the illustrious publishing house printing work that was contrary to general and multiple scientific communities. In the preface, Lomborg quotes Julian Simon, who established much of the template for the counter-movement (see specifically Simon, 1999 for his own explanations on this):

> This is my long-run forecast in brief: The material conditions of life will continue to get better for most people, in most countries, most of the time, indefinitely. Within a century or two, all nations and most of humanity will be at or above today's Western living standards. I also speculate, however, that many people will continue to *think and say* that the conditions of life are getting *worse* (Simon in Lomborg, 2001, front matter, emphasis in original).

Environmental skepticism varies in its individual iterations (see Introduction), but the gestalt of the counter-movement consistently rejects the reality and/or importance of everything from global warming, trace chemical threats, finite resource depletion, stratospheric ozone depletion, biodiversity loss and other issues. However, skeptical positions like the ones above are buttressed by an *unshakable* commitment (the opposite of our traditional understanding of "skeptical") to industrial sciences, sometimes in the form of the science behind genetically modified organisms, petroleum industry sciences, and/or chemical industry sciences (Jacques, 2006b: 78).

In justifying their rejections and commitments, skeptics often believe they are slaying the dragons of "junk science" by "debunking" "environmental myths" that they believe have been constructed maliciously or naïvely. Another example is Roger Bate's representative concerns:

> Many of our preoccupations arise from the modern paradox: although our longevity, health, and environment have never been better, we spend more time than ever worrying about all three. Concerns include both long-standing scares, such as Alar, saccharine, breast implants, passive smoking, nuclear power, pesticide residues in food, children's vaccines, and more recent scares such as mobile phone radiation, genetically modified foods, and global warming. In some cases, the concern is completely invalid, in others the scare is out of all proportion to the likely threat. For several years, my colleagues and I (at the European Science and Environment Forum www.scienceforum.net) have attempted to expose these falsehoods or exaggerations by writing in newspapers, publishing papers, and editing books. We emphasize that while the threats may be real, they are tiny. The out-of-all proportion scares they generate will, at best, divert resources and, at worst, cause significant mortality in poor countries (Bate, 2003: 262).

Notice that the above examples focus on knowledge claims that come from ecological sciences, and notice that even when a threat is accepted as real it is immediately marginalized as unimportant, or "out of all proportion" as Bate claims. This is a principal and defining feature of the environmental skeptical counter-movement. The counter-movement is not just focused on a rejection of science, but a specific rejection of ecologically relevant science, especially if that discipline or set of claims has any meaningful embedded inflection on industrial science, industry practices, free enterprise, or the disruption of markets.

Importantly, this free-market, free enterprise perspective is the same as the conservative think tanks (CTTs) that an overwhelming number of skeptical authors find themselves affiliated with at one point or another in their careers. For example, Bate is affiliated with the Institute for Economic Affairs in the UK as well as the Competitive Enterprise Institute, the American Enterprise Institute, and the Committee for a Constructive Tomorrow, and Africa Fighting Malaria which are all CTTs. These CTTs are dedicated to free enterprise and industrial capitalism that reinforce and concentrate power for the Western industrial nations. Bate notes a cavalcade of issues he sees as either "falsehoods" or "exaggerations" by scientists brought to bear through popular media. Included in this list are some strange counterparts, like mobile phone radiation, passive smoking and global warming, but what brings these issues together is that the concerns being "debunked" stem from industrial production, materials, and technologies.

Bate starts with the optimism of Julian Simon who saw almost nothing but human progress in the modern record (Simon, 1981; Simon, 1995; Simon, 1999; Simon and Kahn, 1984), but ends with the cataclysmic impacts of environmental concern on economic growth, distribution of public funds, and ultimately the death of Third World malaria victims. Thus, the optimism of skepticism is narrowly framed and wholly dependent on the continuation of Enlightenment modernity via free enterprise and the extension of industrial technology as a control over nature. Further, when you look at even just the titles of some skeptical books like *Trashing the Economy: How Runaway Environmentalism is Wrecking America* (Arnold and Gottlieb, 1994) or *Environmental Mafia* (O'Leary, 2003) or *Eco-Imperialism: Green Power, Black Death* (Driessen, 2003) we can see that environmental skepticism is quite alarmist about the threats to modernity emerging from political ecology of structural, often global, ecological changes.

Consequently, these observations demonstrate that environmental skepticism is more than the denial of environmental problems. In Jacques, Dunlap, and Freeman (2008), we empirically studied the patterns of environmental skepticism, and this chapter will re-iterate some of these findings as a basis for further analysis later in the book. Appendix 1 is reprinted from this study in this volume for readers who wish to examine the data from this study. In this study, we note that skeptical writing is occupied with several key themes that stem *from* the dismissal of environmental problems and environmental sciences. One such secondary theme is the rejection of environmental priorities in comparison to other political concerns, noted e.g., by Bate and others above.

Since skeptics reject environmental problems as real, acting on such problems is a waste of time, money, and energy. Ultimately, this position argues that global environmental changes are not legitimate public interests. What does this mean? It means that even though one of the most well-known environmental skeptics, Bjørn Lomborg (2001), says he personally has an environmental concern, he does not see most environmental problems as worthy of *public* action, and if resources are used on these improper concerns other more important and pressing matters will be neglected. From this theme in skepticism, it is clear that it is positioned to blunt the importance of environmental problems, and undermine social action to ameliorate or deal with environmental problems that compete for industrial economic primacy.

Next, following from the rejection of environmental problems, and then priorities, environmental skeptics consistently and directly argue against environmental regulation and liability. Skepticism presents these rules as counter-productive because such efforts drain revenues from the productive corporate and industrial sectors of a society, impoverishing that society. Skeptics often believe that regulation is capricious not only because it is being based on "pseudoscience" but because they see the market as the principal agent of a fair and right political economy. Casting fear on technology, some skeptics argue, provides an unfair program against industry. Bolch and Lyons write:

> The market for new innovations, for example, is blocked increasingly by needless regulation that is engendered by fear, often created out of whole cloth by the media or by academics who forget that the first duty of a scientist is to tell the truth, the whole truth, and nothing but the truth without regard for political biases (Bolch and Lyons, 1993: 118).

Because they see regulations on industry for environmental, health, safety, and labor concerns as being based on bad science *and* they want the market to be able to work unhindered—so that the market may also provide life saving drugs, for example—Bolch and Lyons add: "Perhaps a new slogan is needed: 'Regulation Kills!" (ibid).

From here, some skeptics argue that poverty is the foremost environmental problem (see Hollander, 2003); thus, by solving poverty—through more efficient capitalism—skepticism argues that whatever environmental problems occur now, they will be concomitantly addressed, if they turn out to be real, later. Any restrictions on revenue-producing activity in the market then can be an environmental problem, and this is how some skeptics argue that the environment needs to be saved from the environmentalists (see Arnold and Gottlieb, 1994).

Finally, the fourth theme observed in the environmental skeptical literature is a fear that environmental responses, the environmental movement, and environmental sciences serve as barriers to industrial and economic growth, human progress, and modernity. Luke reminds us how we should think of modernity when he warns that:

> The creative destruction of capitalism has all too often been displaced, mystified, or confused with vague terms like 'modernity,' 'progress,' or 'technological-Industrial development'… modernity has much more to do with the advent of market rationality, commodified social relations, private property, and global capitalist interests (Luke, 2006: 131).

Skeptics typically present these elements of modernity as important for the Good Life, and many skeptics believe it is important to defend modernity because it is their idea of progress.

Indeed, the ideal of progress closely adheres to the terms of the "dominant social paradigm" (DSP). Dunlap and Van Liere (1984) write that the DSP guides social decisions to be cast in Enlightment values. Collectively, Enlightenment liberalism frames the core values that guide and define what is expected within social action and within our own citizenship. These values are:

> (1) commitment to limited government; (2) support for free enterprise; (3) devotion to private property rights; (4) emphasis upon individualism; (5) fear of planning and support for the status quo; (6) faith in the efficacy of science and technology; (7) support for economic growth;, and (8) faith in future abundance (Dunlap and Liere, 1984: 1014).

For example, in Dunn and Kinney's (1996) book, *Conservative Environmentalism: Reassessing the Means, Redefining the Ends*, the authors write that the United States public has been terribly deceived by environmentalists and only through exposing this conspiracy that emanates from the media and the Left will progress move unimpeded. Skeptics, therefore are attempting to rescue modernity and the DSP from various threats:

> The visions of the leftist counterculture evolved through the years. Initially, intellectual idealists visualized a socialist or communist utopia. To achieve that end, they had to discredit free enterprise, democracy, and Western ideals along with the industry that thrived in the system. They used the environment as one mechanism to attack democracy (Dunn and Kinney, 1996: 203).

According to Dunn and Kinney, the captains of industry, who they call the "doers," are trying to move society "full speed ahead" but the environmental movement has been working "to go full speed backward. This is the conflict" (ibid, 201). For these authors, this is a cultural war, and environmental change has been largely fabricated to incarcerate capital and institutionalize fear to empower the Left which will put the United States in another Stone Age.

Most often, it appears that skeptics blame ecological scientists and academics for creating environmental lies, but they blame mass media for spreading these deceptions as a way to sell papers through headline catastrophes. For example, Wallace Kaufman writes in his book *No Turning Back: Dismantling the Fantasies*

of Environmental Thinking, "Popular horse-racing tabloids are much more scientific than the environmental press," and that the "purpose of environmental journalism is not to convey the truth about nature or the impact of civilization. Rather, its goal is to sell the myths of the movement" (Kaufman, 1994: 71). Lomborg blames the media as well. In the second chapter of his book *The Skeptical Environmentalist*, entitled "Why do we hear so much bad news," he notes that "lopsided" reporting in the media that spreads the "litany" of environmental problems that he argues are misrepresented. Patrick Michaels (2004) also finds a problem in reporting bias, evident even in the title of his book: *Meltdown: The Predictable Distortion of Global Warming by Scientists, Politicians, and the Media*. Thus, the counter-movement believes that there is a conspiracy between the environmental movement, environmental science, and the media to portray environmental problems as real and important when the skeptics see this as a lie.

In sum, environmental skeptics believe they are "speaking truth to power" (Wildavsky, 1979; Wildavsky, 1995) by exposing "junk science" that threatens economic prosperity, the Enlightenment basis behind Western industrial affluence, and even modernist progress. Now that this book has established what environmental skepticism is concerned with, it is appropriate to ask how these concerns fit with other movements opposed to environmental protections and environmentalism.

Environmental Skepticism as a Counter-movement

Several factors set environmental skepticism apart from the lineage of environmental opposition: the obfuscation that skepticism is organized; indeed, the counter-movement even attempts to obfuscate its own opposition to environmentalism; and the fact that it operates within a frame of "globalism" as Beck (2000: 9) uses the term. For Beck, globalism is, "the view that the world market eliminates or supplants political action—that is, the ideology of rule by the world market, the ideology of neoliberalism." Globalism is the current ideology of Industria, and creates the intersection of Industria and environmental skepticism. Other anti-environmentalisms have surely been economistic, but the skeptical counter-movement is globalist in its economism. This section will demonstrate these changes in anti-environmentalism: that the environmental skepticism counter-movement mystifies that it is indeed a movement, that it is organized against environmental protection and often at times is even opposed to utilitarian conservation values, and that it is operating with globalism to supplant politics to maintain a "veritable imperialism of economics" and a primacy of neoliberal modernity (Beck, ibid).

Some skeptics reflect on "a substantial groundswell" of their own skeptical opinion by other skeptics and an increasing frustration with what they consider "doomsayers" (Dunn and Kinney, 1996: 213).

- But, how do we know, then, that environmental skepticism is indeed a (counter)-movement?

A social movement is a collective action focused on "preferences for changing some elements of the social structure and/or reward distribution of a society" (McCarthy and Zald, 1977: 1217–18). Quoting Wilson (1973), Mottl contextualizes movements this way:

> A *social movement* is "a conscious, collective, organized attempt" to bring about social change (Wilson, 1973:8). It is useful to define a *counter-movement* as a conscious, collective, organized attempt to resist or to reverse social change (Mottl, 1980: 620 emphasis in original).

Social movements are focused on change and counter-movements oppose the initial movement and work against the specific social changes demanded by the initial movement. Counter-movements resist the original social movement, its actors, its knowledge claims, and the threatening implications that are brought to the fore by the social movement. Thus, social movements evolve out of some grievance or need for change through collective action while counter-movements evolve out of success of the first movement. Meyer and Staggenborg (1996) note that counter-movements arise under three conditions: 1) there are signs of success from the original movement, 2) the movement threatens interests of a population, and 3) there are political allies to help mobilize the counter-movement.

Jacques, Dunlap, and Freeman (2008) demonstrate that these three conditions have been met to explain the mobilization of the skeptical counter-movement. The first criteria is satisfied when environmentalism became a strong *global* movement in the 1990s, highlighted and indicated by the throngs of participants and the range of changes called for at the Rio "Earth" Summit in 1992. Second, "the spread of global capitalism via market economies, privatization of common property, and free trade were jeopardized by this global movement" at the same time that the Soviet Union collapsed (Jacques et al., 2008: 352; Conca, 2001). Since anti-communism had been an important theme in the conservative movement, the collapse of the Soviet Union challenged the conservative movement to find a new theme or face increased irrelevance. Anti-environmentalism served this purpose. It is not unusual that the conservative movement gave birth to another movement because the conservative movement is an umbrella movement that has worked as a general program as well as a source for other movements, as in the "pro-life" movement (see Lo, 1982). Finally, the growing power of conservative think tanks, many of which had started and developed since the 1970s, as well as the Republican take-over of Congress in 1994, provided important structures of opportunities by the 1990s.

When social movements become enough of a threat to the "reward distribution"—or more importantly, the social structure itself in relation to the State or other institutions, counter-movements appear through regular though not

necessarily orderly stages (Gale, 1986). Because counter-movements are usually working to stave off change, they are usually closely aligned with the State, and are very often organized by elites who currently benefit from the status quo social structure and reward distribution (Gale, 1986; Kriesi, 2004). Generally speaking, social movements work to agitate for social change; counter-movements work against movements for social change.

Movements and counter-movements evolve into more cohesive collective action through organizations and social mobilization. Social movement theory has identified a relative consensus of three elements to social movements that make a social movement influential in, "the concepts of mobilizing structures, political opportunity structure, and cultural framing" (Morris, 2000: 446). Mobilizing structures are formal and informal vehicles through which people mobilize collective action (McAdam et al., 1996). These vehicles allow for recruitment to the cause in addition to a place where resources can be organized and action coordinated.

The most important organizational structure for the environmental skepticism, and for the conservative movement itself, is clearly the conservative think tank (CTTs). CTTs provide resources and are receptacles for resources from interested actors like industry and conservative foundations, but which do not *appear* to the casual observer as an interest group or an organization with an agenda anything more than advancing knowledge relevant for policy. CTTs have become one of the foremost important structures for the advancement of the conservative movement, and they have influenced other policy arenas as well as environmental policy (Stefancic and Delgado, 1996).

For example, when the environmental movement hosted and supported Al Gore's film, *An Inconvenient Truth*, the CTT Competitive Enterprise Institute countered with its campaign called: "CO2—We call it Life" as a way to normalize industrial emissions under scrutiny from Gore and the swell of people who were convinced by his presentation. CEI put two 60 second ads up in 14 United States cities, placed these on YouTube and hosted a special web-only ad on "Al Gore's Big Fat Carbon Footprint" to respond directly to the release of *An Inconvenient Truth* (Competitive Enterprise Institute, 2006). The ads showed kids blowing bubbles at the park and happy easy times, and note that "some politicians" want to label carbon dioxide a pollutant which has saved us from "back breaking work" and concludes: "they call it pollution, we call it life" (ibid). This illustrates the point that the counter-movement is *not reacting to science but to the environmental movement*.

But, what is a think tank? Think tanks are defined as non-profit, public policy research and advocacy organizations. Conservative think tanks are those think tanks that promote the priorities of conservatism. Modern conservatism promotes "free enterprise," "private property rights" and "limited government" as their primary interests, as well as some goals from classical conservatism such as fundamental religious goals. Indeed, we might think of their principal function as promoting globalism. Thus, a CTT is defined by a think tank that promotes these above priorities through their research, writing, presentations, supported activities, symposia, web

sites and other activities. Schumaker, Kiel, and Heilke (1997) specifically show that contemporary conservatism operates through free market-oriented think tanks like the CEI. Of course, some conservative think tanks are focused on other critical conservative issues, like the inclusion of religion into public institutions and policies, but Schumaker, Kiel, and Heilke note that "contemporary" conservatism changed from classical conservatism when it endorsed market capitalism (which it formerly had resisted) through Barry Goldwater in the United States who had lost the 1964 presidential election to Lyndon B. Johnson. Goldwater's defeat would be seen as an eventual victory as his anti-statist and anti-communism would fuel the modern conservative movement into the coming decades. Contemporary conservatism, therefore, positions itself unflinchingly towards free enterprise as its foremost concern. Classical conservatism was very (skeptical) of the free market because of its concern for stability, authority, and tradition. Free markets are, if anything, volatile. But Goldwater, and writers like F.A. Hayek would mold libertarian conservatism, which had been an "orphan of history" until this point, as the grounds for networks of publications, think tanks, and political action committees that would come to "rival and often outperform their powerful liberal counterparts" (Brinkley, 1994: 414)

CTTs provide an organizational mobilization structure for environmental skepticism to become a counter-movement. This structure networks CTTs and their staff, it allows for recruitment of members, and it also confers elites into the State apparatus. CTT members regularly revolve between one (and often multiple) CTTs and appointed administrative positions in the State, and industry (Economist, 1991; Mooney, 2005b; Mooney, 2005a; Stefancic and Delgado, 1996; Weaver, 1988). While CTTs are relatively new to the think tank scene which have been a factor in US politics for almost a hundred years (Weaver, 1988), they have become a forceful factor in domestic politics of the world political hegemon, making CTTs key actors in United States international politics. CTTs really emerged in the 1970s, as conservative foundations and business leaders, fearing "creeping socialism," began creating a network of ideologically focused think tanks to establish an intellectual basis for Right-leaning policy making and a critique of the welfare state (Gellner, 1995; McGann, 1992; NCRP, 2004a; NCRP, 2004b; Austin and Phoenix, 2005). Conservatives felt this was necessary because they felt abandoned by what they saw as Leftist academia, and so they believed they needed a refuge for conservative thinkers and an incubator system for conservative intellectual and policy programs. Thus, CTTs are effective and powerful mobilizing organizational *structures*.

But what is the relationship of CTTs and environmental skepticism? Here this chapter will briefly recount research findings of the study in Jacques, Dunlap, and Freeman (2008). This study identifies all the books espousing skepticism that we could find, though it is likely we missed some. The first skeptical book was published in 1972 (Maddox) and thus the study reaches from 1972–2005 in terms of English language books. Books were judged as skeptical if they rejected the authenticity of major environmental problems. These books reject one or more of the following examples of environmental concerns, but are not limited to this

list: the harmful impact of toxic chemicals on human health and the environment; the possibility and plausibility of natural resource scarcity such as energy sources, tropical forests, fertile land, or fresh water; the reality or importance of biodiversity loss; the reality or importance of harmful (especially trace) chemical pollution; the reality and importance of stratospheric ozone depletion; the reality and importance of acid rain deposition; the reality and harm of land conversion via development and sprawl; and the reality and harm of climate change. We found these titles in literature reviews, bibliographies of other skeptical books, and searches of online bookstores. We found 141 books that fit these criteria; they are listed in Appendix I of this book.

- The study concludes that over 92 per cent of the skeptical literature identified had authors directly tied to a conservative think tank (CTT) as illustrated in Figure 1.1.

Authors are deemed to have an affiliation as they participate with CTTs, either as presenters, lecturers, fellows, writers and other temporary and more permanent relationships with the think tank either before or after the publication of the respective book. Most relationships are before and/or during the publication of the book and indicate that the CTTs were definitive in the production of the material. But, the relationships after publication are important also because it demonstrates the mobilization provided by CTTs for compatible ideas and policy. So, for example, Lomborg is affiliated with CEI because he spoke and was supported by them to speak to congressional representatives in the United States after he published *The Skeptical Environmentalist* and demonstrates the promotion and use of the material by CTTs for mobilization. Half of the books are actually published by a CTT (48 per cent). If books are representative, CTTs organize almost all environmental skepticism. This means that skeptics are not marginalized voices in the wilderness, but are rather speaking in conjunction and support from powerful actors who themselves fit within the dominant social paradigm of world politics. Indeed, from this data we can speculate that without conservative think tanks, it is likely that either there would be no substantial environmental skeptical literature or it would go largely unnoticed.

Also, even if it was empirically unknown to what extent CTTs were involved in skepticism, it was evident that CTTs were critical organizations for skepticism prior to our study (Austin, 2002; Austin and Phoenix, 2005; Beder, 2001; McCright and Dunlap, 2003; McCright and Dunlap, 2000). And, since many CTTs use the internet for conveying their message, CTTs and their support for environmental skepticism was searched online. This was done through the Heritage Foundation's list of policy experts and organizations at www.policyexpert.org. Since the Heritage Foundation is one of the preeminent CTTs, they have an interest in disseminating conservative intellectual support for their agenda, and the list they create is made up of conservative think tanks. This creates face validity for this data; content validity is indicated by the fact that all the CTTs described in McCright and

Dunlap (2000; 2003) are found in the Heritage database. Not all of the expected names are listed in this data because each CTT has key words associated with it, and we searched "organizations" and "policy issues" categories with the terms "environment," environmental policy," "global warming/climate change." If the CTT did not have one of these key words it was not picked up in the search, but the key words indicate CTTs that have environment as one of their main interests.

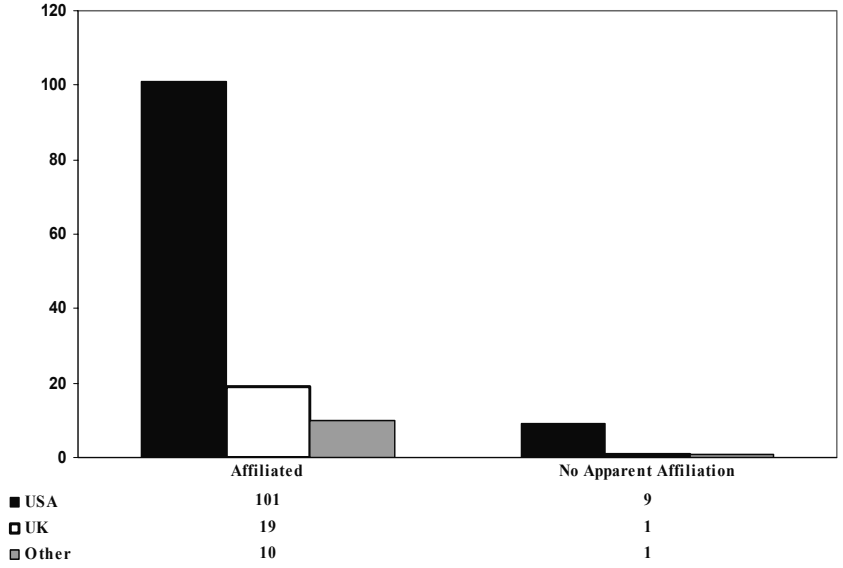

Figure 1.1 Skeptical Books and CTTs, 1972–2005

Source: Adapted from Jacques, Dunlap, and Freeman (2008)

This list was searched for CTTs that had environmental interests by key word in the Heritage database, and then went to these CTT websites to look for support of environmental skepticism from June to December 2005. From the list, we had a N of 50 (with 10 deleted from the list due to irrelevance to the search criteria—for example, we deleted the Black Alliance for Educational Options from the list Heritage generated because they did not have an environmental interest). From this list, 5 out of 50 did not espouse environmental skepticism, thereby making the relevant CTT support for environmental skepticism at that time 90 per cent as is illustrated in Figure 1.2. *Again, using a different set of data and a different approach, conservative think tanks are found to be overwhelmingly affiliated with skepticism in a coherent social structure; and, these two corroborative findings reinforce the proposition that environmental skepticism is a conservative social counter-movement, organized by elite actors with a particular ideological interest*.

In each of these research designs (and the books in particular), conservative affiliation is *underestimated*, as it was clear that some of the 11 books not affiliated with a CTT were clearly conservative; and, some books that did have a CTT affiliation were not counted because we only listed books with an international standardized book number (ISBN) to ensure that they were indeed "books."

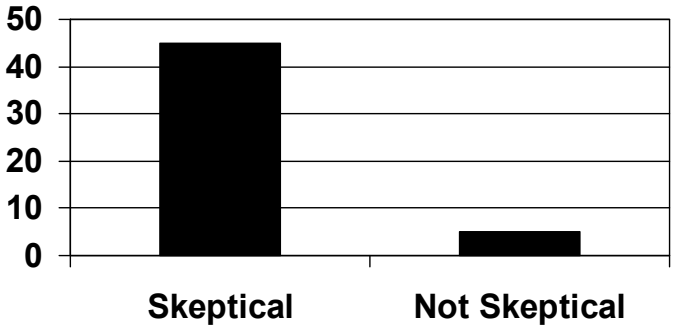

Figure 1.2 CTTs with an Environmental Interest

Source: Adapted from Jacques, Dunlap, and Freeman 2008

This tells us several important things. First, there is a coherent organization from CTTs to create doubt about environmental problems and the environmental movement. The data and analysis also tells us that the movement is elite driven as are most counter-movements, which makes sense since most people in the general public (i.e., not elites) across the United States, regardless of party or ideology, have an environmental concern and are sympathetic to the environmental quality and the environmental movement (Dunlap, 2000; Dunlap et al., 2001). Also, like the Wise Use counter-movement, it has used think tanks as a front for industrial actors and as buffers of legitimacy where industrial spokespersons would lack credibility. Further, simple distributional politics (say, protecting industrial profits) does not fully explain what the counter-movement is about or what is at stake.

There are important political opportunity structures aiding environmental skepticism. The political opportunity structure is the set of opportunities in the political environment, and this opportunity structure is usually external to the movement itself, such as changes in government (Tarrow, 1994).

> These opportunities emerge when divisions develop among political elites, when new external allies emerge, when states weaken, and when new space in the political system opens. In short, for groups to engage successfully in collective action, they must first be the beneficiaries of new external political opportunities that they must exploit (Morris, 2000: 446).

Meyer and Staggenborg (1996) elaborate on elements that allow social movements to affect the political opportunity structure that influences policy, impacts political alignments, or which raise the salience of an issue:

> Movements can also create collective action frames, demonstrate the efficacy of various means of political action, and draw media attention that activates balancing norms in mainstream media. Finally, social movements can create or magnify critical events, to which their opponents can respond (Meyer and Staggenborg, 1996: 1634).

This chapter will draw out parts of the history of the counter-movement here in a way that shows how it has altered the political opportunity structure noted by Meyer and Staggenborg. Importantly, the counter-movement has mobilized around critical events, it has effectively manipulated the context of interactions, and it has activated balancing norms in key institutions.

Critical Events and Opportunities for Environmental Skepticism

One way to look at the importance of political opportunities is to look at the life history of environmental skepticism. In the selection of books, the country of residence during authorship was inferred from biographical information. From this it is possible to see the structure of the counter-movement and the collective action of CTTs in conjunction with publication dates, illustrated chronologically in Figure 1.3.

Interestingly while the first six skeptical books came out in the 1970s, only two (Kahn et al., 1976; Whelen and Stare, 1975) at this time had a CTT affiliation. Herman Kahn, with the conservative Hudson Institute, became a key ally of Julian Simon. Also, Elizabeth Whelen, one of few women involved in the counter-movement, became a key skeptic regarding the impacts of industrial-environmental impacts on human health and is currently the president of the CTT called American Council on Science and Health. Yet, it is clear that in the 1970s, CTTs had not picked up skepticism as an issue, and the environmental skepticism counter-movement had not yet been born—in fact, the ACSH would not be founded until a few years after the book in 1978.

Further, while there were 11 more books published in the 1980s—and *all* of these books were in affiliation with CTTs—the counter-movement had not gained much momentum even though the conservative movement did take notice of skepticism for its potential. Why? This is probably because of the political climate and limited opportunities.

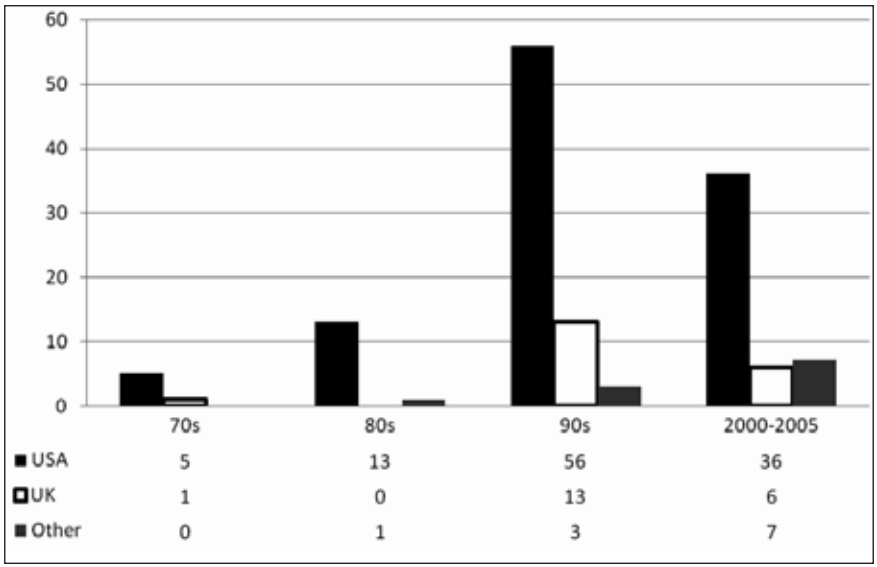

Figure 1.3 Country of Lead Author and Chronology of Skeptical Books, 1972–2005

Source: Adapted from Jacques, Dunlap, and Freeman (2008).

The Cold War occupied key conservative minds until the end of the 1980s (Lo, 1982). However, the early 1990s provided two "critical events," or salient events that worked to mobilize the respective movement. In 1991 the Soviet Union disintegrated and a core and founding principle of conservative concern was gone, leaving a vacuum for the energy of the conservative movement. And, in 1992, the Rio "Earth Summit" was held, declaring global popular concern over global environmental problems. The moment was ripe for the conservative movement to target environmentalism. An illustrative interview is with skeptic Dixie Lee Ray with the CTT, the Acton Institute:

> **R&L:** With the world-wide decline of socialism, many individuals think that the environmental movement may be the next great threat to freedom. Do you agree?
>
> **Ray:** Yes, I do, and I'll tell you why. It became evident to me when I attended the worldwide Earth Summit in Rio de Janeiro last June. The International Socialist Party, which is intent upon continuing to press countries into socialism, is now headed up by people within the United Nations. They are the ones in the UN environmental program, and they were the ones sponsoring the so-called Earth Summit that was attended by 178 nations.

R&L: Did you have a specific purpose in attending the Earth Summit?

Ray: I was sent there by the Free Congress Committee, headed by Paul Weyrich. Fred Smith and I were sent down as observers, with reporters' credentials, so we could witness the events. One of the main organizers of the program, Prime Minister Gro Harlem Brundtland of Norway was the assistant executive for the conference. She is also the vice-president of the World Socialist Party. When she was questioned by Brazilian reporters after her talk and asked if what they were proposing didn't have a peculiar resemblance to the agenda of the World Socialist Party she said, "Well, of course." That was reported in Brazil but not picked up by the American press.

R&L: Did you see a big influence by the radical environmentalists there?

Ray: Oh yes. No question about that, the radicals are in charge. One of the proposals that did indeed pass as part of Agenda 21 proposes that there be world government under the UN, that essentially all nations give up their sovereignty, and that the nations will be, as they said quite openly, frightened or coerced into doing that by threats of environmental damage (The Acton Institute, 1992).

Dixie Lee Ray, the former Director of the US Atomic Energy Commission and Governor of the State of Washington, worked in conjunction with Paul Weyrich and Fred Smith. Weyrich has been a stalwart of the contemporary conservative movement and was the founding president of the Heritage Foundation in 1973–74. Meanwhile, Fred Smith is founder and the president of CEI. A network of organizations, leaders, and allies began to mobilize in the years between the Soviet collapse in 1991, the Rio Summit in 1992, and the Republican take-over in 1994, taking advantage of the CTTs that had been founded in the 1970s.

More than 80 per cent of the books were published after 1992, with the first decade of the millennium on track to surpass the 1990s publishing burst. At this time, the environmental skepticism counter-movement was brought front-and-center to the conservative movement, probably to replace anti-communism. Further, as McCright and Dunlap (2003; 2000) have shown, skeptics and CTTs took advantage of the Republican takeover of Congress in 1994 as a critical moment to inject skeptical scientists into climate change testimony in Congressional hearings and discussions.

Framing and the Context of Interaction

The next aspect of the analysis here on the counter-movement focuses on cultural framing. Cultural framing is the process of orienting ideas in light of belief systems and shared norms. Cultural framing is the process of social construction that guides policy and the emotional drive of social movements that needs to be both aggrieved/threatened and optimistic that their efforts are worthwhile (McAdam

et al., 1996; Morris, 2000). CTTs have framed some environmental problems as "non-problems" and they have been influential and effective especially in the realm of climate change (McCright and Dunlap, 2003; McCright and Dunlap, 2000). However, the "context of interaction" in this framing is just as important. The context of interaction regards the character of the public sphere where the speech act rhetorically occurs (see Kriesi, 2004). In other words, the context of interaction is about *the nature of the discussion itself.* The context of interaction includes the goals and objectives of discussants and the condition under which this interaction occurs. This is deeply related to the political opportunity structure and the mobilization structures which both can condition the context of interaction.

Also, framing relates to one of the three building blocks of society named by Giddens (1979), the structure of signification. Here, social meaning is communicated, and as speech-acts, meaning occurs within a context of interaction. The other two structures are the structures of domination (the flow of authority, power, and resources) and the structure of legitimation, where framing and social meaning are normalized into society. The three structures interact, where authority rests upon legitimated meaning; and, to the extent that the counter-movement can delegitimize social action in environmental policy, it interrupts the authority of governments, institutions, and social groups to act against the otherwise dominant social paradigm and globalism.

In the case of environmental skepticism, CTTs hire scientists or promote and support other professionals like lawyers, and make their case against ecological sciences. The framing from CTTs and environmental skeptics is that there is something wrong with the science. When we think of fallacious scientific claims, we would typically look to the depth of literature behind a scientific claim, the method of discovery, the reliability of data, and other aspects that reflect rigor and academic integrity. This would imply that regardless of our background or goals, we might be able to agree on knowledge claims that are improperly asserted.

But, in looking at the context of interaction, framing does not occur on its own. People and groups assert the framing, and this creates a context of interaction that tells us something about the circumstances of the substantive claims. So, one of the problems environmental policy making has encountered from skepticism is the pervasive denial that global environmental problems are real or important. When it comes to the United States general public's sense of climate change—they believe climate change is real and that something should be done, but they are genuinely confused about the scientific consensus because they think climate scientists are evenly divided about the reality and importance of climate change (Brewer, 2005). There are certainly several complex features of what Jamieson refers to the "American Paradox" where most United States citizens express concern but end up not voting in environmentally active politicians or opting for actual greenhouse gas reductions. United States recalcitrance from political values then is complicated by psychological perception and crescive/creeping time scales (Jamieson, 2006; Leiserowitz, 2006; Lorenzoni and Pidgeon, 2006; Oppenheimer and Todorov, 2006; Sterman and Sweeney, 2007; Weber, 2006). However, fueling

much of this paradox is the counter-movement that, in conjunction with media "balancing" of pro and skeptic voices in news stories, the United States publics in particular are confused about the legitimacy of climate change policy. However, the media and the public have only begun to systematically engage the framing of systems of signification in light of the counter-movement. The reflexive identification and analysis of the context of interaction has been too thin in the popular mind and press, because the organization of the skeptics by ideological think thanks has not been transparent or revealed. This study empirically measured a part of the context of interaction and shows that the skeptics are not unbiased or independent voices, and that a key element to this context of interaction is the CTT organization structure.

- Beyond speculation, it is clear from this data that environmental skepticism relies on conservative think tanks to organize skepticism into a coherent set of propositions opposed to a growing global environmentalism that threatens conservative interests. Environmental Skepticism is a conservative counter-movement.

CTTs are particularly useful for hiding direct material, profit, and ideological interests. Think tanks subvert the context of interaction because policy makers cannot and do not typically differentiate between intellectuals from think tanks and their ideological background (Lahsen, 2005). Further, newspapers and wire services do not make this distinction effectively either (Antilla, 2005; Boykoff and Boykoff, 2004). Thus, we should not be surprised that for some time, the public has been confused about the nature of scientific agreement in climate change—even though these same publics believe climate change to be real and that something should be done.

What is the difference? Text box 1.1 presents several points that should help make distinctions between CTT knowledge claims and much of the rest of the sciences, especially that work which comes through the process of refereed publication. Note however that these are not scientistic values. They are instead values for reflexive public discourse and civics.

CTTs have been making knowledge claims as if they presented science that was just as reliable or fairly treated or that which has a depth of credibility behind it as that found in peer-reviewed articles. Myanna Lahsen interviewed many skeptics and staff in Washington DC on these concerns, and one Democratic staffer commented to her:

> Washington has had think tanks that do battle with policy issues for a long time. That is a staple of Washington life. What is different about think tanks such as the Marshall Institute [an influential Washington D.C.—based think tank] is the veneer of scientific credibility. Congress can't tell the difference between real science and junk science; *they [i.e., the purported experts] all wear white lab coats* (Lahsen, 2005: 138 emphasis added).

Text Box 1.1 Think Tanks: What is the Difference? How do we differentiate representatives in public discourse?

Part of the confusion is explained by a context of interaction where CTTs are integrated into the milieu of the rest of the sciences. What is the difference?

The difference is that think tanks and institutes can publish whatever they want. As a matter of free discourse this is a good. However, citizens should be able to sort propositions. Think tanks, conservative or otherwise, often publish without:

- Good faith witnesses to the process of the knowledge claim outside the CTT (e.g., editorial scrutiny)
- Clear procedural insurance of integrity [integrity being adherence to moral principles like fidelity of representation]
- Being subject to corroboration outside the CTT (e.g., peer review)
- Vetting the knowledge claims in a way that compares the fitness of new knowledge claims to prior institutionalized knowledge (responsibility to history)
- Perplexity; multiple perspectives are effectively and institutionally filtered out of a think tank through purpose, ideological fit, and fitness of project interest

Perhaps we can cut through this fog by simply asking:

- To whom is the think tank (or any representative) responsible to?
- What community does the claimant answer to?
- Who provides some (imperfect) insurance of integrity?

Thus, the context of interaction has been distorted by hiding the movement and its mobilizing structure. It is not as if the publics are necessarily uninformed in this case—the context was manipulated and the agenda of skeptics was so unclear and so obscured it was difficult to discern even for people working on these issues in professional politics, academia, and the press. Therefore, the skeptics and the CTTs were able to culturally frame things like climate change, at least for a while, as "non-problems" without being exposed as an organized counter-movement hostile to environmental protection. Instead, this framing successfully was positioned as "dueling scientists" reasonably disputing the facts (McCright and Dunlap, 2000).

Balancing Norms and Institutional Opportunities

In the liberal democracies, there is a norm for "balancing" information in the State, the media, and educational institutions, i.e., there is an expectation that values will not be foisted but offered fairly with individuals left to choose on their own. In these institutions, when there is a controversy, balancing norms are triggered and the institutions feel compelled to treat each side as having equal credibility and potential merit as a way to maintain fairness through non-interference. But propositions do not usually have equal merit, and we have already seen that the counter-movement is not subject to the same responsibilities as most other non-think tank (e.g.,

university) scientists. Thus, to treat skepticism as deserving equal attention simply because we do not want to violate liberal norms is not only imprudent, it stems active discussion and action, and is therefore a democratic problem.

For think tanks to demand to be treated as if they fit within the milieu of the rest of the sciences even though they are not subject to the same responsibilities is a form of infidelity because infidelity refers to how we represent information and relationships. Mystifying the context of interaction as such is a deception in representation that has hurt our ability to bring some discussions to impermanent closure for social action. The specific infidelity comes from the impression that an intellectual front like a think tank supposedly serves some broader public interest, but conservative think tanks (and others as well it is presumed) are actually serving a much more narrow interest base that is more responsible to the funders (e.g., foundations and corporations) and to the leadership of the think tank.

In addition to these balancing norms that accommodate think tanks uncritically, the political structure of US institutions offers opportunities for CTTs that do not occur in the same way elsewhere. As noted above, CTTs started to become established in the 1970s to create a counter-intelligentsia that would influence policy and social structure. But this was able to take hold in the US due to some specific institutional characteristics not found in the other Western democracies, and thus think tanks, conservative or otherwise, do not appear to have been able to have the same kind of influence on policies that they have had in the United States.

Weaver (1988) notes that the US think tanks have more favorable opportunities through three key characteristics of US politics. The first characteristic is a relatively weak party system. In the US, members of a party do not have to support the party line as strictly as in other countries, and the parties themselves are relatively weak and fragmented in comparison, say to British parties. Parties do not have research arms of their own, and think tanks have filled this gap. Weaver also describes the atmosphere as less charged ideologically, where policy think tanks can propose ideas and their motives will be under relatively less suspicion than in other industrial Western countries.

Weaver also notes the "permeability" of bureaucratic elite posts in the government. Weaver explains that the "revolving door" described above between CTTs and the State is an effect of appointees often not coming from public service or through parliamentary caucuses as they do elsewhere, but simply from political changes in leadership. Industry is certainly in this revolving door also, because it is clear that after having been in government, a lot of administrators go to the corporate sector to work, presumably hired by industry because they had opened windows of influence while in office. For example, in the George W. Bush administration, the former Chief of Staff for the White House Council of Environmental Quality, Philip Cooney—who had censured, softened, and significantly changed climate reports coming out of the White House to make climate change appear less important, real, and threatening—was a lobbyist for the American Petroleum Institute, the largest trade group for the petroleum industry (Revkin, 2005). After his work in the Bush Administration, he went to

work for ExxonMobil. Though the American Petroleum Institute bills itself as a trade group, it also says it is "a major research institute" (API, 2007) and therefore presents itself like a think tank in its advocacy for the oil industry. Afterward, it became clear that Cooney had been instrumental in suppressing key United States climate documents like the *Climate Change Impacts on the US: The Potential Consequences of Climate Variability and Change*—or the United States National Assessment (Mooney, 2007).

Finally, Weaver describes think tank influence in the United States as having more opportunities than in other Western democracies because of the US division of powers between Congress and the President. He argues that this division permits more points of influential contact. Similarly, Dryzek et al (2003) observe that the structure of adversarial policy making in United States institutions, as compared to other Western democracies, has empowered rival uses of science and has disabled the United States from advancing toward ecological modernization, where the state and markets incorporate ecological needs and limits, or ecological rationality.

In summary this section has measured and analyzed key elements to the organization of environmental skepticism that clearly indicate that it is not just a set of unaffiliated, independent rebel scientists.

- Environmental skepticism is an organized counter-movement that has been able to alter the structure of political opportunity through mobilizing around critical events of the early 1990s, mystified by the context of interaction that hides the organized and ideological nature of the counter-movement, and by triggering balancing norms.
- Like many counter-movements, the skeptical counter-movement is organized by elites to protect a status quo against agitations from an opposing grassroots social movement. This counter-movement is organized to defend against the environmental movements, and the global environmental movement in particular to stave off major changes to globalism.
- By taking advantage of political opportunities, the counter-movement has been able to challenge environmental protective social action, especially in the United States, but with farther-reaching consequences by:
  - Blocking discourse for social action (e.g., legislation) by framing ecological issues as "non-problems" (McCright and Dunlap, 2000).
  - Conferring elites into the state apparatus (e.g., Cooney from the API) to weaken regulatory policies, rules, and reports (Mooney, 2007).
  - Pressuring the state to challenge international commitments such as the Kyoto Protocol (McCright and Dunlap, 2003).
- From this analysis, (Jacques et al., 2008) concluded that the skeptical counter-movement is one substantial reason for the decline of United States environmental protective policy since the 1990s, observed in forestry, biodiversity, hazardous and toxic materials, genetic change, and of course climate change policies since the 1990s—the same period that skeptical

books exploded in numbers and the key critical events began mobilizing actors and allies.

However, the skeptical counter-movement is not the only anti-environmental movement in the US, and the following section examines the historical context from which the counter-movement evolved to demonstrate lessons learned by anti-environmental leaders.

The History of Opposition to Environmentalism in the United States

This chapter will begin this part of the story by providing a history of US opposition movements against environmentalism ("anti-environmental movements") in order to contextualize the skeptical counter-movement described in the previous section. Why focus on US movements only? Certainly there have been other important environmental opposition movements around the world—as an example, the extremely popular Czech Republic President, Vaclav Klaus, wrote a letter to the US Congress naming environmentalism as a new dogmatic religion with the aim of limiting freedom around the world "similarly to the old Marxists" (Lopatka, 2007). However, shortly after this, Klaus wrote a skeptical book with the same tone and implications—published by the US CEI. Thus, even in this case, the US organizational structure of the counter-movement is a definitive factor.

In any case, just as the modern environmental movement has important roots in the United States, notably with Rachel Carson's *Silent Spring* published in 1962, so does environmental skepticism also have its roots in the United States.

In order to understand environmental skepticism, some history of environmental opposition is needed. In US environmental politics, there have been several brands of opposition. The most well known of these opposition movements are identified most thoroughly by Switzer (1997) through county rights, the Sagebrush Rebellion, and the still-powerful Wise Use Movement, some of which have taproots to the beginning of the republic. These movements were often based in protecting extractive industry and land use, private property, and local decision making. The principal claims of these movements were that environmental protection or levels of protection or specific kinds of protection were against the public interest. Of course, when we look at the Wise Use Movement's defense of extractive uses, motor sports on public land, and private property interests, it is not hard to tease out the private interests behind this claim for public interest, and in this way the Wise Use Movement, as Switzer correctly notes, has never really had the popular traction of the environmental movement, nor will it.

Sagebrush Rebellion

The two most important of these movements are the Sagebrush Rebellion and the Wise Use Movement. The Sagebrush Rebellion was the first of these, with

the Wise Use Movement growing out of and transplanting the concerns of the former. The Sagebrush Rebellion started in the context of the new nation, as the US expanded its land base by purchase, annexation, cheating on treaties, or brute force. Portions of this land base formally became a public domain. As states came into the Union, they received large land grants, while other vast swaths were simply sold off or given away as was the case with the railroads. Within this time, most of what Charles Wilkinson (1993) calls "the lords of yesterday"—laws that favored exploitation of the public domain established for western development and settlers that would become deeply entrenched into environmental policy—became institutionalized. Some, like the 1872 Hard Rock Mining Law have never successfully been challenged. This law grants control of federal lands to private enterprises that find marketable minerals on them, for a nominal 1872 fee. Just imagine the largesse! Many of the industries related to the exploitation of federal lands, like ranchers, mining companies, and logging companies successfully captured the regulating agencies (some, like the Grazing Service, the predecessor to the Bureau of Land Management, were actually governed to a large extent by powerful ranchers); and they established the classic "iron triangle" where other interests were effectively locked out of deliberation. Now, fast forward to the 1960s and 1970s where the environmental movement began causing tension with these "lords of yesterday" and therefore with the industries that were feeding off of this largesse. One would be hard pressed to find a better example of corporate welfare than this relationship. For example, the United States Forest Service's road-making efforts were more extensive than any other road builder in the world, primarily in the service of making logging roads for timber access. The Forest Service's success in road-making can be credited to Gifford Pinchot's Progressive Era desire to use the forests as a tangible asset for the country, discussed below.

By the time President Jimmy Carter came to office, the environmental movement was in full swing. In 1976, Congress and the President passed Public Law 94–579, The Federal Land Policy and Management Act (FLPMA). FLPMA, besides institutionalizing the idea of "multiple use" as a public interest management strategy for federal lands (and the Bureau of Land Management in particular),[1] "reversed the 200-year-old policy of disposing of public lands by stating that it be the policy of the United States that 'the public lands be retained in federal ownership, unless … it is determined that disposal of a particular parcel will serve the national interest'" (Blakemore and Erikson quoted in Foster, 1983: 658). Thus, until 1976, the expectation had been that the Federal Estate in the West would be transferred in large portion to the states over time, but with FLPMA, this expectation was reversed.

1 This technically means land managers are supposed to manage land for many purposes, not just one, like logging. Practically though, managers are hard pressed to do this, since some uses effectively preclude others, e.g., the use of off-road vehicles and those who wish to use the land to find quiet solace.

Immediately, in 1977, the Mountain States Legal Foundation (MSLF) was created by the beer producer Joseph Coors to challenge and fight against this creeping federalism in land and environmental policy. It turns out that Coors' efforts were a tap-root for later environmental skepticism, as he also helped fund the launch of the Heritage Foundation in 1973. Coors is a prime example of an elite captain of industry working to defend against the public interest of ecological concerns, tying the ideas of Industria to skepticism. At the same time, the United States found itself in the energy crisis from the 1973/9 Middle East Oil Embargos when the Organization for Petroleum Exporting Countries (OPEC) restricted critical flows of fuel. Thus, in 1979, Nevada passed a law insisting on state control of BLM lands and by 1981 fourteen other states had joined the row attempting to wrest control of federal land within state borders (Foster, 1983). Sagebrush rebels very clearly wanted better control over the Federal Estate through the states to intensify extraction efforts cradled in regional political economy.

President Reagan, who had noted that Coors was part of his "kitchen cabinet" as an advisor, was elected after declaring himself a Sagebrush Rebel and he appointed the colorful James Watt as the Secretary of Interior. Watt was the former director of MSLF. Yet, the states could hardly be expected to afford managing such vast tracts of land and resources. And, it turns out, that Reagan's goal was to privatize the Federal Estate, and the opportunity for simple conveyance to the states began to wane. At this point, the Reagan Administration might be credited for killing the Sagebrush Rebellion because privatizing the lands would have changed everything the Lords of Yesterday were created for and those who were protected by these lords. It would have stopped the largesse and corporate welfare that depended on socializing the costs of United States industrial growth and production. Few beyond Reagan and Watt were interested in this loss of corporate welfare, and the Sagebrush chapter mostly ends—with still some occasional echoes, but the height of this movement clearly ends by 1983 when Watt leaves the Reagan Administration. It is transparent that the Rebellion was founded in a spirit of Western regional anti-federalism agitated by the increasing influence of environmental laws and it declared open season on all of it (Cawley, 1996; Switzer, 1997).

The Wise Use Counter-movement

The Wise Use Movement is a close cousin to the environmental skepticism counter-movement, and some writers have woven them together (Ehrlich and Ehrlich, 1998) because some Wise Users like Ron Arnold write about the falsity of environmental problems. As understandable as this is, it is a mistake to confound the two movements because Wise Use has a separate list of goals and primary

actors than environmental skepticism, even though there is overlap. Primarily, the Wise Use counter-movement[2] is an effort that started in 1988 to challenge environmental laws that limit commercial and industrial uses on federal and private lands. On this note, Arnold took Gifford Pinchot's famous goal of "wise use" of the nation's forests during the Progressive Era as a name to frame the ambition of the movement (Switzer, 1997). Importantly, the counter-movement is overtly and covertly against environmentalism. Overtly, Arnold has said the Wise Use goal is to destroy environmentalism in several newspaper interviews:

> "Our goal is to destroy, to eradicate the environmental movement. We're mad as hell. We're not going to take it anymore. We're dead serious—we're going to destroy them … we want you to be able to exploit the environment for private gain, absolutely," he says. "And we want people to understand that is a noble goal" (Long, 1991, Lexus Nexus online).

Given that Pinchot's aim in wise use was *conservation* and direct limits to the nation's industrialists who would otherwise develop the Federal Estate into oblivion (Hays, 1959), the appropriation of "wise use" for an environmental opposition movement is a conspicuous move, whose fidelity to Pinchot is suspect.

Importantly, there are covert aspects to the movement that are akin to the covert organization of environmental skepticism. For example, the Wise Use counter-movement appears to be controlled, organized, and funded by major extractive industries, particularly in mining and logging. It is known that companies illegally tried to pressure their employees into attending rallies and pressuring environmentally concerned politicians. It is also known that these industries pay/have paid to have front groups—what Beder (1998) calls "astroturf" groups because they pretend to be populist grassroots groups—that help organize opposition to environmentalism and used public relations firms to frame and hide industrial interests. Like skepticism, it is an elite-led and organized counter-movement. And yet, when we look at the Wise Use Movement, even if it is made up of the disillusioned and alienated rural workers, as Beder rightly suggests, it is still not *all* corporate front. Driving into small towns in rural Idaho, where extractive use of the Federal Estate is essentially the only employment in town, it is not uncommon to see homemade or manufactured signs that say "This family supported by Forest Service Timber" or "I support the timber industry" or placards in trucks that say "Women for Timber" (a Wise Use interest group). The elite counter-movement, through Astroturf efforts, *grew* more populist followers. We might suspect that the skeptical counter-movement will result in some of the same politics, where perhaps from skeptics, we see bumper stickers that say something like "stop global whining."

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2 The terms here are interchanged because it self-refers as the "Wise Use Movement" but since it is reacting to environmental preservation/conservation efforts from the environmental movement, it is better characterized as a "counter-movement."

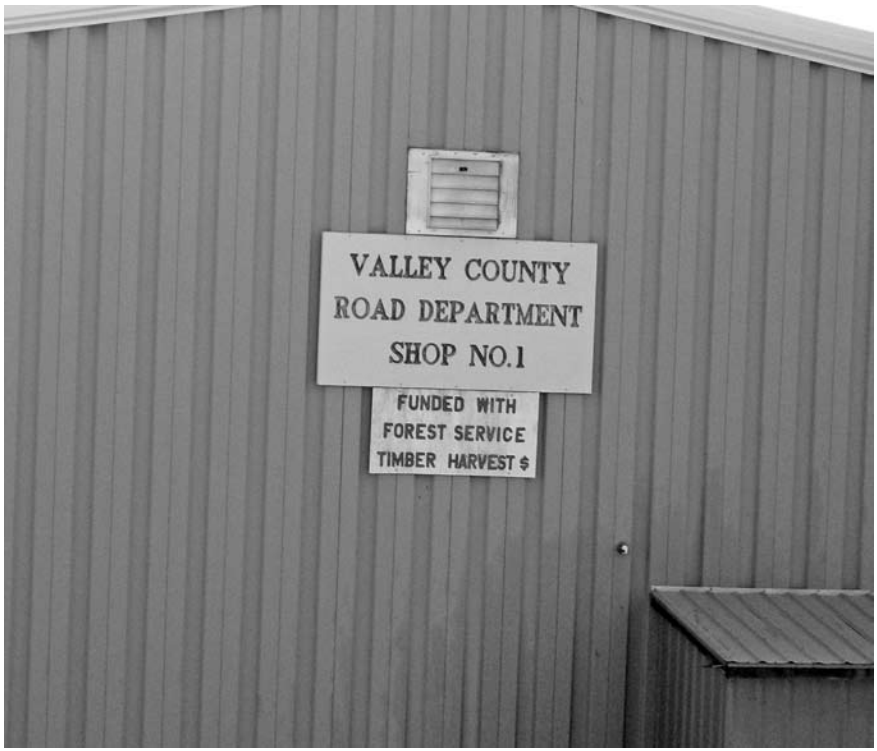

Photo 1.1 Valley County Road Department Shop No. 1. Funded with Forest Service Timber Harvest $.

Source: Peter Jacques

These signs in Photograph 1.1 are indications of the alienated working class in the West who, regardless of who has helped organize them, are ardent supporters of extractive industry and the Wise Use counter-movement sometimes even after the corporations leave town. However, the case of W.R. Grace which mined vermiculite containing asbestos, in Libby, Montana might be a counter-example. The town has been fully devastated by the tragedy of people working, and bringing home the toxic dust into the homes of residents and riddling the town with disease. Such catastrophe might demonstrate the limits to this town loyalty. Thus, it is mistake to consider the Wise Use counter-movement *purely* an industry front, though it is substantially so (see also McCarthy, 2002).

In addition, both the Sagebrush Rebellion and the Wise Use Movement do not deny that they are/were *movements* designed to oppose the modern environmental movement in the United States. Both of these opposition movements were very transparent in self-identifying as just this—rebels against encroaching

environmental restrictions on extractive uses and limits to commodifying the Federal Estate.[3]

This transparency changes with the environmental skepticism counter-movement, which denies that it is either a movement or opposed to environmental protective policies for political reasons. Rather, the principal rhetoric in the *skeptical* counter-movement is a rejection of authenticity of environmental problems, and a denial of ecological *science*. Environmental skepticism embeds its rejection of environmental protective policies based on these motives, but skeptical authors sometimes note that they do have an interest in protection, often phrased as something like "saving the environment from the environmentalists." In any case, unlike the prior to anti-environmental movements, the skeptical counter-movement insulates its antagonisms to environmentalism, probably because open antagonisms have not played well for these two prior anti-environmental efforts.

In other words, had it been transparent that skeptics were hostile to environmental protections, as in the Sagebrush Rebellion and Wise Use projects, the skeptical project would likely have been marginalized like the other two, since open hostility to environmental public interests is and has been unpalatable to the public. Anti-environmentalism is viewed by people in the public across ideology and party as a violation of the public interest. Such public rejection of anti-environmentalism is best exemplified by the open hostility of the Reagan Administration and members of his cabinet, like James Watt, which fueled a growth in environmental activism, membership in interest groups, and interest group funding. This sent the message that open hostility to environmentalism was a political non-starter (see for example Brechin and Freeman, 2004; Dunlap, 2006,; Kraft and Vig, 1984).

After that lesson, the United States saw two obliquely anti-environmental presidents who ran against the flank of the environmental movement. First, President George H.W. Bush Sr. declared he would be the "environmental president" meanwhile hosting anti-environmental policies—albeit much less so than Reagan—such as his attempts to drill in the Alaskan National Wildlife Refuge (until the Exxon *Valdez* disaster that closed the political opportunities for this policy goal) and his hostility to the Rio Summit policies. His son, George W. Bush successfully passed laws like the "Healthy Forests" and "Clean Skies" initiatives that were programs for rolling back environmental protection, changing administrative regulatory policies, softening language in regulatory reports, and challenging the international community's environmental efforts with thrusts of economic and cost/benefit priorities (for a review see Austin and Phoenix, 2005; Brechin and Freeman, 2004; Cohen, 2004; Conca, 2001; Devine, 2004; Pope and Rauber, 2004; Sussman, 2004).

Leaders of the conservative movement have learned from this history. The rhetoric of environmental skepticism is typically something like the "evidence

3 In addition to the Federal Estate, the Wise Use counter-movement is also relevant to private property, since the US Endangered Species Act and the US Clean Water Act have specific ramifications for private property land use changes.

for global warming is unsettled or false" or "global warming is real but natural cycle unrelated to human activity" positioning the discourse *not* as a rejection of environmental public interest values, but instead positioning themselves as a prudent minority up against the environmental radicals that control Goliath. The counter-movement argues that we should not interfere with industrial processes and economic growth if these environmental problems are unproven or even maliciously fabricated.

The antipathy within the counter-movement is therefore rhetorically masked in knowledge and science claims that implicate prudence, but underneath the mask are the consequent themes of antipathy to ecological protections and science in skepticism. In sum, environmental skepticism is not a coalition of individual rogue scientists speaking truth to power. Instead, environmental skepticism is a social counter-movement organized by conservative think tanks. This counter-movement is an anti-environmental movement that has learned and evolved from the history of anti-environmental movements in the United States. It has shown elites that they cannot use overtly anti-environmental framing or rhetoric and that private interest dissent against environmentalism must be insulated and hidden if the claims are to remain credible. Conservative think tanks offer this insulation for private industry and conservative ideology itself.

Globalist Anti-Environmentalism?

There is a globalist and transnational nature to environmental skepticism. Environmental skepticism has become effective globalist anti-environmentalism and a significant factor in world politics as it works to maintain a global ideological order. Beck argues that globalism supplants the political, where the

> … central task of politics … is to define the basic legal, social, and ecological conditions under which economic activity first becomes possible and legitimate, drops out of view or is suppressed. Globalism implies that a complex structure such as Germany—its state, its society, its culture, its foreign policy—can be run in the way a company is run. *But this involved a veritable imperialism of economics, where companies demand the basic conditions under which they can optimize their goals* (2000, emphasis added).

Thus, globalism is the forceful assertion of worldwide, reductive economism that subsumes all other concerns "under the sway of the world-market system" (ibid). And, with "globality," another term from Beck which refers to the global society and an transnational human intercourse where all "victories and catastrophes affect the whole world" (ibid, 11), the ecological trauma from neoliberalism will be felt transnationally—though we all know the poor are poisoned and starved first. In at least these two ways, the environmental skepticism counter-movement is important to world politics.

Since environmental skeptics do not see environmental problems as real, serious, and/or important, they challenge the legitimacy of ecological science that legitimates issues such as stratospheric ozone depletion, toxic chemicals, trace chemicals, land use/land changes, sprawl, the loss of biodiversity, changes to the gene pool as through genetic modification, the limits and dynamics of finite natural resources, and of course climate change. A close look at the list of objections indicates that skeptics are not fighting local battles. These issues are not even national issues like control of the Federal Estate that preoccupied both the Sagebrush Rebellion and the Wise Use Counter-movement. In fact, these problems are global in scope and are typically associated with the industrial world-market; thus, it makes sense that globalism would marshal its own defense. Further, skeptics have already, even if temporarily, successfully intervened in international action in at least one area—climate change, thereby becoming a force in international environmental politics. Skepticism is, even on the most superficial levels, a force in world politics as it works to subsume global politics and the globality of environmental problems.

Skepticism really broke out in 1992 and skeptics gained more prominence in the conservative movement and more skeptical publications went to press. This was also the year after the communist threat appeared to conservatives to be over and the Rio Summit declared environmental concern a worldwide popular phenomenon. But it was also when some core elements of global environmental change gained scientific and political currency, so for example, it was at the Rio Summit that the United Nations Framework Convention on Climate Change was brought to the front page along with the Convention on Biological Diversity and Agenda 21—*all* of which the United States has demurred on in one way or another.

The recalcitrance of the United States put the world on notice that it would not forcefully counter the structural changes being wrought in the Earth system that were—at best—ahistorical experiments with key life support systems. To the extent that skepticism is working to counter the advances of international diplomacy and negotiations about trans-boundary environmental changes, it is playing in the fields of international relations and world politics.

- Regardless of whether any other proposition is accepted from this book, it should be clear from study of the counter-movement that science is a foundational concern for world politics. To the extent that the counter-movement plays on this field challenging claims about truth and knowledge, the operation and social dynamics of ecological science is a central pathway for ontological and ideological struggle in contemporary world politics with tangible, material impact on power and meaning. From this point on, social science should not have to ask if science is politicized, but rather *how* is it politicized.

Skepticism's most important world politics is in suppressing dissent, opposition, and choices that are non-neoliberal, or non-capitalist, or which work outside the limits of modernity. As Table 1.1 suggests, opposition movements to

environmentalism have moved through several important progressions—from overt hostility to environmentalism to covert hostility and from regional/national scope to global scope as environmental problems extend and appear more serious.

Table 1.1 The Progression of Opposition Movements in the U.S.

Movement	**Goal**	**Context of Opposition to Environmental Protection Obscured?**	**Scope**
Sagebrush Rebellion	Anti-federalism, Place the Federal Estate under state control	No	Regional/ National
Wise Use Counter-movement	Allow unfettered access to the Federal Estate for extractive industry, remove environmental laws that impact private property	Partially: Arnold's Newspaper interviews are clear, but the use of CTTs and PR firms obscured part of the countermovement	National
Environmental Skepticism Counter-movement	Challenge the reality and importance of environmental problems in defense of globalism and modernity	Yes	International

By challenging ecological science, environmental skeptics set epistemological and political conditions for defending Industria and its hegemonic force from ecological justice and broad egalitarian accountability. Now that this chapter has empirically described and analyzed the environmental skepticism counter-movement, this book will now analyze what skepticism means to world politics in more detail.

Chapter 2
World Politics and Political Ecology

This chapter will discuss the dominant political ecology in world politics. Political ecology is a term that is so broad and ambiguous it is immediately confusing. However, the term is redeemable if we think of political ecology as a field of study and contemplation with several concerns, and not a term that refers to a single concrete idea any more than we would for a term like "political science" or "sociology."

The literature of political ecology has several themes and topics of recurring interest which Greenberg and Park (1994) describe as "science, social sciences, and political economy." In this context, science refers to the ecological setting in which human individuals and populations are situated, and it includes the ways in which the ecological condition shapes decision making with particular interest in interdependencies, evolution, and communities. The social sciences in political ecology contemplate the human condition in ecology and have been involved with studies of human evolution, community development, and metabolism (use and flow of resources). The idea of political economy (in political ecology) has revolved around Marxist dependency theories of development. These theories explain the distribution of affluence in the core industrialized nations through a theft of value that flows from the underdeveloped periphery (poor countries in this context) to core states. Criticisms of this approach—that it described a system that was too unified and that it over-simplified differences between classes in the world—led to the development of Immanuel Wallerstein's (1974–1980) world systems theory (Greenberg and Park, 1994) which theorized a single global economic system organized through a worldwide division of labor that included other classes, such as the petit-bourgeoisie sitting between the affluent core and the dispossessed Global South.

> The world in which we are now living, the modern world-system, had its origins in the sixteenth century. This world-system was then located in only a part of the globe, primarily in parts of Europe and the Americas. It expanded over time to cover the whole globe. It is and always has been a world-economy. And it has always been a capitalist world-economy … What we mean by a world-economy (Broudel's *economie monde*) is a large geographic zone within which there is a division of labor and hence significant internal exchange of basic of essential goods as well as flows of capital and labor (Wallerstein, 2004: 23).

Other political economists have also suggested terms under which international economic structures and rules condition the metabolism and development or its

opposite, underdevelopment/undermining human wellbeing. In sum, this form is concerned with the materialism and structures of economics at the world-level through various lenses, though most of these lenses are critical of these structures. Since the colonial period and the rise of global capitalism, this unified system seems to describe the political economic umbrella that commodities flow within and around. Thus, the study of political ecology is at least partially concerned with how humans consume ecological space, and this occurs within a physical political economic structure that is made up of infrastructure, trade routes, producers, consumers, firms, laws, energy systems, and other actual material from the world, dictated through ideational and political relationships.

Perhaps the most important work on political ecology is the work of Bruno Latour (2004). Latour argues that true, emergent political ecology comes from refusing to think in terms of what he calls the "bicameral world" divided by either the "mute authority" of nature or of pure social conditions. Latour's political ecology forces us to examine the world in more complicated ways than the Enlightenment model where an objectified nature is counter-posed to the social, but offers a full universe and more relationships.

To the degree that various indigenous peoples had associations with various non-humans and did not distinguish between these two constructed houses, these tribes have never lived with nature. This is what Latour tells us is the main contribution of cultural anthropology to political ecology. At the same time, Latour believes that Western society has never lived without nature because the West has always defined itself in terms of its supposed opposition to nature as something that is real and "out there" that can only be discovered by Science (scientism). In this way, Latour believes we use Science as a blunt instrument of authority to suspend public discussion.

Latour argues that Plato's Cave has become one of the principal metaphors of knowledge/truth and politics/public life. In the Cave we are chained down facing the cave wall. Behind us someone is projecting shadows on the wall from a fire. We cannot move our heads and do not know these representations are illusionary and insubstantial. Enlightenment occurs when we break free of the chains and come outside into the light of Truth. Scientists, Latour argues, are charged with going out into the light to understand Truth and nature, and coming back into the cave as intermediaries of indisputable knowledge that subverts other discussion. In this way, Science (capital S, singular practice as authority) mutes public discourse through unquestioned command of the facts. Latour believes that so long as Western civilization lives chained to the *metaphor*, we will allow Science (instead of plural, less authoritative but more authentic sciences) to dominate and supplant politics.

He argues then that we need to do several things to rescue politics and ecology. The first is to refuse to enter the Cave in the beginning and refuse to see sciences as neither relativistic nor as unquestioned authority. The second is to "let go of nature." This is the nature that is seen as the light outside the cave, and it is instead better to see politics as the "progressive composition of a good common world"

between humans and non-humans. The representation of these associations is political ecology. Latour argues that political ecology up to this point has been reinforcing the bicameral constitution of Western politics, and therefore will not contribute to emancipation. "Why take an interest in political ecology, then, if its literature only manages to plunge us back into the Cave? Because, as we are going to show … political ecology has nothing to do, or rather, *finally no longer* has anything to do with nature, still less with its conservation, protection, or defense" (LaTour, 2004: 19, emphasis in original). Whereas nature had clear boundaries, neat and expected behavior, and a sharp distinction between politics, political ecology works in drawing together associations of rhizomes and networks, human and non-human, living and non-living associations. Latour argues that where asbestos started out as a miracle material (a matter of fact) it evolved into a network of embedded matters of concern as the sciences drew out complicated unintended consequences and relationships and that this latter development is a good example of progressive political ecology.

Relativism, Nihilism and Nonsense

For Latour, political ecology is an emancipatory project that liberates public life from Science, but is itself *not* relativistic—it is not *just* society or social construction. That either/or proposition itself is a throwback to the fact/value dichotomy and does not advance our thinking. Rather, scientists have the role of representing parts of the world. Within this representation, we can see that some representations hold more fidelity to the matters of concern than others as these representations make their way through public discourse in a Risk Society (one with ubiquitous risk, and a potentially reflexive look back at the production of risk) (Beck, 1992; Latour, 2004). Latour's point makes it all the more important that a collective response or scholarly response to environmental skepticism is not just to rebut, or to reiterate Science and truth as unquestioned, neat and tidy authority. Rather, a political ecological response would be to invoke the ideas of fidelity to representation, and ask something about what actors the counter-movement is representing. Equally important, political ecology would assess the impact of the counter-movement on the public discourse and the concepts of public life being forwarded in the representations. What skepticism proposes is to suspend politics by arguing for the placement of its own Science, a more ritualized dichotomy and a more persistent form of modernity to stem the ideas and consideration of non-economistic associations in political ecology. Ultimately, we are forced to ask—"what are the associations in the world we are making and how do these contribute to the more personal and public lives that we lead?" In the case of skepticism, we are told to limit our associations to radical exclusions and to limit public life to commodification and possession. This is in opposition to Latour's "good common world" and the ecological demos forwarded in this book.

In conclusion, as a work of political ecology, this book positions and analyzes the structures of political economy and power and representation forwarded by

the environmental skepticism counter-movement. In order to begin discussing the details of political economic structure, it is useful to consider an idea proposed by William Hipwell noted in the Introduction—"Industria." Discussion will then move to the world capitalist-system and Industria in terms of hegemony in world politics.

Industria

The world capitalist-system refers back to the specific world-economic system defined by Wallerstein above. It is a single economic system with a division of labor. Importantly, this kind of world politics is not bounded by nation-state borders:

> A defining feature of a world-economy is that it is not bounded by a unitary political structure. Rather there are many political units inside the world-economy, loosely tied together in our modern world-system in an interstate system (Wallerstein, 2004: 23).

Thus, instead of competition between nation-states, world systems theory sees the interstate system as much less fragmented then realist models of world politics, where the system is a system of individuated states, because the world systems theory sees major institutions holding the same economistic interest in the accumulation of capital. Wallerstein describes the world capitalist-system as a "collection of many institutions, the combination of which accounts for its processes, and all of which are intertwined with each other." The world economic-system is capitalist…

> …only when the system gives priority to the *endless* accumulation of capital. Using such a definition, only the modern world-system has been a capitalist-system. Endless accumulation is a quite simple concept: it means that people and firms are accumulating capital in order to accumulate still more capital, a process that is continuous and endless (Wallerstein, 2004: 24).

What makes the Industria Hypothesis useful for thinking about the counter-movement?

Inasmuch as power is hidden, it is hard to be specific about who the actors are in this world capitalist system. But to avoid discussing these actors would allow hidden power to remain so. There are visible structures and systems of power in the world capitalist system. They become visible through trends in history and conspicuous hierarchies. To discuss these actors we need a concept that is be both

specific in identifying how actors and how structures are ordered and that explains the political-economic relations that are so important to ecology.

Historically, political ecology was not exclusively or as thoroughly determined by capitalism as it is in the current era. Capitalism currently is *the* dominant economic system for rules of international trade, production, consumption, and economic institutions (Bryant, 1998; Chase-Dunn, 1998; Chase-Dunn and Hall, 1997; Wallerstein, 1974–1980; Wallerstein, 1989). While ecological exploitation by a capitalist world-system is a theme in this book, this does not mean that capitalism is not the only exploitive political-economic system. The socialist system of the Soviet Union initiated ecological disasters of epic proportions: the USSR used nuclear weapons for moving earth, abandoned live reactors in nuclear subs in the ocean, engaged massive transformations of Soviet land through the Great Stalin Plan for the Transformation of Nature, attempted to bring the vast steppes under cultivation (under Nikita Khrushchev in the Virgin Land Program), all but totally destroyed the Aral Sea and brought on a cascade of unspeakable environmental devastation (Ostergren and Jacques, 2002).

However, despite the difference in ideological foundations, socialism and capitalism carry much of the same "economistic" political ecology and both have a heavy metabolism through brute force industrialism (Josephson, 2002). Economism refers to a value system that placing economic values above all else, and democracy scholar Robert Paehlke has written that globally, ''Economic considerations overwhelm all else. What might be called 'economism' is triumphant'' (Paehlke, 2004: viii). Others, like Beck, indicate agreement in the ascendant power of neo-liberal globalism; and, while it appears radical in the United States to say so now, there are just too many scholars who see a coherent and dominant world-capitalism operating as a linked system with a world-division of labor to dismiss the theory as fringe. That said, there are many mainstream political scientists who see the traditional inter-state system as having the most explanatory power—but even in this system the structure is levied to capture material wealth and power, embodied in ecological systems before they are transformed into guns and butter. Even if one rejects world systems theory, it is much harder to reject the idea that the dominant economic paradigms strive toward accumulation at meta-scales across countries in conjunction with firms; and, even if skepticism is not defending a world capitalist system it is defending a capitalist system that is global.

In both industrial socialism and industrial capitalism, the control of nature and the reduction of diversity in landscape and in people (say the loss of languages noted below) is an overt project run by people at the top (elites) of hierarchical organizations that require uniformity and conformity like political parties, state bureaucracies, industrial corporations, militaries, the aristocracy, and status-based institutions (e.g., universities, churches). When we say "elite" this is not a reference to an empty conspiracy theory, but an acknowledgement of transnational minority-led political hierarchy.

Thus, we are need of a term that is simple but descriptive of this coherent political economic system across ideologies which is specific of actors, and

theoretically apt for identifying systems and structures of real power in the world. Bill Hipwell has provided us with an elegant idea and hypothesis—a proposition (see Terms)—that helps us imagine the extension of control in the world that critical theorists have been trying to describe for so long in his idea of "Industria." He writes that "Industria is equally inherent to communism, capitalism, fascism, socialism, etc. Though it is now almost universally capitalist, Industria has also manifested in socialist states, as an anthropocentric, rationalising, colonising and ecologically destructive network of capture and control" (Hipwell, 2004: 370).

Industria complements the idea of world systems as a predatory and expansive system of knowledge and power which obscures the "myriad interconnections between human and non-human beings" (ibid). Hipwell identifies the specific political minorities running Industria:

> In concrete terms, Industria is the network of power which has grown from the state system and which now includes state governments (especially those of G8 members), international financial institutions [e.g., the World Bank and the International Monetary Fund (IMF)], military alliances [e.g., North Atlantic Treaty Organization (NATO)], regional trading blocs [e.g., Association of Southeast Asian Nations (ASEAN)], trade organisations [e.g., the World Trade Organization (WTO)], global corporations and other economic elites. This is not to imply that there is a conspiracy afoot; Industria is more likely the unintentional product of interactions based upon self-interest, though its emergence has been hastened by instances of deliberate cooperation among (or coercion by) elites (Hipwell, 2004: 368).

Industria is identifiable through several characteristics. The first is that it is an industrial, homogenizing force, "evident in monoculture farming and (de)forestry, the decreasing distinguishability and ceaseless expansion of 'world cities', the disappearance of diverse human languages and cultures and the mass extinction of species currently underway" (Hipwell, 2004: 368). Likewise, remember Beck's idea of globalism is also homogenizing: "the view that the world market eliminates or supplants political action—that is, the ideology of rule by the world market, the ideology of neoliberalism" (Beck, 2000: 9).

Industria is also "a network not a container" (ibid) in that it is not like our imagining of the State with its borders. Rather it is a web of nodes intersecting and linked through transportation, communicative, and industrial infrastructure and often urban elite relationships. Like Beck's (1999) idea of a world risk society, there are no "empty" places left in the world, and world politics and world political ecology fights a struggle between the territorial/bounded and the non-territorial. Figure 2.1 is a conceptual map of Industria. Hipwell warns (personal communication) that the map is too clean—the lines and boundaries should be fuzzier; and, he warns that the sea and forest should be drawn as "interpenetrating intensities" in one biophysical world (i.e., the schema is not meant to present a bicameral world, but a network of power that is objectifying the forest and the

sea as examples). Nonetheless, the idea here is clearly communicated and an extremely compelling way to imagine globalization, globalism, and Industria as they are physically manifested around us. Industria is so hegemonic that the representations of Figure 2.1 should be immediately recognizable. Ironically, even though the idea is clear, our own (Northern) consumption of ecologies in the South are mystified by both physical and mental obscurities, buffers, insulators and spatial distance. This schema makes our operating relationships in ecology much more clear, and while we must dispose of the modernist idea of nature, we must become all the more intimate with the sea, forest, soil, air, animals, plants, and the rest of ecology in order to see that elite economic and political relations are disposing of these associations without any substantial consultation with affected actors, human or non-human. This might be the penultimate consequence of an impoverished public life.

There is a physical political economic structure that has a particular metabolism, driven by cities in the figurative North (C_N in Figure 2.1) that feed off of the other marginalized spaces and entities. Notably, Industria is a collection of nodes, and not unified state blocks, making the network much more complicated and less unified then some world system approaches. What we may have otherwise thought of as a unified United States—clearly the North—has non-Northern nodes; what we thought was the North isn't all North, and is not part of any ruling minority.

There are physical apparatuses and social relations that explain how modernity has settled into and grounded itself into our lives—though the powerful nodes in Industria are not grounded in/responsible to the ecological changes that will affect the figurative South and non-humans. These powerful nodes are "distanced" from other ecologies, insulated from their damage through the commodity chains produced through multinational corporations and their affiliates along the steps of mechanized industrial extraction, industrial production, and finally consumption at the primary Industrian organs—affluent cities, or affluent elite in Southern cities. Deplete a fishery? Move to the next one, and consumers will buy that instead. Deplete a forest and globalization will network with "substitutes" in each chain, and each substitute, Industria and its agents expand even further out. However, in each case, the local ecology will have no effective substitute for the exhaustion of life-supporting commons (Johnston et al., 2006), and these Others are left to misery and deprivation.

Though, unlike Beck, Hipwell sees class and divisions of labor as much more influential and still critical elements of contemporary world order, a combination of these perspectives is in order. One of the important elements of Beck's risk society is that industrial modernity creates its own contradictions where rationality and the attempt to exert rational instrumental control over people and the earth then creates *uncontrollable*, irreversible, co-mingled complex ecological and social consequences. Thus, rationality violates its own principles and becomes irrational where industrial modernity initiates a "spiral of destruction" where crises, accidents, and unintended consequences come together from territorial

Figure 2.1 Hipwell, W. T. (2004) A Deleuzian Critique of Resource-Use Management Politics in Industria. The Canadian Geographer/ Le Géographe Canadien, 48, 356–377

Source: used with permission from Blackwell Publishers.

control over nature to create uncontrollable fused-together transnational catastrophe (Beck, 1999: 36). Threats have globality and they are shared around the world; but even more important is that to the extent industrial risks undermine Industria itself, Industria becomes its own contradiction and undermines its own possibilities. However, this is not a *fait-accompli* because even Beck recognizes that we appear to be in a transition phase (that is beyond our control) between industrial modernity and the second modernity—the risk society—and we have "wealth-driven ecological destruction" and "poverty-driven" ecological destruction. The difference between the two is that wealth-driven destruction is externalized to the poor while the poor just poison themselves (Beck, 1999: 34–35).

Of course, so long as there is poverty that exists within a determined structure, we cannot rightly lose sight of class in a way that contextualizes "poverty-driven" destruction as something that is co-created with internal and external political determinants. The poor are, quite often, forced to be poor and therefore forced to dwell in crisis. The North goes to work, to school, to the ballgame or watch television during these enduring crises. Thus, in using the idea of Industria, some of Beck's observations apply, where Industria exerts a predatory and expansive control over the world, it also generates its own contradictions and the fodder for its own destruction, embodied in the potential for collapse of inter-linked civilizations within the nodes of Industria. Beck's most elegant point is that modernity and industrial society operate on logics of control and hyper-economic rationality, but which—in their success of this project—produce *the absence of control, irrationality, and comingling transnational risks* that follow more the logic of non-linearity and complexity.

However, prior to the total dissolution of Industria either into a second modernity, or some other potential, it is very likely that first modernity will and has been resisting change as it feels its own foundations unraveling. Class antagonisms are intensified, not relaxed, in the intensification of externalizing there is more destruction. The skeptical counter-movement is an example of this dynamic as it is an obvious class-based interest that attempts to subvert and displace the politics that challenge Industria as these risks unfurl uncontrollably before us.

Further, Hipwell describes Industria as "the opposite of wilderness" (2004) in that wildness and creatures like bears and other predators that cannot be managed by humans easily, are the farthest spaces from the strings of Industria. While some writers have poignantly written how the idea of wilderness reinforces the radical alienation of people from nature and therefore reinforces its opposite, this criticism appears incomplete. Inasmuch as wilderness is a social construction, there is something to *wildness* that refers back to a "will" (part of the root of the word) (see Nash, 2001) of the non-human and a freedom from the pure domination of the industrial. Thus, wildness is a reservoir of resistance, and *that* is why Thoreau saw wildness as a salvation of the world. Such wildness then is also fitting with civil disobedience and other forms of resistance. Indeed, we can never have authentic associations with the non-human if there is nothing but human will.

However, the most important element of Industria that Hipwell notes is that it is expansionary. Like empire, Industria consumes and expands outward in order to continue to consume. Industria, therefore, operates on the logic of growth for growth's sake as growth feeds the power of those making the decisions to grow, expand, and consume. Finally, Hipwell describes Industria as a "physical and cognitive" system of knowledge and power (Hipwell, 2004; Hipwell, 2007). Science and ideology help to manipulate the directions of the nodes and garner the legitimization of elites in Industria.

Industria is a worthwhile proposition that provides fertile ground for specific political study and theoretical examinations of relatively hidden and hegemonic power systems. Industria requires not only the material and energy of ecology (it is grounded), but it also requires continued hegemonic discourse and tactics to keep society accepting the norms that allow Industria to operate and expand. Thus, the coincidence of United States hegemony and United States-led environmental skepticism is no accident.

Some Interesting Material Ties of Skepticism to Industria

Commodity chains are operated by multinational corporations and their affiliates, such as local contracted firms, in cooperation with states. These firms provide material connections to the conceptual ideas of the Industria hypothesis.

As previously noted, there is a consistent globalist rhetoric in the counter-movement and there are material connections between important conservative think tanks, regulators, and powerful business—they form a "revolving door." There are also important ways in which the counter-movement is pursuing the Industrian expansion and building sinews of power in the South. Even further and more compelling, there has been multiple corroborated layers of material connections brought to the fore by investigative journalists from different perspectives surrounding climate denial, conservative state officials, think tanks, and industrial networks (Gelbspan, 2004; Mooney, 2005; Mooney, 2005a; Mooney, 2005b; Mooney, 2007; Revkin, 2005). The above all appear adequate to provide a fairly strong material connection to key parts of the Industria system and the counter-movement. Another very interesting example that illustrates the material ties to Industria and the counter-movement is the Free Enterprise Action Fund, created and managed by key skeptics.

> By leveraging its shareholder status, the Fund seeks to counter-balance social activist pressure on corporate managements and strive to keep managements focused on lawful maximization of profits and shareholder returns rather than appeasement of social activists. The Fund aims to help enhance the performance of individual companies over the long-term while promoting the American system of free enterprise (Free Enterprise Action Fund, 2005).

One of the leaders of the Fund is Steven Milloy (see also Appendix 1), publisher of www.junkscience.com, a popular skeptical website and a hub for the counter-movement. Milloy is read by many people. He is a columnist for www.foxnews.com and an "adjunct scholar" at the Cato Institute. Milloy is one of the principal agents in the counter-movement.

Milloy's activism began, like several other skeptical groups and individuals, when he was working for the tobacco industry organizing denial about the harmful effects of smoking (especially passive smoking) (for an excellent history of this see Buell, 2003). In 1993, a Phillip Morris public relations firm, APCO Associates, created The Advancement for Sound Science Coalition (TASSC).

> Philip Morris, APCO said, needed to create the impression of a "grassroots" movement—one that had been formed spontaneously by concerned citizens to fight "overregulation." It should portray the danger of tobacco smoke as just one "unfounded fear" among others, such as concerns about pesticides and cellphones. APCO proposed to set up "a national coalition intended to educate the media, public officials and the public about the dangers of 'junk science.' Coalition will address credibility of government's scientific studies, risk-assessment techniques and misuse of tax dollars ... Upon formation of the Coalition, key leaders will begin media outreach, e.g. editorial board tours, opinion articles, and brief elected officials in selected states" (Monbiot, 2006, online).

Thus, the current skeptical counter-movement was rooted in the development of anti-regulation efforts directly by the tobacco industry looking to avoid the implications of their own products. Even in the beginning, the counter-movement is looking to discipline challengers, whether they are scientists, bureaucrats, or activists from asking any further questions, and characterizing just about any proposition that problematizes industry as "junk science." This is apparently the birthing ground for the term.

Milloy eventually was Executive Director for TASSC, whose goal was to cast doubt not only on the implications of passive smoking, but on a host of industries implicated in Industria. For example, in addition to TASSC, Milloy was registered as a lobbyist for EOP Group where he is listed by the United States Senate as having clients like the American Petroleum Institute (API), Dow Chemical, International Food Additives Council, and energy companies like Edison Electric regarding environmental issues from underground tanks, environmental justice (Dow), community right to know laws, and others, though it is unclear if he actually lobbied for these groups. The point is not that there is connection of skepticism, but a connection to skepticism and the network of Industria's elite described above.

In an interview with *Frontpage Magazine* published by conservative David Horowitz's Center for Popular Culture, Milloy says that the Free Enterprise Action Fund is a "a libertarian/conservative activist fund" (Steigerwald, 2008) that works

to provide "pro-free enterprise ideological returns" (Free Enterprise Action Fund, 2005). Its tactic is to force *companies* into economism even when they begin to consider ecology, consumer advocates, etc … that dampen or threaten to dampen profits. By investing in public corporations, they become shareholders who can sue the companies if they do not serve the shareholder interest—which has largely been interpreted in the courts and elsewhere as profit-seeking to return a profit to the shareholders and increase the value of their holdings. If the corporations allow for ecological considerations, the Free Enterprise Action Fund works to discipline them away from such temptations, like environmental and social responsibility. Milloy points out the material connection of the counter-movement to globalism, a capitalist system (remember Wallerstein's "perpetual profit" seeking definition), and Industria himself through the funds tactics:

> I can't make Al Gore tell the truth. I can't make Barbara Boxer tell the truth. I can't make (NASA climatologist) James Hansen tell the truth. But you know what? I can make a CEO tell the truth. I can maybe even sue a CEO. I can maybe get the Securities and Exchange Commission interested in some of the statements they've made about global warming that aren't true. That's why we have the Free Enterprise Action Fund, and that's kind of the route that we are pursuing because we think the CEOs are vulnerable on this (Steigerwald, 2008, online).

Consequently, as a capitalist world system feels the pressure of a system under scrutiny to change and its own principal actors, multinational corporations, begin to partially reform or acquiesce, the rearguard is there to discipline even its own elite using institutionalized rules of Industria. It is therefore reasonable to offer Industria as both the macro setting and a partial explanation for the counter-movement. If this is true then we can situate the counter-movement as a conservative project lodged in Industria, working to defend against reforms or change in the system. Hegemony is part of the context for public life in Industria.

Hegemony

> [Hegemony] appears as an expression of broadly based *consent*, manifested in the acceptance of ideas and supported by material resources and institutions, which is initially established by social forces occupying a leading role within a state, but is then projected outwards on a world scale (Bieler and Morton, 2004: 87 emphasis added).

Hegemony requires widespread consent; and, widespread consent lives in the dynamics of public life. Hegemony, therefore requires a subdued public discourse to constrain the range of possibilities for knowledge, life-ways, and associations we are legitimately allowed to consider.

If political science is a field founded on the study of power in society, then studies in *world* politics focus on power as it extends through and between societies. If it is true to the spirit of investigating power, political science can be a counter-hegemonic force, and a serious threat to the structures of power that can only exist unmolested if left in the dark, suppressed and unexplored. Political science is at its best when it peers into the backrooms of concealed power.

Hegemony is at first an ideological power that enforces other more material powers, such as martial or economic force. It is the force of consent, which broadly speaking, may be consent for modernity or perhaps globalism, suppressing multiplicity and dissent, difference and, above all, its own processes of subjugation. The world capitalist-system is structured to discipline those who have "other motivations" than the accumulation of capital:

> If we say that a system 'gives priority' to such endless accumulation, it means that there exist structural mechanisms by which those who act with other motivations are penalized in some way, and are eventually eliminated from the social scene, whereas those who act with the appropriate motivations are rewarded and, if successful, enriched (Wallerstein, 2004: 24).

In proposing that environmental skepticism is an element of hegemonic Industria, we must first understand and unpack the term "hegemony" and the quote from Bieler and Morton at the beginning gives us a good start. Hegemony, as introduced and explained by Antonio Gramsci (1972), is a dominant force, but one that is pernicious and silent, undetected and consented to in obedience. Hegemony works along ideological lines—but here Gramsci is writing as a Marxist, and ideology here is not just the socialist-liberal-anarchist commitments, but ideology in terms of an ideational, cognitive force. This force develops a "common" sense in that the design of social order is commonly held. This order is not regularly questioned and subjects assume and behave in accordance with it, but these structures of social paradigms are not neutral. Gramsci wrote in the *Prison Notebooks*, that this hegemony was class-based and designed for the purpose of serving elite capitalist material and cultural apparatuses.

In a roundtable discussion printed in the *Mershon International Studies Review*, several scholars who take the idea of hegemony seriously expand upon the concept to help us further understand what hegemony means for world politics. Christopher Chase-Dunn writes:

> With the invention of a new form of accumulation called capitalism, however, we begin to have a hegemonic core power, or hegemon. What makes the hegemon different is that the hegemon never conquers the whole core; it is just *economically* and militarily bigger and more powerful than the other core states (Chase-Dunn et al., 1994: 362).

People living with "other motivations," as Wallerstein writes above, still exist, but they are penalized and outsized, and they are often silenced. World systems theory sees the evolution of larger political systems that rise and fall, but which exist within an interconnected system of core, semi-periphery, and periphery powers and relationships. Chase-Dunn sees this cycle and system working over the last 8,000 years of human history, where smaller political systems (chiefdoms) have been replaced with regional powers, states, and then world empires. Hegemony develops when a core power develops as a central power within capitalism, but does not conquer—instead it *orders* the core and the peripheries, often through ideological domination.

Likewise, Peter Taylor describes hegemony as the power of a hegemon to convince others to emulate it. Since hegemony lies on the dictate that "What is good for the hegemon is good for the world," Taylor argues that a hegemonic state represents "nothing less than the future world, and people come from other countries to see their future in the land of the hegemon" (Taylor in Chase-Dunn et al., 1994: 364). Since the future is defined as the hegemon's present, the hegemon creates incredible cultural power to "define modernity and thus restructure the world in its own image" (ibid).

Giovanni Arrighi adds that hegemony occurs to the extent that a hegemon can lead the state system to rules that reinforce the hegemon's power. Like several of the commentators already noted, Arrighi places this power in the context of capitalism:

> For those of us who believe that the modern world system is also a capitalist world system, however, means of coercion and means of consent are not the only sinews of world power. In a grey area that lies between them, Gramsci puts "fraud and corruption," which are used by hegemonic groups when coercion is too dangerous and consent is too ineffectual (Arrighi in Chase-Dunn et al., 1994: 365).

Robert Cox helps us understand the importance of hegemony as a concept even further as a "complex of international social relationships that connect the social classes of the different countries" (Cox, 1983: 137). Thus, hegemony is about the ordering of political authority between social classes around the world, as in the network of Industria, connecting elite interests.

Thus, from the discussion on hegemony so far, we can see that hegemony is a power that determines cultural values and rules that empower the hegemon, a core power, *but* when consent to hegemony is not enough the core power will use "fraud and corruption," to keep its place in the world system. Notice the incredible concordance between the commentators that the world capitalist system, or some related worldwide capitalist market *defines the limits of political life*.

Observe the following about the skeptical counter-movement:

- It has a hidden ideological order
- Its principal articulation is *only* from core Northern elites, almost all from the United States, some from the United Kingdom and a trivial amount from other core nodes
- It articulates relentlessly in favor of globalism
- It attempts to discipline and suppress ecological thinking, while promoting industrial science and free enterprise.

The counter-movement is a hegemonic force defending Industria though specific types of fraud and corruption to defend core powers as more ecological problems become deepened, inter-linked, transnational, or uncontrollable catastrophes.

The counter-movement is a defense of modernity and its related enterprises of globalism, capital accumulation, and industrial social organization; and, it is working to discipline "other motivations," such as those thinking about ecological contradictions of industrial organization,[1] non-capitalist life-ways, or the history of civilization collapses. It conducts this discipline through the labeling of scientists, regulation or increased liability of the world capitalist-system as propagating "junk science," "myths," or a false and fear-mongering "litany." In addition, as the Free Enterprise Action Fund demonstrates, when key actors fall out of consent or begin reforms of economism and other values than the accumulation of capital are considered, Industria even disciplines its own elite members into compliance with the dominant paradigm. Inasmuch as the counter-movement is working to keep industrial-ecological contradictions hidden, it works hegemonically within the world capitalist-system to define the limits of ecological political life.

Because skepticism is deceptive in the context of interaction, and it works through avenues like the "revolving doors" of CTTs, the state apparatus, and industry, it is corrupt, and Gramsci's and Arrighi's comments are fitting. Such a reading of the counter-movement helps us understand it as a rearguard defense marshaled from core nodes and primary Industrian organs, such as United States elites. In addition, it appears that, like Industria itself, the counter-movement is expanding this program in other core powers (the United Kingdom) and periphery areas like Uganda just as consent for modernism drains away through the deepening and more pressing attention to ecological crises.

Hegemony is powerful precisely because it needs so little enforcement. Gramsci noted that we are taught in schools, churches and other non-state institutions the will of the state-apparatus and the elites that run it, even if they simply run it by legacy and political inheritance (i.e., individual elites are not actively working on a conspiracy to control the poor).

However, the world has changed since Gramsci was a political prisoner of the Italian fascists in World War II. Since then, globalism has reached unparalleled

1 Industrial-ecological contradictions would be ecological problems caused by industrial society that pose a threat to industrial society.

heights of hegemonic order through economic globalization. Globalism (ideology) and globalization (the expanding apparatuses and rules) are triumphant (Paehlke, 2004). The ecological impacts of modernity have begun to be revealed. It is not just the will of the state apparatus we are subject to now, but more transnational, less grounded and less geographically bounded globalism. The world itself has become a commodity, and the rise of globalism is so thoroughly hegemonic, that such a transition is obscured in remoteness of authority, knowledge and space. Currently, the will of the World Trade Organization and transnational firms like Monsanto, in vulgar capitalism, provide the more influential rules for transnational order. Our public life, along with the earth system, is in tatters.

Hegemony and Earth Others

Hegemony results in the control, order, and disposal of Others, including non-human Others. Take for example the control, ordering, and disposal of chickens, cows, and pigs in the industrial meat system. Journalist Michael Pollan (2006) documented in his book, *The Omnivore's Dilemma*, that when he asked to see the "kill floor" of a slaughterhouse, he was denied. Importantly, journalists are regularly denied witnessing this element of industrial society. That the meat industry will not allow journalists to see the "kill floor" of the industrial factory slaughterhouse is illustrative. If the public were to see it, they just might feel some disquiet—and maybe even reject its affiliate processes, products, and *maybe* life-ways that include eating industrial meat as a regularity, a "normal" thing to do (Pollan, 2006). When the slaughterhouse did become more conspicuous in Upton Sinclair's *The Jungle*, it prompted reforms of the unsanitary conditions found there. Though, the public appeared, at that time, to be much more interested in sanitary conditions than the treatment of either the workers or the non-humans, as reforms on this front were far less profound.

This is only a single, but telling, example of how Industria operates. Pollan, after looking into the facilities and relationships of the industrial meat system, argues that perhaps one central purpose of industrialism is to *hide* its own operating processes. This is something like self-preservation on the part of Industria. Yet, when we are confronted with the *denial* of the system—when we ask to see, as Pollan did and was denied, the ugly details, we can see that the veil is covering the Achilles' heel of consent.

The system of rules in society favor industrialism as found in the meat system. Pollan was allowed to be denied such a critical view, and there was nothing formally he could do in protest. Informally, his resistance to this denial was through his writing and pointed social comment. The larger issue though, is that politics across societies is suppressed by industrial processes like the industrial meat system—which pollutes the land, water, and our bodies with foul organic and synthetic accumulations, not to mention the grim treatment of these herbivores as cannibals (cows are fed beef fat)—but we live in *every day* silence.

As Cynthia Enloe (1996) has indicated, world politics extends beyond the simple strategies of aggressive nation-states, but the systems of power that work their way down into the everyday functions of life for people, and for those instrumentalized non-humans that people affect, like industrialized and slaughtered animals. Enloe explains that power in world politics looks like a ladder and those on the "bottom rungs" are put and kept there through material *and* cognitive hegemony and discipline that operates in our everyday world. Importantly, Enloe describes how the State Department and world political power relations would not be stratified internationally, without the ability to hold women on the political bottom rungs of social power. We can say the very same things about non-humans. Power could not be stratified in the same way as it is now, say between core powers and peripheral zones, without ordering non-human and non-living actors in ecology.

One evident starting point for seeing how ecological relationships are embedded in world power arrangements is through the beginning of the European colonial expansion. Before, for example, Great Britain could expand outward and impress upon a world so dispersed that the "sun never set on the British Empire," it needed a fleet of ships. It built this fleet by literally deforesting parts of England to nubs. If Britain's social system recognized trees as important others, or even the forests as important ecological systems, the ships could not be built in the same way and the Empire would have had to either start another way, or simply find a social order contained on the British Isles. Imagine the way the world would have changed had Britain not been allowed, say through its own cultural restraint, to dispose of its forests as it did? India would have an entirely different modern history, as would every single other former-British colony.

Material power over others is embedded in the ability to exploit material systems, and this ability must first pass through the ethical gates of consent from the respective community. These are not new ideas. They have been recognized by several thinkers. Some of these key argument are made by Carolyn Merchant (1989) in her influential work, *The Death of Nature.* Merchant makes the point that prior to the modern era, European societies saw the world as "organic"—alive. There were cultural restrictions on mining, since doing so would be like burrowing into the Mother. Part of the transition to exploiting non-humans so fully in the pre-capitalist and capitalist systems required an ethical transition to a "mechanistic" view of the non-human world, where nature became a set of inanimate cogs in a machine, including animals, and even non-Anglos, that could be disposed of and managed as much as nature's antipode, civilization, desired. Without this transition, European society could not have hosted capitalism, since capitalism is about accumulation, and accumulation requires exploitation of others more than subsistence. In the organic paradigm, humans still exploited others, but if the universe is "full" and the non-human world matters/is recognized as having its own purpose, then *wanton* exploitation and accumulation are ethically untenable. Material accumulation that is so necessary for capitalism, let alone Industria, would be stopped short, as it is culturally stopped in many indigenous cultures. Consequently, without being able to order, manage, and dispose of non-humans in

a uniform and homogenous-industrial fashion, world political power would have an entirely different history, and therefore would look entirely different today. Perhaps we would not be experiencing the same kinds of global environmental change as we are now, but the point is that the current world order *requires* the orderly disposal of diverse forests, oceans, plants, animals, air, freshwater, and people to continue lurching outward in ecological space. The hegemony over non-humans keeps our disposal silent and unquestioned, and those who do question this process face the disciplinary front of being cast as fringe and radical and often as anti-human.

Further, without constructing the non-human world as disposable and separate from "civilization," Industria would lose its ability to legitimize itself. Ecological feminists, e.g. Vandana Shiva (2005), representatives of the global ecology movement and others (see the explanations of Dobson, 2003; Paterson, 1996) have continued to argue that this disposal of the non-human world is required for the mal-development. By identifying how environmental skeptics de-populate the universe of moral standing to allow for this continued disposal, we can see how hegemonic and roving world powers are propped up on a very thin and oppressive political ecology.

On the other hand, the fact that sustainability discourses continue to strengthen in the face of this world order demonstrates the resilience of ecology as a counter-hegemonic force with emancipatory potential (see Sachs, 2003). These relationships allow for the disposal of the non-human world, and are elemental to hegemony in the world capitalist system. They are essential to the understanding of how the world works at this time. If discourses on sustainability are able to *threaten* to dislodge the wanton dispossession of people and non-humans at the bottom rungs of power, then and the system will defend against change and agitation first through discipline from the top of the ladder. Skepticism provides the organization and iteration of this discipline.

World politics as a discipline is challenged by the increasing clarity that political ecology is more than a secondary concern behind war and international security as "high politics." The "high politics" designation has served as a way to legitimize militarism while marginalizing other concerns as less urgent (Barnett, 2001), and academic IR work appears to have fallen over itself at least since the writing of E.H. Carr (1964) to oblige this goal—though such pedantry has been political science's legacy since Thucydides, Kautilya, and Machiavelli.

Further, the prejudice focusing on nation-states has come under increasing scrutiny, in part, because the supposed high politics of war-making is directly linked to the material ecological goods and services that make war machinery possible—not to mention that such goods, like water, minerals, and oil, serve as substantial loot (de Soysa, 2002; Klare, 2001).

Perhaps more important, the separation of ecology from high politics resembles the radical exclusion of humans from the idea of nature. If humans are excluded from the non-human world, then ecology should not matter to world politics or international relations or to a cosmopolitan public life. The construction of politics

outside of the non-human world permits the use and disposal of a constructed nature, then, *because* it is outside public life. Thus, without political ecology in public life, our understanding of politics and how it operates is substantially diminished, if not empty. As such, political ecology is a constitutive function in world politics.

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Chapter 3
Civic-Ontological Implications of Environmental Skepticism

> From the time the term 'politics' was invented, every type of politics has been defined by its relation to nature, whose every feature, property, and function depends on the polemical will to limit, reform, establish, short-circuit, or enlighten public life (Latour, 2004: 1).

This chapter comments on the greater substance of environmental skepticism. It is (very) tempting to say that environmental skepticism is all about protecting simple profiteering or distributional interests. Certainly, this is part of the story. For example, it is true that Western Fuels and Exxon Mobil—gargantuan corporate interests that are seemingly hurt by the implications of global warming and the prospect of burning hydrocarbons—have been important funders of the Cooler Heads Coalition and other skeptical conservative think tanks (CTTs). Clearly, this is a head or at least a nerve-ending of capital and a tangible example of the interests of a global capitalist-system. But, to leave the analysis there would result in deeply underestimating the power of skepticism and its adherents. If skeptics were simply profit seekers, or "rent seekers" looking to squeeze out the last penny possible from resource use and disposal, then the actors in the counter-movement would be less committed to the ideals and more committed to simply following the fickle course of profit, say in preparing a new energy base, which is increasingly an intersection for sustainability and business interests alike. If skepticism were simply about profit, it would be temporary and would give up and change teams, lining up with the arrangement of profit, less with ideology. For example, we might find that instead of CTTS, the books in Appendix 1 have a stronger correlation with oil companies or industry affiliations. However, if the heart of the skeptical counter-movement is made up of believers, then some will fight until their last breath is forfeit.

This is important because it tells us something of the range of commitments held in the environmental skepticism counter-movement, and because it also tells us something about how ecology touches on a range of emotions and identities in world politics. Indeed, the counter-movement is a rearguard for modern*ism* and global*ism*, as redundant as that may sound. Elsewhere it has been argued that the counter-movement is a vestige of *modernity* (Jacques, 2006b), but here the author would like to correct the terminology used in that article to modern*ism*, where modernity is a force of history in the world capitalist-system and modernism is its

ideology.[1] And, certainly Industria is a modern vestige. Inasmuch as the counter-movement is fighting for corporate profit and defending simple accumulation, it is defending modernity; however, inasmuch as it is a desperate faith (again, it may be useful to counter-pose this to the classical idea of "skeptic"), it is a defender of modernism and Industria as "the good" and as a form of its own brand of virtue. This is mimicked in the publications and ideas of skeptics, as well as the material connections of the counter-movement to Industria (Chapter 2), where for example, Milton Friedman's idea that "The social responsibility of a business is to increase its profits" becomes a "core principle" (see for example: Free Enterprise Action Fund, 2005).

This chapter first traces the dimensions of the skeptical convictions that are represented in the skeptical literature. It then discusses the civic rejection of environmental concern as a legitimate public interest found in the counter-movement. The counter-movement rejects distributive justice claims that come from the wreckage of Industria as a way to protect this world capitalist-system. Importantly, part of this rejection comes from a "deep anthropocentrism" that denies the importance of ecology in human affairs. Finally, the chapter examines the counter-movement's ontological, or essential ways of being, through its desperate defense of a crumbling modernism and C.B. MacPherson's "possessive individualism."

Deep Anthropocentrism

Environmental discourses tend to circle around the relationships of humans and non-humans. Even the wording of "non-human nature" makes this tension in environmental studies painfully conspicuous. This tension has come from the Enlightenment insistence in an array of disjunctures and exclusions. These include, but are not limited to:

1. separating object (the world) from subject (us) in science;
2. separating mind (our higher "True" selves in Cartesian thinking) from the more vulgar body (the lower, less important Earthly form), and;
3. finally the transition of thinking about the Earth-as-organism to the Earth-as-mechanism (Merchant, 1989).

These exclusions imbed hierarchy and reinforce thinking that humanity is distinct from and separate from the rest of non-humanity (Merchant, 1989; Plumwood, 1993; Plumwood, 2002; Latour, 2004). Some have even argued that *the* principal feature of Western Civilization is anthropocentrism (Hay, 2002) which sees humanity at the center of the important universe, excluding the rest

1 Here I am grateful to Joel Kovel of *Capitalism, Nature, Socialism* for his discussion on this point.

as instrumentalized Others. Many environmental thinkers have argued that the persistence of a "human/nature" dichotomy has created environmental problems because people, in thinking mostly of themselves, do not see environmental problems or causes of problems *because* they do not see environmental conditions as foundationally important compared to their own wellbeing. This is part of the reason thinkers like Aldo Leopold argued for humans to see their community as expanded to the land, plants and animals in his "Land Ethic." If we expanded our notions of self/community to include wolves, Leopold argued, we would be more attentive and gentle to wolves, and then perhaps there would be more wolves left because we would not have so callously and fully extirpated them. However, this conceptual nail of human separation from non-human nature driven by the hammer of Enlightenment is hard to remove from the knotty wood of social imagination. Even today, philosophers like Val Plumwood (1993; 2002a) and Ronnie Hawkins (2002) continue to press hard on us to re-consider our ontological place in the world, in part, so that we can *see* the damage being done to the non-human world.

Jane Goodall, primatologist and United Nations "Messenger of Peace" notes how this tension and her own re-positioning came to bear on her place in history:

> When I first went to Africa to study chimpanzees, I had to learn to look at the world—as best as I could- through their eyes. I came to realize that we humans are not separated from the rest of the animal kingdom, that there is not an unbridgeable chasm between us and them. The chimpanzees reach out across this perceived chasm and demand that we accept them into our world or that we join them in theirs. They have taught us that we are not the only beings on the planet with personalities, minds, and above all, emotions (Goodall, 2003: 1).

She adds:

> Once we admit that we are indeed a part of the animal kingdom, we will have a new respect for the other amazing animals with whom we share the planet. And we become increasingly shocked when we look around the planet and see what we have done to the environment. We see that our actions have destroyed the homes and the lives of countless millions of animals. And we are ashamed and shocked when we think of the way that we treat so many animals in our daily lives (ibid).

This is also part of why Arne Naess (1983) developed what he called "Deep Ecology," a movement that recognized an eco-centric universe, where humanity was but one of many organisms with consistent value and importance.

There have been important disputes as to the impacts of Deep Ecology, such as through environmental problems in the Global South, where Northern environmentalists think that something needs to be preserved and then they do something like support the eviction of indigenous peoples from that place to "save

it." For example, Ramachandra Guha's (1989) criticism of Deep Ecology was that it was individualistic, and neglects the basic everyday critical ecological needs of the peasantry and the poor of the Global South when it equates the value of human life to any other animal or insect. However, this criticism, which this chapter accepts as valid, does not dislodge the importance and thinking that is supported in many societies in the Global South, such as in indigenous communities, that see humanity as part of a living world, not the lord over it.

Further, there have been important disputes about the function of an "enlightened" anthropocentrism, that argues for protective environmental actions and policy based on their importance to humanity. For example, we may preserve a marsh from development not because we have a deep affinity for the birds, amphibians, and mammals that live there, but because we dislike our communities flooding and marshes mitigate flooding. Here the reason for protection is human-centered, anthropocentric, but it values the pragmatic and indirect goods and services provided by ecosystems around us.

Deep anthropocentrism, on the other hand, is a different set of values altogether. Here this chapter takes the "deep" label thinking about the opposite end of the spectrum of Naess' ideas. Deep Anthropocentrism rejects the value of pragmatic and indirect benefits of protective environmental social action. A deep anthropocentric view would develop the marsh and deal with the consequences of flooding through other options, likely technological engineering, at a later point. But the deep anthropocentric will see the value of revenue from the development of the marsh to humans as far more important than the loss of the creatures that lived there and even the threats to humans from marsh loss. The clearest explanation of this position comes from Peter Huber in, *Hard Green: A Conservative Manifesto*, who does not obfuscate his home position as some other skeptics and the movement in general have. And, Huber's manifesto does several things that are important. He identifies what the skeptical positions are and where they come from. He identifies this as a conservative movement, also consistent with research and analysis noted in Chapter 1. As a member of this counter-movement, imbedded also in a CTT called the Manhattan Institute, he is familiar with the counter-movement purpose and goals. One of these positions of the "hard green," his term for the counter-movement view, is that the counter-movement wishes to divorce itself from the non-human world as much as possible, and the more the better. There is literally no ethical obligation that Huber sees to the non-human world. He does not see even indirect utilitarian value in conservation, and even less direct value to humans in conservation and preservation of non-human nature. Huber forcefully writes:

> After the flood, God directs Noah to 'subdue' creation, to take 'domination over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.' Today we can think of nature as benign only because we have obeyed that one command so very faithfully. We have no more practical reason to conserve nature than we have to conserve cows. We can subdue at will and replenish at will too, with transgenic mice and cloned sheep.

Further,

> At this point in history, the second vision is a lot more likely than the first. *We can go it alone.* We need energy, nothing more, and we know how to get it from many more places than plants do. We don't need the forest for medicine; as often as not, we need medicine to protect us from what emerges by blind chance from the forest. We don't need other forms of life to maintain a breathable balance of gas in the atmosphere or a temperate climate. We don't need redwoods and whales at all, not for the ordinary life at least, no more than we need Plato, Beethoven or the stars in the firmament of heaven. Cut down the last redwood for chopsticks, harpoon the last blue whale for sushi, and the additional mouths fed will nourish additional human brains, which will soon invent ways to replace blubber with olestra and pine with plastic. Humanity can survive just fine in a planet-covering crypt of concrete and computers (1999: 80–81).

Huber provides so many insights in this one quote. His book elaborates on several of these insights. One is that at least part of the counter-movement originates in an evangelical Christian fundamentalism. This, in addition to the opportunity structure for conservative think tanks, explains why the counter-movement is mostly in the United States. Fundamentalism is weaker in Europe and other countries. Second, the quote illustrates and harbors the technological and economic optimism as well as the neoliberal views well known in the "cornucopian" literature of Julian Simon and Herman Kahn in the 1980s (Simon, 1981; Simon, 1995; Simon, 1999; Simon and Kahn, 1984). This relates to the counter-movement's defense of Enlightenment modernity, and is a modernism at its heart.

Finally, it is *deeply* anthropocentric. It is shocking to hear the sharp disregard for the flora and fauna of the world, but it is refreshing too because it is an honest account of how the counter-movement thinks and what its core values are. Antipathy to the non-human world is both representative of and hidden in the counter-movement. Anti-environmentalism is hidden because the general publics of the United States rejected it even during a very popular president. When Ronald Reagan became president, his anti-environmentalism prompted political backlash, and a surge in environmental group membership and funding.

Other writers in the counter-movement display this position as well. Wallace Kaufman writes:

> The debate in our society is not really between those who care about nature and those who do not. Everyone has a preferred environment. Less than 1 percent of the world really wants to live in a wilderness, or even in a cabin at Walden Pond. Put aside all the elegant essays and wilderness treks and it is clear that we all prefer nature to be subservient to our own interests. The debate is over how to manage nature for human purpose. The more serious part of the debate is which

> management philosophy will ensure that nature remains subservient to us, now that we have achieved real dominion (Kaufman, 1994: 175).

Kaufman's point about "wilderness" is that humans literally dominate nature and everything in it, and that the determination of what to do with nature (presumably the non-human world) is squarely about what humans want. Political questions lay underneath in this passage—who determines human purpose? If nature is chaotic, as he argues earlier in the book, how can humans make it subservient when the dynamics and changes in nature are and cannot be understood with totality? *What does wilderness mean in non-industrialized areas?* If wilderness is that one place that Industria has not reached yet, is Kaufman saying that Industria (or industrial development reach and power) should envelope everything and everywhere? Kaufman answers: "Nature has no will but ours" (Kaufman, 1994: 174). *There is no loss* of something important when nature changes. Therefore, there is no problem *unless it is demonstrably a problem for "humanity."* Since humanity's purpose is hard to know with specificity, the conclusion is anything goes.

Kaufman sympathizes with a quote from David Ehrenfield taken out of context of Ehrenfield's work:

> We do not know how many species [of plants] are needed to keep the planet green, but it seems unlikely to be anywhere near the more than quarter of a million we have now (Ehrenfield quoted in Kaufman, 1994: 175).

Kaufman fails to note that Ehrenfield "has asserted that simple presence on earth confers moral standing: living beings have value because they exist and have existed for a long time" (Balint, 2003: 21). Kaufman elaborates that it is our convenience and comfort that should determine what we do in a human dominated world. He writes in response to Lynn White Jr.'s (1967) article that argues Christendom's defeat of Paganism was a pivotal environmental turning point toward destructive habits, given the mandate for Christendom's dominion of the Earth.

> White's argument that Christianity's values are more destructive than any other culture's does not stand even a quick reality check [I suppose the *Science* editors were sloppy that day?]. But he also lays down a truth that can help us understand where we are going. 'What people do about their ecology,' he said, 'depends on what they think about themselves in relation to things around them.' Therein lies the key to our future. It is clear that if we condemn ourselves as White and other environmentalists do, we will abandon our most precious gifts. We can only preserve nature as we prefer it, and achieve the kind of peace and comfort [Buckminster] Fuller describes, if we embrace our powers.

> We do have almost 'limitless rule of creation.' We should attempt to change creation for our own convenience ... We have entered an era when nature no longer tests us. From now until the end of civilization—our species—we will test nature. Dominion is ours. As we test nature, we also test ourselves and the very limits of human wisdom … We may regret the loss of Glen Canyon or the forests of Manhattan Island or the clouds of passenger pigeons that once darkened Midwestern skies. But we don't regret the passing of yellow fever, malaria, or bubonic plague. Few people really want a simpler life … We all want more, for ourselves and for the rest of the world, because that is the way to peace. And we know it is possible. Now that we know the freedom of the human mind is more important than the quantities of any natural resource, no insurmountable obstacle exists to continued improvement in the quality of our lives and the way in which we manage the natural world (Kaufman, 1994: 180–181).

All of this profoundly indicates that the chestnuts of prudence, charity, wisdom, and virtue only extend to the human world, and this world can do whatever it wants, and *should* do whatever "humanity" wants with nature so long as it is kept in subservience and in the service of people. And, as Hipwell has indicated, keeping order means making order (to "striate") and homogenize. The deep anthropocentric ethic believes the homogenization and subservience of non-human nature is an aspect of human destiny and progress. The bottom line here is that our ethical systems determine what we do, *and what we see* and what the deep anthropocentric sees is a world made for humans, and so long as that world serves humans there are no or few ecological problems.

Balint (2003) has taken our analysis of how ethics shape the skeptical view of what is real to the first juncture where environmental ethics determines what environmental problems we let ourselves see. He looks at the disputes that arose after Bjorn Lomborg's (2001) *The Skeptical Environmentalist* was printed by Cambridge University Press. Lomborg's thesis was that the state of the world was generally improving. Throughout the voluminous work with thousands of citations,[2] Lomborg argues that environmental circumstances are improving and environmental problems are much more trivial than we generally think and that environmental circumstances are not getting worse. But, like the father of the counter-movement, Julian Simon, Lomborg points out that people continue to think environmental problems are increasing. He is "skeptical" of these environmental problems, but not of the nature of human progress or that modernity is a jewel in the human crown. Balint points out that Lomborg generally evidences a rejection of Leopold's principles in the land ethic, while his scientific critics evidence an acceptance of the land ethic and *therefore* these groups simply see the world differently, including the makeup of its problems, conditions, and policy prescriptions. Balint notes that Lomborg is anthropocentric, whereas his

2 This point is endlessly highlighted by supporters of Lomborg, as if any citations will do or that all citations are equal.

critics are not, and thus Lomborg sees environmental policy as having, "at best, a complimentary role, and if done poorly [it] can have a significant detrimental effect" (Balint, 2003: 21). Few people would be for "poorly" crafted environmental policy, but what adjudicates what is "poor" environmental policy? Balint rightly points out that this position is determined by our moral standpoint and what we see as important.

Let's drive this analysis further. Not all anthropocentrics agree that human domination and disposal of non-humans is morally just or prudent. Some anthropocentric thinkers or "enlightened anthropocentrics," like Bookchin, argue for environmental protections because they will serve people. *Deep anthropocentrics* do not see this as a strong case. Clearly, there are degrees to the depth of anthropocentrism, where the deepest anthropocentrics see absolutely no loss in changes and degradation of non-human nature, and therefore human progress and development is blind to these changes. Degradation is something of a reference to something that had value, but was losing this value.

In this case, the economy comes with the annihilation of non-humans, but deep anthropocentrics either cannot or will not see this annihilation as real, because we are asked "how can something be degrading if it has no value to begin with?" If humans are living longer and there is more wealth in the world whatever its distribution, then humans are progressing. Some environmental skeptics such as Thomas DeGregori (2002), see that the word "natural" is in-fact illegitimate, as humans change and modify and order the world around them entirely making it all about humans and their will. Bruno Latour sees this term as illegitimate, and for the same exact reasons—but the essential difference is that DeGregori believes that is the right life and politics, and Latour sees this politics as fundamentally corrupted. To some skeptics, so long as human will and determination is pursued,[3] then progress is being made and the state of the world is improving. Changes in non-human nature are not problems, and the warnings of environmental decline make no sense.

Therefore, the deep anthropocentric position is a critical element to understand how environmental skeptics can see a world of progress and not a world of increasing environmental decline. This is an important understanding, because, not only is the counter-movement an ideological one, ordered by United States conservative elites, but for some it appears as a real belief. It would be an underestimation to simply see skeptics as misrepresenting facts. Many environmental skeptics appear to really believe what they are writing. However, incorporated into their writing is the dubious assumption that there *cannot be* any threats to sustainability in environmental change because non-human nature does not count morally or pragmatically to modern civilization. Rather, the threat for deep anthropocentrics is environmental protection that they see as interrupting the transference of peoples whom they construct as "backward" into modernity.

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3 Note that this assumes a homogenous human purpose, and thus globalism subsumes difference not just in approach to social action but ontology.

Even though deep anthropocentrism appears to be authentically held and believed to varying degrees by some skeptics, deep anthropocentrism can be rejected because it capriciously and arbitrarily simplifies our universe of associations into an impoverished and lonely narrow band of people. If a meaningful life has anything to do with the richness of our associations that we make with the world around us, then, deep anthropocentrism lays the groundwork for a life less lived.

The Civic Project of the Counter-movement

Deep anthropocentrism is not only important for understanding why skeptics see what they see, but also what they think are legitimate public interests.[4] Deep anthropocentrism partially explains why skeptics do not see environmental protections, which they view as mostly limits to modernity and globalism, as real or strong public interests. Protecting something that is not important (non-human nature) that limits humans (most important) is not only a waste of time and money and human effort, but it is bad or the reverse of the philosophical and civic "good," because they say such limits cost human lives, particularly in the Global South. This is the counter-movement's most serious claim because it bridges broad cultural and value cleavages that makes the position much more available to larger parallel value conflicts about justice (see the framework of Schattschneider, 1960). This appeal to broad values probably makes the elite movement much more attractive to non-elites everywhere, and therefore these appeals require detailed attention that will be given in this section.

Lomborg articulates a deep anthropocentrism and shows what it means to civic obligations. First he notes his deep anthropocentrism in epistemological terms, where deep anthropocentric assumptions guide what we can and should see in the state of the world:

> Counting lives lost from different problems also emphasizes a central assumption in my argument: that the needs and desires of humankind represent the crux of our assessment of the state of the world. This does not mean that the plants and animals do not also have rights but that the focus will always be on the human evaluation (Lomborg, 2001: 11).

This means that measures for changes in the state of the world for Lomborg are *determined* by what it means to how many human lives are directly lost. So, if there is a dam project and no lives are lost, but many lives sustained in a region by water storage and flood management, then this is an improvement in the state of the world. The fact that we do not see the loss of the river in this assessment is neither accidental nor a problem for the counter-movement. We would not see the loss of species like river dolphin or the people, practices and values that co-

4 Here this chapter will expand ideas presented in Jacques 2006b.

evolved between littoral Yangtze peoples and the river dolphins, both subject to the "progress" of dams. We are blind to the loss of salmon from, say, the Columbia River or the change for Northwest Pacific tribes who position salmon as a cultural-ontological cornerstone, among so many other things, such as changes in agriculture, urban-suburban population growth, and a loss of the aesthetic river. The ecological effect of this view is catastrophic, but the point of the skeptics is that, there is no catastrophe—people are living longer, better lives, and the end of ecology is only the beginning of human potential.

One can peer into the potential ecological effects of this view in Lomborg's treatment of fisheries, which gets *one page* out of the entire book, and this one page is the only apparent treatment of any marine ecology. Lomborg points out that fish-as-food demonstrate no threat of decline. Indeed, he discusses the widely known graph of increasing global fish catch that has shot up since worldwide measurement began in the 1950s, and points out that we are catching more, not less fish, and there is *therefore* no problem. In other words, the effect thus far on people in their interactions with fish has been abundance of fish. He admits that a larger role is being played by aquaculture, or farmed cultivated fish, but that is of little concern really—the point is that there is more fish for people and that is the end of the one-page story.

Of course, the story of fisheries is something more complex. Wild fisheries are a storied ecological issue of overexploitation. Modern fishery management is widely acknowledged as a failure if sustainability is the measure. This conclusion is based in consistent, repetitive failures to maintain healthy stocks that can absorb ecological changes in addition to the actual fishing effort (Acheson and Wilson, 1996; Eagle and Thomson, 2003; Hilborn et al., 2003; Larkin, 1977). Absent from Lomborg's one page are the suspected dispositions of wild fisheries,[5] which are seriously over-fished, at the point of maximum fishing, or are in decline. The fisheries that are over-extended are of the most concern, where in the 1950s, about 5 per cent of the world's fisheries were in this position, but today the number is nearly 5 times that (24 per cent) (FAO, 2006).

Also absent are the well-known and accepted conditions of "fishing down the marine food web" (Pauly et al., 1998), loss of marine biodiversity in top ocean predators (Stevens et al., 2000), or changes in marine ecology at the large marine ecosystem level (Essington et al., 2006; Sherman, 2006; Project, 2004), not to mention that world fish catch data is fully understood as over-representing catch data, so that wild fish catches have likely been falling since the 1980s or sooner (Watson and Pauly, 2001). All of the latter indicate in a much more decisive tone that everything is not OK for fisheries. This includes the conditions of fish-as-food, where the bulk of the fish catch comes from wild marine stocks, and as

5 The word "suspected" is used because assessment of fisheries requires humility and circumspection; though, repeated warnings from fishery scientists indicates we have well-underestimated human impact on marine ecology, especially fisheries, but industrial extraction and commodity chains of fisheries is unrelenting.

these fish are targeted by industrial trawlers, small scale fishers who use fish as a primary source of protein—as opposed to choosing between, say, frozen lasagna or fish on a Wednesday night—with little other option. The fish-as-food for food security for small scale fishers becomes much more tenuous as price and physical abundance of the world's fish communities change. Lomborg's facile treatment of this subject should be seen as so imperceptive as to be misleading. Since Lomborg's epistemology blinds his analysis to ecosystem changes, then ecosystem changes can hardly be problems. The world, so long as humans are living longer and better according to modernity's standards, enjoys fewer problems and he can declare environmental problems overblown. Oddly, Lomborg admits this limit, but few have picked up on the conditions of his analysis:

> This [human lives lost] describes both my ethical conception of the world—and on that account the reader can naturally disagree with me—but also a realistic conception of the world: people debate and participate in decision-making processes, whereas penguins and pine trees do not. So the extent to which penguins and pine trees are considered depends in the final instance on some (in democracies more than half of all) individuals being prepared to act on their behalf. When we are to evaluate a project, therefore, it depends on the assessment by *people.* And while some of these people will definitely choose to value animals and plants very highly, these plants and animals cannot to any great extent be given particular rights (Lomborg, 2001: 12, emphasis in original).

Here, we can see that the deep anthropocentric ethics and epistemology set up a deep anthropocentric sense of civic life. Because he is counting people (literally and ethically) civic obligations and conditions only extend to human concerns. This perspective invites us to live with several problems. The first problem is rhetorical, in that he extends consideration to flora and fauna only to the extent that people in a majority will allow them to be considered but then retracts this in that "these plants and animals cannot to any great extent be given particular rights." So, rhetorically, Lomborg giveth and taketh away in the same breath—people may consider non-humans, just as long as they do not seriously do so. Such a contradiction in rhetoric belies the degree of ideological commitment Lomborg has to deep anthropocentrism because he is saying that even if a democratic majority were to advance the "rights" of flora and fauna, Lomborg believes that Earth Others "*cannot* to any great extent" be given "particular" rights.

A second criticism is even more substantial. He writes that "the extent to which penguins and pine trees are considered depends in the final instance on some (in democracies more than half of all) individuals being prepared to act on their behalf." The extent to which any one of us are considered depends on the same condition, and history is littered with the rubble of human lives ill-considered: the mentally tortured, the developmentally disabled, children, women, ethnic, racial, and cultural minorities, prisoners, laborers, the physically disabled, and the poor are just some groups who have been in the same condition as penguins and

pine trees, where the "majority" decides to expand the ranks of those who will be considered important ends in themselves.

All rights are dependent on someone else observing them. If a parent sexually abuses their child (woefully common, as the author discovered during his time as a social worker), the child is still abused and hurt, whether or not someone is willing to protect them. This limit of needing someone else to observe our own rights does not stop us from extending rights to each other as adult citizens, and when it does as in the historical cases noted above, we look back on this history as morally repulsive, as in the case of slavery and the pre-suffrage era. The limit of needing someone else to observe these rights, therefore, is an illegitimate and invalid argument for not extending "rights" to non-humans.

Further, the majority itself, in this recipe, magically has their own rights conferred upon themselves. Others are then subject to the majority's beneficence to be brought into the fold of political recognition. With this point in mind, it is clear that while Lomborg is talking about "rights," the substance of his argument is actually about political recognition. This is important because recognition is the currency that allows for all other political gains (Schlosberg, 2004; Young, 1990). Strangely, once we understand recognition to be the issue, we can re-read Lomborg's comments to be "we cannot extend recognition to penguins and pine trees because we do not and cannot recognize penguins and pine trees" making it a circular and logically invalid case.

In addition, a more profound criticism of this approach is that "rights" are probably the wrong way to think about the scope of civic obligations, where rights are simply one approach. For example, as a parent, my children have the right to not be abused or neglected, but much, much more is owed to them than this. More than the absence of being abused, and being provided material needs like food and clothes, my children are owed a future that they can reasonably navigate. This means I owe them an education, which is manifest in various formal and informal means from how to cook and climb trees to arithmetic and language skills. I owe them a chance at having a meaningful life, which they must make mostly on their own, but they will need the tools of prior generations to carve out. And, if our (say, the nation) use of ecological space encroaches on the lives of other peoples—say, if our carbon emissions threaten a small island—it is our obligation to them to mitigate further damage and aid them in the damage already done. It follows that if we overfish the crucial, ancient horseshoe crab, and the subsequent loss of horseshoe crab eggs undermines the ability of migrating shore birds like the red knot (expected to be extinct in a matter of years)—we are obligated to guard and aid the red knot as well as stem the source of pressure on them and the crab. This obligation does not turn on the fact that penguins and pine trees do not vote, but rather whether those who vote extend recognition to the penguins and pine trees. Ultimately, though, Lomborg's argument is aimed at *reducing the public sphere* as well as the demands and entities that may legitimately be recognized in the public sphere, as such a sphere exists in global, regional, national, local, and interpersonal conversations, actions, and expectations.

Andrew Dobson (2003) makes some related arguments in his ideas of "ecological citizenship." Dobson's proposal is thus: given globalization, ecological effects are not contained by national borders as is traditional civic republican and liberal kinds of citizenship. In civic republicanism, citizenship is described in terms of virtuous service to a common good and in liberal democratic citizenship, the language of rights are dominant. But, if our ecological footprint—our consumption of ecological space—extends beyond our national borders, these traditions obscure impact and responsibility beyond the "international." Consequently, there is a liability to this damage not covered by our normal ideas of citizenship. Waving away rights for non-humans can not preclude this obligation as the impact and responsibility to that impact are incurred. Thus, Dobson contends that ecological citizenship is citizenship that accounts for the ecological footprint of the individual. This is an expansion of civic duty and liability that the counter-movement is squarely against, especially as the changes to structural Earth systems are changed by things like land use changes and biodiversity loss, or, of course, climate change which have local origins but transnational effects. Given that some of these issues like climate change have occurred through the legacy of industrialized nations—which are, by definition, industrialized because they built an industrial economy by burning hydrocarbons—then it makes sense that part of the counter-movement battle is to maintain a status quo in civic terms and deny this expansion of liability and accountability. And, what better way to remove oneself from such liability than to argue that no harm has occurred to begin with?

Deflection of civic obligation, evidenced in Lomborg's denial of changes and the deep anthropocentric ethic that undergirds the position as an authentic view are two very important pieces to the skeptical environmental counter-movement puzzle. Another part of this puzzle is found in the home ontology for the counter-movement of possessive individualism. For modernity and globalism, recognition of environmental change is an existential threat.

Parallel Value Conflicts

Before this chapter turns toward the ontological conditions of possessive individualism, it is important to reflect on some of the more pressing demands the counter-movement injects into environmental debate which cross large value cleavages and therefore open the issue of skepticism up to a much, much larger conflict than whether we should do something about the loss of wetlands or polar bears. Without treating the empirical validity of skeptical claims generally (notice that is *not* the project of this book), we can agree that charges of genocide of Third World children against affluent "environmentalists" strikes a chord in reference to justice and the benefits of modernity and globalism. The accusation is often very simplistic and vulgar, but they are nonetheless claims about justice that demand some reflection.

Let us dismiss the simple part of the controversy first. Deep anthropocentric ethics are evident on websites, like eco-imperialism.com or Junkscience.com, where skeptics trade blistering accusations that environmentalists value birds harmed by DDT, or even mosquitoes, over African babies dying of malaria, while the "facts" of DDT are that it is unequivocally harmless. Some skeptics blame ecocentrism and related ethics, sometimes labeled a new pagan religion, for leaving African babies to misery (see Coffman, 1992; Coffman, 1994; Huber, 1999).

This means we need to look to tenets of eco-centrism as a guide for some of the most deep environmental concerns where we can get some philosophical relief. If eco-centrism is to blame then we should review eco-centric core principles. In Matthew Paterson's (1996) summary of ecocentrism we see that the first point is the "recognition of a full range of human interests" means that acting to preserve lives leaves no ethical burden to save the lives of that which is threatening our survival (the mosquitoes) or even for the birds of prey. But, further principles from eco-centrism are that we should recognize the needs of non-humans, where wanton spraying of DDT, as in agricultural uses, is another matter entirely than using it in thatch homes to keep deadly disease at bay.

More consistently though, skeptics simply argue that Rachel Carson and the environmental movement she sparked has been responsible for the deaths of millions of people, particularly in Africa where malaria is so deadly and kills mostly children. At one point, www.junkscience.com, had a ticker on the front page running upward of how many people Rachel Carson had "killed" through her criticism of DDT leading to its regulation. Several groups focus on this element of environmental science, history and politics. CTTs have sponsored several pro-DDT groups, such as the Congress of Racial Equality (CORE)—Uganda/Kill Malarial Mosquitoes Now Brigade, Africa Fighting Malaria, and Project 21 through the National Center for Public Policy Research.

As an important aside, one might reasonably look at this list and notice that there is a "civil rights" group, CORE, in this mix and be a little befuddled. There is a disconnect of conservative politics and progressive civil rights politics, where some analysts indicate that the overt support of racism has been a feature of Right Wing movements in the United States as a part of its "road to dominion" (Diamond, 1995). Yet, here we have CORE, a major and historic civil rights group involved in the Freedom Rides, lunch counter sit-ins, the 1963 March on Washington, and the 1964 Freedom Summer in Mississippi. The placement of CORE as a skeptical CTT should by itself be a red flag that there is something different going on. To understand this issue, one must look to an entry in the *Journal of Blacks in Higher Education* (2003) which explains CORE's transition from leading civil rights organization to a CTT. In the history of CORE, we see that the pre-1968 CORE was influenced by Gandhian philosophies and Thoreau, aimed at non-violence and social change for the underprivileged and oppressed African-American citizens. However, in 1968, Roy Innis made a move to take-over CORE. Early-on, Innis was a Black Nationalist, fighting in Harlem for equal opportunity of its citizens. But, by 1968, Innis disavowed liberal welfare-state based policies as degrading, and

backed the bid for Richard Nixon for president, based on ideas of black capitalism and other related approaches Innis found more appropriate. The *Journal* notes that over the next 30 years, Innis would turn far away from the leadership of founding member James Famer and work to defend established power and privilege which would play into the hands of segregationists, e.g., by defending Senator Trent Lott after he lamented the loss of Dixiecrat Strom Thurman's segregationist presidency bid. Today, CORE can be seen advocating for the NRA and ExxonMobile, and supporting skeptic Paul Driessen. Driessen believes environmental problems are mostly non-problems but environmental policies deny the South's poor protections that would save lives (DDT) despite the fact that the politically marginalized are among the most vulnerable to environmental problems, such as toxic chemical exposure. Chris Mooney writes in the progressive magazine, *Mother Jones*, about this concern:

> Innis has been accused by founder James Farmer and other black leaders of renting out CORE's historic reputation to corporations like Monsanto and ExxonMobil. (CORE even mounted a counterprotest to environmentalists picketing an ExxonMobil shareholders' meeting.) "We all want to protect our planet," says CORE spokesman (and Roy's son) Niger Innis. "But we must stop trying to protect it from minor or illusory threats—and doing it on the backs, and the graves, of the world's most powerless and impoverished people." Niger Innis has also said that the terms "eco-imperialism" and "eco-slaughter" should be household words (Mooney, 2005, online).

Thus, the inclusion of CORE in the counter-movement is explained by its turn toward conservative politics, but is important because this history and context are not immediately clear to anyone who is unfamiliar with the specifics of CORE's recent history. If we read in the newspaper that one of the major historic civil rights groups is protesting against climate change science and the "junk science" that leads to a fear of DDT because this fear is hurting poor people, it garners the sense that these concerns have germinated some increased authenticity and legitimacy by crossing ideological lines. However, for CORE at least, this is not the case, and skepticism remains a trenchantly conservative position. By using an apparent faux-civil rights group rhetorically defending the poor in the name of justice, the counter-movement is working large parallel value cleavages to mobilize a defense of globalism. Consequently, CORE allows the counter-movement to use global justice for the poor as a pathway to protect neoliberalism from transnational environmental regulations. It also allows the counter-movement to engage a much larger audience than just the United States conservative elite.

Another pro-DDT project sponsored by a CTT is the "Rachel was Wrong: Uncovering Silent Spring's Deadly Consequences" (www.rachelwaswrong.org) website which presents the DDT issue this way:

> Cultural myths often stand in the way of human progress—in some cases producing devastating consequences. In fact, today millions of people around the world suffer the painful and often deadly effects of malaria because one person sounded a false alarm. That person is Rachel Carson, author of the 1962 best selling book *Silent Spring*. Many have praised Carson for raising concerns—some legitimate—about problems associated with the overuse of chemicals. Yet her extreme rhetoric generated a culture of fear, resulting in policies that have deprived many people access to life-saving chemicals. In particular, many nations curbed the use of the pesticide DDT for malaria control because Carson created unfounded fears about the chemical. As the world commemorates the 100th birthday (May 27, 2007) of the late Rachel Carson, it is time to acknowledge the unintended, adverse effects of Carson's legacy and find ways to correct them.

This website is run by the Competitive Enterprise Institute (CEI).

Another similar website and organization is Africa Fighting Malaria (www.fightingmalaria.org), which sounds like a homegrown effort in Africa to find answers to malaria, but it, too, is fed from the mammon of the Northern CTT network, directed by Richard Tren. Tren is, according to the site, a South African living in Washington DC in order to work closer with United States "allies." The organization is based in both South Africa and Washington DC, with ties to the conservative Institute for Economic Affairs (IEA) in the UK and the US CEI, according to its annual reports. Roger Bate, of IEA and CEI, is a board member, and Tren spent time at IEA as a Fellow.

Once these trends in the context of these groups is revealed, the defense offered appears to really be about defending the expansion of Industria through increased pressures for globalism into the periphery of core nodes of power. Here we have apparent astroturf CTT organizations which regularly defend chemical and other industries that use potent, toxic chemicals, that say Carson's science created a movement of "unintended" death. This debate is a window into globalism and is worth examining a bit to see these mechanisms.

Part of the counter-movement's efforts in this area are to present modernity as a balm, in this case to the poor, and Northern environmentalists are not only preventing the use of the balm, but are preventing the spread of modern progress itself. Such a framing defines economic expansion and modern Industria as the obvious, Hobson's choice, suppressing alternative definitions of human purpose and life-ways. Globalism is suppressing politics of DDT and malaria; it goes beyond supplanting politics and transplants its own voice for non-modernist alternatives, impoverishing transnational public discourse by insisting that the only politics is a globalist monologue.

Certainly, African malaria is a potent and deadly epidemic. Malaria kills about 2.7 million people a year. Almost all of the incidence of malaria is in Africa (90 per cent), and even more of the malarial deaths are in Africa (90–95 per cent), most of which are children (Pinmentel and al, 1998). Consequently, implicit in this politics, but obscured in the globalist discourse, is the question "why Africa?"

Why is Africa the last continental harbor for this disease? Part of the answer lies in the history of malaria treatment and part in political economy. Rogen and Chen (2005) describe that DDT (bis[4-chlorophenyl]-1,1,1-trichloroethane, or dichlorodiphenyl trichloroethane) was first synthesized at the end of the nineteenth Century, and then discovered to have insecticidal effects in the 1930s. It was then used in World War II to prevent typhus and other vector driven diseases, including malaria, which claimed an enormous toll in World War I. On this level we can safely say DDT saved thousands of lives. Then, after the war, DDT was turned toward agriculture, which we might expect since manufacturers would be looking to keep demand up. Then:

> The eighth World Health Assembly in 1955 adopted a Global Malaria Eradication Campaign based on widespread use of DDT indoor and outdoor spraying against adult mosquitoes, and by 1967 endemic malaria was eradicated in developed countries and many subtropical Asian and Latin American countries (Rogan and Chen, 2005: 763).

Rogen and Chen note that "However, few African countries participated in the campaign. The 22nd World Health Assembly in 1969 ended the campaign after authorities realized that the infrastructure necessary to support global eradication did not exist. Additionally, mosquitoes were becoming resistant to DDT" (ibid). Countries that did participate ended up dropping the program because DDT did not work as well in the specific climate, in some areas mosquitoes developed a *total resistance* to DDT, and cost was prohibitive.

Clearly, DDT was important in treating the spread of malaria, and the present conditions for malaria are partially set in this period. But, unless between 1962 (when *Silent Spring* was published by Carson) and 1967, the United States and European environmental movement had generated so much power it impeded African nations from using DDT, then the liability for malaria cannot be put on Northern environmentalists in the way that the counter-movement contends. As a matter of politics, there are many contributing factors that complicate this political-economic history that are left un-earthed.

It was not until 2001, when the Stockholm Convention on Persistent Organic Pollutants (POPs) proposed a global ban on DDT that more contemporary attention was focused on DDT and African malaria. Ultimately, malarial control was given an exemption in the ban under the treaty.[6] Also, while the counter-movement works to deny the harms of its own globalism and its own products, DDT is hazardous.

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6 This is, after all a treaty, and countries can choose to agree to the treaty or not, and if African countries wanted to they could abstain from the POPs treaty altogether. In fact, enforcement of the treaty was left to be determined at a later date, meaning there are no penalties for violation as yet. Though, of course, malaria use would not engender a violation anyway. There are certainly other pressures that are relevant, such as trade and aid relations that may be threatened if dependent countries don't do what the core states want.

For example, villages should be informed that neurodevelopment delays may affect their children from in-utero exposure (Eskenazi et al., 2006), and inconclusive studies affiliate DDT with higher preterm births strongly associated with shortened breastfeeding capabilities (Chen and Rogan, 2003). Chen and Rogan note that the end result might be a wash because DDT *may* raise the infant mortality rate to the same rate of malaria-related infant mortality: "Therefore, the side effects of DDT spraying might reduce or abolish its benefit from the control of malaria in infants, even if such spraying prevents all infant deaths from malaria." None of this means that DDT should be banned for malarial treatment, but it does mean that neighborhoods and villages should know the various hazards that come with it, and decide for themselves in their own public discourse. The fact that this is not an obvious part of the transnational exchange supports Dobson's view that globalization is largely moving in one direction, where the South is globalized, but does not globalize nor are citizens in the South typically and regularly heard *independent* of the North. How do villagers in Uganda really feel about their options, and what are their options for transnational discourse about the spread of various hazards that affect them? Because the globalist counter-movement has suppressed this politics, the answer to this question is difficult to determine outside of Uganda.

Also, none of this discussion is to imply that environmental groups are blameless in this battle, as some groups, like the World Wildlife Fund, have been rather callous in their overly-simplistic calls for African villages to use substitutes for DDT. *Neither* CTTs nor Northern environmental groups are the ones affected by the diseases affiliated with mosquitoes. Regardless of whether it is WWF or the counter-movement speaking, the discourse is impoverished because we are only hearing a narrow band of voices, few of which have to live with the consequences. Nonetheless, this pressure from some Northern environmental groups appears to have reduced the availability of DDT. In 1999, a report in the *New York Times* reported that:

> … in Botswana, health officials have also abandoned DDT, but for a different reason. Only three countries —China, India and Mexico—still manufacture the pesticide, and Thandie Phindela, a malaria control officer in Botswana's Ministry of Health, said the country could not get a reliable supply this year. "The environmentalists are trying to put pressure on the use of DDT," she said. "We had to resort to pyrethroids."

This means Northern environmental groups are not blameless and have apparently made it harder to use DDT.

However, even after all this discussion, the politics of malaria is still more complicated. What of the role of the modern structure of economics and politics in Africa's larger misery as an object of globalism and Industria? In the same *New York Times* article:

> Tanzania no longer uses DDT; the country cannot afford it, Dr. Kilama said. But with the economy improving, he added, "I can see a lot of hope coming up" that Government-sponsored spraying might resume. In the meantime, some Tanzanians sleep under nets soaked in pyrethroids, another chemical. But the nets cost $4 to $5 apiece, too high a sum for many villagers, and Dr. Kilama [a Tanzanian entomologist] said they work only by "mass effect," which means entire neighborhoods must use them (Stolberg, 1999, online).

In at least one country, then, DDT is not being used because the country is entrenched in poverty and cannot afford the chemical, and individuals are left fending for themselves, in futility, if the entire village cannot do the same. At this point, we must ask what was the cause of African nations abstaining from the first global health initiative to eradicate malaria to begin with? This remains unclear. And, in no small measure, what has caused the varied nations of Sub-Saharan Africa to exist in poverty for over 50 years? Could the answers to these final questions have something to do with the extension of Industria via colonial expansion, post-colonial spasms, and the violent colonial legacy that has left the continent devastated? Rogen and Chen point out that infants make up the largest proportion of malaria deaths, thus:

> Because poverty, malnutrition, diarrhea, and respiratory diseases account for most infant mortality in sub-Saharan Africa, the benefits of DDT use could be *dwarfed* by interventions to improve nutrition, vaccination, sanitation, personal hygiene, and medication accessibility (2005: 768, emphasis added).

It is impossible to consider the politics of malaria, without considering the role of Africa in colonial and neo-colonial Industria, but globalism and its expansion keep this concealed in the monologues of the counter-movement.

It should be noted also, that the 1955 World Health Assembly program included non-DDT tools, such as health care for children which aided in reducing mortality rates. Clearly, the counter-movement is interested in widening neoliberal political economy and market capitalism at least as much as skeptics say they are saving the Third World babies from green imperialism. They are fighting for a system that calls for less government spending on health care and education and deepens African poverty that rests on the shoulders of tradition and neo-colonialism. Readers can draw their own conclusions to these sweeping issues, but development scholar Arturo Escobar points out the larger conditions for malaria and other poverty-related problems: "Minus a few exceptions, the promise and dream of 'development' for the Global South has actually produced its opposite: massive underdevelopment and impoverishment, untold exploitation and oppression" (Escobar, 1995: 4). Further, Escobar draws out an important point relevant to the pro and anti-DDT camps. He argues that development should not be about more roads and dams, as much as about more political voice. *Above and beyond any of the concerns regarding DDT and malaria, transnational African voices in their*

multitude, independent of the North, should be recognized and heard in these discourses. Further, if the international community and its leaders *really* wanted to treat and eradicate malaria (which is a serious difficulty given mutations and resistance to anti-malarial drugs and DDT) the Global North could offer a few things of terrible importance: DDT, aid with and for medical services such as support for artemisinin-based combination therapies, and structural improvements such as stripping out trade related intellectual property rights from World Trade Organization agreements that favor Northern corporations, eliminating agricultural subsidies within core states like the US, in addition to the elimination of *all* African debt. And, most importantly, the North can step back from the podium in this transnational public discussion to stop talking and listen to the complex array of voices in Africa about what these publics want to do.

Everything the varied sciences believes to be important about DDT should be disclosed—for example, that it has historically worked, and sometimes still works (such as by deterring mosquitoes from entering sprayed homes), that it is not harmless, and then let the villages, neighborhoods, and cities decide for themselves what they want in rich political discussion. African babies need something more than Pollyannaish arguments for the beneficence of DDT and free markets. This is a complex issue that requires not just chemicals, but it also needs structural changes in the global political economy that presses an unending boot on the throat of African people—but this kind of change is not of interest to CTTs who defend the current politico-economic structure of Northern dominance. Some of this commitment to free enterprise over African needs is evident, for example, when Tren and Bate (2004) argue that "anti-patent AIDS activists are hurting AIDS sufferers" and that advancements in lowering AIDS will only come by protecting the intellectual property rights of Northern big-pharma. They argue in the *National Review*, a conservative journal, the affluent multinational pharmaceutical companies need to make money to save Africans because, "… making Africa a no-profit zone [for multinationals] is folly that will keep the continent in poverty." The strength of Industria's core actors here is of *first* concern over those suffering deadly disease. Perhaps a tenet of deep anthropocentrism, then, is not that human concerns come first, but the concerns of *some* humans come first over everything else.

Of course, none of this discussion even touched on other politics of DDT such as the concerns Native Arctic people have for the spread of persistent organic pollutants to their region even though the region has never used these chemicals, or the persistence of the chemicals themselves in all these areas, or the important impacts on non-human populations around the world.

Possessive Individualism

The "end of history" is an idea by Hegel (1965 [1821]) where the "last man[sic]" approaches and realizes the extension of human progress and becomes the height of civilization and enlightenment. Fukuyama (1992) picks up this idea and says

the liberal state and market capitalism are the fulfillment of this finality. This puts the very embodiment of Industria and modernism at the head of this "history" denying the possibility of other politics such as Beck's second, more reflexive modernity.

The world capitalist-system organizes the non-human world in order to funnel resources and power to the elites of core affluent Industria, feeding its unsustainable metabolism. As part of this parasite (Hipwell, 2007), the counter-movement defends modernism more than just as distribution, but as identity. Indeed, the concept of the "last man" is representative here because to Hegel, the last man represents not just material welfare, but human destiny and human purpose. This is ontology. "Onto" refers to "being" and ontology connotes the essence of being. Our ontologies work in some ways like ideology, but should be seen as more basic, perhaps the foundation of ideology, because what we see as our purpose cannot conflict easily with what we see as good. This section will describe what the skeptics and the skeptical counter-movement says are foundational principles, their ontology.

Speaking from Industria, the assumptions and values of modernism are dominant, and "progress" and accumulation are discussed in terms of destiny. Chapter 1 discussed the adherence of environmental skepticism to the dominant social paradigm (DSP). The DSP is a primary guide for individual and institutional action in the United States, and are implicated in the economism that is found in globalism (Beck, 2000; Paehlke, 2004), and which come from Enlightenment values. Of course, the Enlightenment built modernity through the advancement of the modern scientific method, the development of market capitalism, philosophical emphasis favoring individualism and proto-cost/benefit rationality, and the development of industrial technology. John Cobb adds to our understanding of what this economistic outlook favors and protects:

> Economistic thinkers typically believe that there is no problem about the indefinite expansion of the economy. Indeed, this indefinite expansion is their goal. They met the warnings of physical scientists with skepticism. History has shown to their satisfaction that the technology that is such an important part of capital can solve the many problems that natural limits are supposed to put in the way of continuing economic growth. They point to many past instances that illustrate this (Cobb, 1999: 39).

This defense of modernity can be seen in titles of skeptical work like DeGregori's *Agriculture and Technology: A Defense* (2001), Richard North's *Life on a Modern Planet: A Manifesto of Progress* (1995), and Herbert Meyer's *The War Against Progress* (1979). Conversely, fearful reproach that modernism and modernity may be threatened by environmental problems is visible in titles like Michael Coffman's *Environmentalism! The Dawn of Aquarius or the Twilight of a New Dark Age* (1992). Each of these works are examples of skeptics worried that environmental concern will undermine modernity, industrialism, the world

capitalist-system and even deceive good Christians toward heathenism in a storm of irrationality, luddism, and illegitimate fear-mongering. Two important points should be remembered: first, from the evidence marshaled to demonstrate the character of the counter-movement, environmental skepticism is ideologically committed to contemporary conservatism. Contemporary conservatism has as a primary concern the advancement of market capitalism. Second, the commitment to the DSP and modern Enlightenment-based "progress," are not *simply* profit seeking/protecting efforts. The defenders of skepticism and modernity are *ontologically* committed in that (many) of them see the essence of human destiny embodied in Enlightenment ideals and industrial development. This section will trace out the dynamics of this commitment.

C.B. Macpherson argued decades ago that some people harbor a "possessive individualism" which is defined as such:

> The possessive quality is found in its conception of the individual as essentially the proprietor of his own person or capacities, owing nothing to society for them. The individual was seen neither as a moral whole, nor as part of a larger social whole, but as an owner of himself (Macpherson, 1962: 3).

Macpherson argues that the possessive individual believes that identity of a person is derived from independence of other people's will and being an owner of property. Inasmuch as the possessive individual ontology captivates some of the most committed skeptics, the aim is to *reduce public life to objects of possession and possessors*. Duality is re-formed into that which is possessed and those who possess these objects; and, other public discourse is routed, disciplined through neoliberal doctrine and the constant questions of "what will policy X mean for business" or "how will this affect the economy" where "economy" and "business" represent not the small trader of goods, but of globalism and the logic of possession.

Importantly, in the sense that modernity is crumbling and threatened by the emergence of uncontrollable global environmental changes, the skeptics are not only defending the political order of unequal ecological exchange that sends Southern ecology to the core-North (Bunker, 1985), some appear to be responding to an existential crisis. Not all skeptics hold to possessive individualism, but there is enough of a pattern in the literature to identify it as a theme. This theme indicates that some skeptics see the essence of being through acts of consumption and possession. The annihilation of non-humans, in this context, is not nearly as meaningful as the loss of potential elite globalist existence supported through neoliberal capitalism, Enlightenment-based development, and the expansive accumulation and consumption and property that anchor the possessive individual to their own sense of human purpose.

Since the possessive individual from Industria is an identity of privilege, as the world begins to shudder from Industria's metabolism and the effects of the world capitalist system—the loss of biodiversity, changes in the chemistry of the

atmosphere, oceans, and soil on a global level, changes in freshwater supplies, land use changes to name a few—this privilege is put under scrutiny. Such scrutiny is something akin to the reflexive modernity described by Beck, but it is apparent from the study of the counter-movement, that the scrutiny itself has generated a vigorous defense of modernism and a denial of modernity's problems.

Such scrutiny includes voices like that of Bennholdt-Thomsen and Mies (1999) who are working toward an autonomous subsistence peasantry—what they call "the subsistence perspective" of development that focuses on autonomy. They criticize the neoliberal type of development as full of problems that lessen autonomy and increase dependency. Bennholdt-Thomsen and Mies note that in mainstream economic discussions, there is an assumption that there is no "development" without "growth" but that the visible aspects of economic growth rest on the top of a pyramid of unseen colonization of women, men, and non-humans. Thus, the context of the possessive individual existential crisis appears to rest upon millennia of generations of existential crises for others.

We discussed the "loot" in Chapter 2, but the privilege-as-identity here is threatened from so many directions. Pressures on Western elite consumption come from those calling for more inclusive ecological citizenship (e.g., Dobson, 2003), a reformed "post-liberal" state that includes the interests of non-humans (Eckersley, 2004), a world-wide indigenous movement (Hall and Fenelon, 2004), the anti-globalization movement (Kütting, 2004; Thompson, 2000), feminism (Tickner, 2004), and even new variations of Western science, e.g., "sustainability science," to name a few. The DSP and Enlightenment modernity still hold dominance, but their future is in serious question, and in as much as skeptics hold to a possessive individualist ontology, the world that skeptics hold dear is also in question.

Summary

In sum, the skeptical world view is held together by a *deep* anthropocentrism that seeks to annihilate non-human ecology or at least has little ethical use for non-humans, a severely narrow sense of civic obligation and duty, and an ontology of possessive individualism that sees consumption and property as defining features for being human. None of these issues indicate that skeptics are actually skeptical of conditions on Earth. Instead these points raise the issue of a rather *committed* perspective and identity that is not likely to change regardless of the evidence provided for climate change, biodiversity loss, or harm from trace chemical exposures. The counter-movement is not only defending unequal exchange and "loot" garnered from Industria, but it is defending Industria as "the good" and as human destiny. From the persistence and determination that comes from such conviction, we should expect to see an expansion of environmental skepticism into the Global South—and this will be one of the more profound successes the counter-movement could hope to attain. Either way, we see in the counter-movement an impoverished sense of public life based on accumulation, commodification, and

erasure. In this way, one counter-hegemonic activity is to enrich and empower other voices and to extend considerations beyond thin globalism and modernism to something more critical, more ethical (in extending consideration to others), and less violent.

Chapter 4
Biopolitics and Representation of the Other: Skepticism, Violence and Disposal

Being attentive to global environmental changes opens the door for more people and non-humans to have moral standing. This consideration throws conspicuous light upon the hegemony that constructed the Other to begin with. Thus hegemony in world politics evades such democratic and threatening tendencies through denying the authenticity of global environmental change, thereby normalizing privilege and power in the world that continues to threaten the every-day lives of the marginalized. This insecurity rests in the control of public discourse as this discourse moves between the micro-local through transnational scales. The end result is that the Other—whether in the ninth ward in New Orleans, or on the coastal zones of Southeast Asia, will continue to suffer severe and growing insecurity until the source and logic of such power is better understood and challenged.

This chapter first traces the construction of vulnerability for others, mostly focused on climate change politics. This construction of the Other[1] will be traced in light of how some actors are represented as a way to limit and suppress the extension of non-economistic associations in a world of political ecological crisis. The stripped down universe with limited associations permit continued disenfranchisement and disregard, which create the conditions for vulnerability itself. It then elaborates on some specific constructions of Others at the crossroads of vulnerability as a way to illustrate the depth of the world politics of environmental skepticism. Finally, the chapter places this democratic failure in the context of governance. If the impacts on specific groups are specifically discounted, then mitigating and adapting to environmental changes is going to lack accountability and will likely have some problems in not only effectiveness, but key elements of justice.

Re-Politicizing Ecological Insecurity

Hans-Martin Jaeger (2007), has published an essay in *International Political Sociology* describing a "depoliticizing" that is occurring in international civil society and other areas. By this, he means that some elements of world politics are

1 Remember that non-capitalized "others" are recognized and have political ends in themselves, while capitalized "Others" are constructed as having no or little agency and are means to someone else's ends.

rhetorically positioned to be neutralized as non-conflictual. "Human security" is one such attempt of Foucaultian bio-politics aimed at managing life. To re-politicize in this perspective means to expose how life is managed by normalized streams of discourse, tendrils of power, and expectations, especially those expectations that are positioned as 'natural' but are really choices being made by groups and individuals that affect the lives lived by others.

Similarly, Jon Barnett (2001) indicates that "environmental security," which usually refers to the ways in which environmental changes are connected to inter and intra-state conflict, depoliticizes environmental protections by shifting environmental changes to "high politics" that had been reserved for issues of war between competing nation-states. Barnett points out that this is a dangerous move because it means that "environmental security" becomes co-opted as a part of the state-system that causes environmental problems and many political threats to human and non-human wellbeing. As such, conceptualizations of "human" and "environmental" security may inadvertently (or purposefully) militarize environmental and social concepts and place environmental protections into a hostile militaristic policy community. Consequently, "Practices of depoliticization are thus part of the political logic of (neo)liberal global governance" (Jaeger, 257). In order to avoid this depoliticization, this section will reverse this conceptual trap by politicizing environmentally-related "security" and examining the construction of "Other" in the context of the environmental skeptical counter-movement. In the end, we can ask who is threatened most by the bio-politics of globalism, as well as the environmental changes by analyzing who is constructed as outside the moral universe of Industria. Assuming that Industria and its actors define the universe of dominant power unquestioned—as hegemony discussed in Chapter 2—then unpacking and re-politicizing the discourse of "security" may improve the prospects for exposing the nature of choices being made and the normalized politics that hide these choices.

Note that if Foucault is right, then it is not possible to eliminate the politics that manage life (bio-politics), but it *is* possible to unearth the processes and frames that have been so effectively normalized that they are unquestioned. This type of project reaches back into the discussions we have in and about public life—how we relate to each other and what we expect from each other and adds critical democratization. This chapter will argue that in creating extensive networks of more and more associations between life and non-living environments, and human and non-human actors, we will have more rich and just social discourse and perhaps more just social action. The lessons we get from Jaeger and from Foucault, however, is that we should incorporate these discussions and actions within a richer—more inclusive—public life where questions from the margins are counted and recognized instead of relegated to dollars and rationalism or hidden goals.

What has been depoliticized? As Plumwood (2002) notes in the *Ecological Crisis of Reason*, hierarchy and domination are normalized—that is, depoliticized—as they are made to seem natural and unquestionable; and, she argues that this process

occurs through the dominant modern form of rationalization. This rationality positions the self in an autonomous field, ignoring the self's dependencies and relationships, and "economic man" and others like him are left to make decisions that appear to have little consequence to these relations. Modern rationality, which has roots in antiquity and even before this, creates, continues and empowers an alienated self through duality and dichotomy that conceptualize the world in hyper-separated conditions (civilization versus nature; man versus women, etc …). The idea of "nature" becomes separated from "culture" or "civilization" and the distance between them is exaggerated so that civilization becomes defined by its lack of "nature." This hyper-separation then "naturalizes radical inequality" between the two constructed forms. This inequality creates a form of domination that is able to empower and reproduce itself as the hyper-segregation of nature/civilization becomes reconstituted without questioning. Think, for example, of the way in which the Hobbesian myth of the "state of nature" has become simply taken as an unproblematic starting point in the liberal mind. The radical inequality *and the fact that this inequality was constructed* are left to procreate in our colonized minds unchallenged.

This chapter will examine how certain groups are positioned through radical exclusion through a globalist skeptical counter-movement; and, as this counter-movement is aligned with the reigning dominant social paradigm, these radical exclusions are not tokens. The exclusions are representative of a broader global politics aimed to reduce public life to commodification and accumulation. To demonstrate these points, we will specifically explore how associations with the Global South as a whole, indigenous peoples, women, and non-humans are represented in the skeptical counter-movement.

In each of the four identified categories of Other, there are separate discourses that are important. For those in the Global South, the discourses of "development" are central. For indigenous peoples, the central discourse surrounds "civilization." For women, the central discourse is rationality over hysterical women, and for non-humans, the central discourse is anthropocentrism. These four discourses identify central foci that help us understand where the Other is configured; however, inasmuch as a "discourse" is a discussion, much of the important pieces of these discourses are left hidden, unquestioned, and assumed—that is to say, they are hegemonic. Let us establish the following caveat first, however: none of the following discussion is meant to imply that these themes are scripted into all skeptical discourse, but instead are recurring themes.

The Global South

Prior to the end of the Cold War, the term "Third World" referred to the poverty stricken and colonized countries of the world, with the terms "Second World" referring to the Soviet Bloc and its satellites, and "First World" referring to the democratic industrialized countries. The Fourth World has been used to refer to

indigenous peoples, mostly because they remain politically outside of the first three (Wilmer, 1993). The representation of the world into these divisions and now the bifurcation of Global South and North are immediately conspicuous and themselves are matters of concern.

One might wonder what the identifier for "first" really is referring to. This referent is really not clear but at the same time used often and is an indication of hegemony itself. Perhaps "first" refers to the level of privilege or affluence. However, it may actually be an unconscious (or conscious?) assumption that the affluent industrial nations are the first to have reached the "End of History" as it is parochially designed in modernization and neoliberal theories of development. This would mean that the Third World is far behind and, by implication, needs to "catch up."

However, now that the "Second World" has been transformed into the Commonwealth of Independent States, these designations make even less sense today than prior to 1991. Currently, the main referents to a global division of class and labor is in the terms "Global North" (affluent) and the "Global South" (poor, underdeveloped). Throughout the book these terms have been used without critical reflection. Importantly, the terms sometimes hide as much as they reveal, because they imply that poverty and underdevelopment are easily cleaved with an imaginary affluent Northern Hemisphere, but a simple look at North American tribal reservations is a quick reminder that the Global South is not a geographic representation of hemisphere. If we think of the North as uncomplicated bloc, then we are forced to admit that the Global South lives in the Global North as well, undermining the utility of the term. It is also important to note that within the North, there are pools of resistance to Industria's unequal exchange, but they are outside the DSP and are often marginalized or suppressed.

Consequently, the term "Global South" is used not as a referent to poor countries, but to underdeveloped, colonized, geographies that have been made a periphery anywhere within Industria. As Hipwell notes, Industria is "a network, not a container" (Hipwell, 2004: 368). In this way, the peripheral subjects of the nodes in Industria are the Global South, just as the Rosebud Sioux reservation in South Dakota in the United States is a fairly underdeveloped and subjugated space within the vast reserves of wealth and power in one of the most influential Industrian organs of the United States and its network of powerful cities. Rosebud is in the Global South not because of its latitude, but because of its relationship with imperialism. Consequently, the term "Global South," is still useful but only with the understanding that the Global South is found globally and exists in relation to a Global North that are really core nodes of Industria—it is a political economic term that refers to specific spaces, not hemispheres.

The environmental skeptic Paul Driessen (2003) is affiliated with the Center for Defense of Free Enterprise, operated by skeptics and founders of the Wise Use Movement, Ron Arnold and Allan Gottleib, the Congress on Racial Equality (CORE), and other CTTs. He writes in a chapter called "Cow Dung Forever," that:

> The Third World's poor increasingly want to trade their huts for modern homes, and enjoy running water, refrigeration, electrical lighting and other basic necessities taken for granted by westerners (and by intellectual and government elites in their own countries). They want to see their children live past the age of five, and look forward to even better lives for their grand kids (online).

But, the "Third World" is unable to "determine their own destinies" because "First World environmentalists" are dictating their choices. So—how is Driessen working to free the Third World? One visible effort is to testify before the United States Congress on the deadly impacts that environmental protections have on the poor and starving. This is the essence of "Green Power" (environmentalists) and "Black Death" (starving and diseased Third Worlders). His written testimony to the United States House Subcommittee on Energy and Natural Resources argues:

> Activists claim the rampant malnutrition, disease and death isn't their intent. However, it is the *result*—and the result is certainly predictable. The likely consequences are simply ignored, and the radicals have done nothing to alter their anti-biotech campaigns. In fact, they intend to spend *$175 million* battling biotech foods over the next 5 years—on top of the *$500 million* they spent between 1995 and 2003, courtesy of "socially responsible" foundations and organic food companies. As Greenpeace cofounder Dr. Patrick Moore says, they all put "unfounded fear-mongering ahead of the world's poor" (Driessen, 2004: 5).

Notice the use of Patrick Moore, who has become a trenchant anti-environmental skeptic. Environmental concerns, like biotechnology and genetic modification, are framed as "unfounded fear-mongering" that is killing hungry Third World children. But, because Moore is referred to as one of the founders of Greenpeace, we are to assume that Moore is an environmental voice that adds perplexity and layers to Driessen's claims.

To free these children, Driessen argues that corporations need to abandon a false promise of "corporate social responsibility" which he sees sapping corporate profit. This is expressed in exactly the same tone as The Free Enterprise Action Fund core principles that "The social responsibility of a business is to increase its profits" originating with Milton Friedman (see Free Enterprise Action Fund, 2005). Driessen argues that corporations exist for profit and should therefore be concerned—literally—about nothing else, otherwise the benefit of corporate innovation and production will be abandoned, along with the manna to save Third World babies. Such charity-from-greed includes: increased electricity service, disease fighting technology in DDT, and the supposed genetic miracle of "Golden Rice" that is infused with Vitamin A—which is only an example of the salvation that corporations and market capitalism, can bring to the Global South (Driessen, 2003; Driessen, 2004). He notes to the United States committee, "America is a biotechnology leader, *precisely because we want these people to live and prosper*. The challenge now is to confront and defeat the misguided policies that threaten

their future" (ibid, emphasis added). Driessen offers an odd contradiction then, because he notes that the good corporations do is based on their own self-interest for profit, but then adds that America is a leader, presumably through biotech corporations, "because" we want to help and be good global citizens. Both statements cannot be true.

In any case, Driessen is arguing that Africans can determine their own destinies if only the "eco-imperialists" would get out of the way and let modernity, industrial technologies, and neo-liberal capitalism do its job of bringing wealth to the South. Driessen writes this by way of a question:

> Will greater prosperity in developing nations place greater stress on the Earth and its natural resources—or will it free people from poverty, starvation and killer diseases … unleash their creative energy … and generate the wealth, human spirit and technological progress that can help *conserve* energy, mineral and environmental resources? … I think I know the answers to these questions—as do members of the Subcommittee on Energy and Natural Resources. Our country is living proof (Driessen, 2004: 11).

The United States is framed as a bastion of liberal democratic freedom and the juggernaut of global capitalism, technology, industry, and the heart of Industria, and it is both a savior and model for Third World Development. Anyone getting in the way of Africa following this course is castigated, even if the ones dissenting are Africans (Mushita, a Zimbabwean, for example is an African criticizing biotechnology, see Mushita and Thompson, 2007), as robbing the life possibilities from the continent.

The logic of this implies that the Global South is only permitted to determine its own destiny if it follows the form of others. Indeed, inasmuch as we consider the Global South or the Third World as having a singular destiny we are already constraining the structure of the political field of choices permitted for the South in the corpo-state network. To the counter-movement, if environmentalists challenge the network of the state system and corporate largesse they also obstruct "progress" and human destiny. This means that neoliberal economism orients broader social and political options other than market capitalism as barriers to freedom. This is indeed an Orwellian way of disciplining objections to Industria and to the dominant spheres of power. "War is peace," "Ignorance is Strength," and particularly "Freedom is Slavery" seem to have the same kinds of appeal and the fact that the counter-movement receives so little critical appraisal (see Lahsen, 2005) is itself, a condition for continued "Slavery."

More important than these literary claims is the issue of fidelity. Fidelity is the degree to which our representations reflect that which we say they do. The fidelity to representation of marginalized people of the Global South is transferred as the interests of the Global North. Such a limited discussion of public interests is reminiscent of a bully arguing that its onslaught on fearful children is in their own interests, and anyone disagreeing will be sorry as well as responsible for

more bullying of the bullied. More specifically, Driessen and others in the counter-movement position private interests of corporate elites as public interests of the huddled and starving masses around the world, and to question this is to question whether or not help should be extended to actors in need. It, of course, does not address the creation of starvation or deprivation on a structural scale, nor does it adequately allow for voices from marginalized groups to become authentically associated with our own. We are left to deal with these Others as the tragically dispossessed.

Other skeptics in the counter-movement have and continue to raise the same issues on biotechnology and saving starving masses in the Global South. Dixie Lee Ray (1993) writes:

> For the first time in history we can take for granted that food will be available whenever we wish to buy it. For the first time in the more than 6,000 years of recorded human progress, food self-sufficiency in the developed world has been achieved, and it happened on our watch! Modern society—that is, the Western industrialized world—is now able to feed itself and still have surpluses left over to help nourish much of the rest of the world (ibid, 67).

She continues, quoting Borlaug:

> Dr. Norman Borlaug, a Nobel prize recipient who is considered one of the fathers of the 'Green Revolution' because of his involvement in the early genetic development of the newer, shorter stiff-stalked wheat and rice varieties, has said, "I am concerned that the growing anti-science and anti-technology bias in affluent countries will adversely affect the prospects for agricultural development … In effect, the 'haves' are telling the 'have-nots' that they should stay with current simple lifestyles since great material well-being isn't what it is made out to be. How many people in the First World would be willing to cut their life spans by one half, see up to half of their children die before reaching the age of ten, often as a result of minor and easily curable illness, live in illiteracy with substandard shelter, clothing and sanitation, and face bleak prospects of no improvement in economic well-being for themselves or their children? Unwittingly, this is the continuing fate that the affluent anti-technology groups are wishing for the Third World's people" (ibid, 68).

Lee Ray is arguing that the cause of suffering in the Global South is that the Global North has not been able to penetrate the South deeply enough to make it part of the North, or perhaps that "development" has been impeded by "anti-science" and "anti-technology" groups. If the South were only able to mimic the North, it could be affluent, fed, and healthy. This discourse is framed as if the South were found "*un*developed" and the poor populations could be saved if they were permitted to follow an obvious path to development (read: affluence). The poor and starving masses were discovered this way, and we (Industria) can help by providing

the blueprints for capitalism that drives growth, exports, and state revenues and the neoliberalism that strips out over-exuberant state policies and safety nets, like health care and education, which are pressured to be privatized under policies like the Washington Consensus and its legacy programs (Williamson, 1993).

Andrew Mushita and Carol Thompson (2007) write in one of the most cogent arguments about biotechnology, biodiversity, and poverty that biotechnology and "biopiracy" (the plunder and the theft of local biological resources) are tools of international social control.

> Africa is known around the globe for endemic drought, often accompanied by famines. Many outsiders have tried to help Africans overcome this continual horror but have failed … Other outsiders have used repeated African famines to further their own interests. The US government sent genetically modified (GM) maize kernels to Southern Africa in 2002 as food aid. Because anyone who works with famine relief knows that some kernels will be planted, not eaten, US government officials understood well the high risk, or rather certainty, of its shipments polluting the local genetic maize pool. The people of Zambia refused to eat the GM food, with its elected, popular president stating, 'we would rather have our people starve than poisoned.' The view from the inside of the continent looking out is that aliens have responded to drought and famine with inappropriate technology, expensive (highly profitable to some) unsustainable inputs, trade barriers against African goods, and more loans than grants for so-called 'aid' (ibid, 4).

Whereas Driessen and other skeptics have excoriated southern Africa for refusing this aid, few in this debate are really asking what people in Zambia want or see the broad tracks in history that Mushita and Thompson bring into relief. Namely, that Africa was not "found" undeveloped but in fact was colonized, substantial portions of its peoples were enslaved and shipped to far-flung nodes in Industria, where most died in misery on the way or once they arrived. Mushita and Thompson point out that slavery did not simply end by acclamation, but rather continued through the institutional and political-economic conditions that became slavery and colonialism's legacy and which promoted the "second onslaught against the continent [which] was, and continues to be the removal of Africa's minerals to industrialized cities in the North" (5). They write that Africa is now fighting against the third onslaught against the theft of African biodiversity, and point out that the largest threat to this biodiversity (worldwide) is through industrial agriculture which eliminates varieties in food staples, a community's self-sufficiency, and violates the biological diversity that has allowed many in Africa to survive the prior two assaults. This process advances through, among other avenues, the privatization and patenting of life and vital commons, such as seed, which favors affluent corporate actors that can use technology to change a gene to make thousands of years of shared cultivation their own. Then, as the seed and plants are made into patentable private property, they are no longer free, but

part of the flow of revenue (value) toward the centers of Industria. Thus, Industria, through striating biodiversity into manageable tracts of 100,000 acres of one variety of maize, organizes and domesticates Earth's (and Earth's poor citizens) biological defenses into a reservoir of commodities for profit much less than food. Indeed, countries experiencing famine are very often *exporting* food (Mushita and Thompson, 2007) which reinforces the fact that famine is not typically caused by absolute food availability but household capacity to command food—that is found in the multiple dimensions of poverty (Sen, 1999). Consequently, in order to consider neoliberal development and the promises of the counter-movement, we must forget or be disciplined into framing our thoughts of famine and disease in the South *without* colonialism and its neo-colonial legacy, such as through the World Trade Organization and biopiracy.

In terms of constructing an Other, people in the Global South are constructed by the counter-movement as subjects that have been barred from modernity's blessings because of the interference from Northern environmentalists. In the process, voices and recognition are denied to people who are in the South who are resisting global capitalism and even Western ways of being in the world in order to preserve their own way of seeing and being in the world.

The Southern Other, then, is constructed as a hapless group of people who were found poor and wretched, in need of toilets, DDT, and capitalism to move them from "backwardness" so they can join the hubs of power in "better living through chemicals" among other accoutrements of modernity. Because they are placed in the continuum of development, with the United States at the heights of development/progress/destiny, the failure of the South to climb to the same destiny implies that the Southern Other has neither political acumen nor an authentic self-realized vision of the Good Life outside of modernity and Western ways of living life and arranging political economy. Importantly, there has been increasing CTT sponsorship of African satellite organizations, but only to the extent that these satellites agree with the home CTT, modern ideals of progress and capitalism, technology, industry and social organization. Associations in public life and conversation are limited and determined by larger Industria, an economistic DSP, and the history of the world capitalist-system. Authentic connections and relationships and associations with the human and non-human actors of Africa itself are largely absent; we are in effect, only talking, not listening, and that is not conversation but dictate.

Nonetheless, it appears these satellite CTTs will likely be seen as authentic in their own right given the fact that the United States CTTs have been able to conceal much more inconvenient problems. Their development and the relationships that they foster may create a real social movement. Satellite CTTs will likely serve as "instrument[s] for cultural penetration and cultural dominance" much like the Christian Church and the education system (Rodney, 1982: 26).

Some of the most bewildering aspects of the counter-movement will very likely never be questioned in popular fora. The satellite CTTs say they are fighting against malaria, they say are fighting for human rights, they say they are fighting

poverty. These efforts, such as the Congress on Racial Equality (CORE) in Uganda and Africa Fighting Malaria and the Free Market Foundation of Southern Africa (FMF)—are all from or are heavily influenced by Northern CTTs, such as through funding and networking with CTTs like CEI, the IEA, and Canada's Frasier Institute. FMF doubts the reality and importance of climate change, the risks of DDT, and a host of other environmental problems evidenced by a long list of skeptical environmental articles on their website. They are fighting for privatizing as much of South Africa's health care as possible, and are working actively to entrench southern Africa further into the global capitalist-system. Jim Peron, a New Zealander from the Institute of Liberal Studies, wrote a feature article for FMF equating resistance to the global capitalist-system to apartheid:

> There are organised forces that rally around the idea that the peoples of the world should be kept economically separate. They don't want us to trade with one another. They don't want us to buy one another's products or hire one another for specific jobs. They argue that the races of the world should be kept independent of one another. They even claim it is necessary to do this to 'protect' the cultures of the different nations. They call themselves anti-globalisation activists. I call them advocates of global economic apartheid. It's true they don't go as far in violating individual rights as did the apartheid regime. But in other ways they are worse. The apartheid governments didn't try to stop various ethnic or tribal groups of the same race from dealing with each other. The Afrikaner could still sell to the Englishman and the Zulu could still trade with the Xhosa (Peron, 2004, online).

Consequently, just like the Northern sponsors and affiliates of CTTs in the Global South, the effort is to protect free enterprise and market capitalism, and draw Africa (in this case) further into the political economy of the North. Peron wishes to make the connection of historical apartheid in South Africa to resistance to global capitalism and Industria, but inasmuch as the Afrikaners were a force in the first wave of Industria's expansion in periods of colonialism, global capital fostered and created *actual* apartheid.

More visible skeptics, like Fred Smith Jr., founder and President of CEI, writes that privatization and free enterprise is the panacea for any environmental problem that he would acknowledge exists, such as depletion of rain forests and fisheries (not global warming). He writes that such environmental problems come from their:

> … open access, their common property status—not from any excessive demands. To realize how these problems reflect the lack of property rights, note that steel mills do not dump slag in people's backyards (where ownership protections are explicit) but do dump soot and acid residuals into the airsheds and waterways (where private ownership is absent) … *Our goal should be to allow more of the planet to become the moral equivalent of someone's backyard or pet and,*

> *thereby, to empower people to play a direct and immediate role in environmental protection* (Smith, 2002: 297, emphasis added).

True to form, the argument is to order and domesticate people and non-humans into the stria, or the homogenized lines and patterns, that Industria can use, and in this sense is anything but ecological protection. Instead this is more in line with the continuing deep anthropocentric move to annihilate associations with non-humans and non-living actors in the world. Notice the descriptor of "moral equivalent" which implies that non-humans should be more like pets, more ordered, made to bend to the will of utilitarian anthropocentric demands. Further, it should be noted that open access would be an irrelevant problem if it did not allow for "excessive demands." In any case, while Smith admits a few environmental problems, he sees them as problems because we have not assigned them modern control through enclosure, and the solution is to fully appropriate those elements of life and non-life *as possessions*. The desire for outright control supplants democratic discourse and consideration without hearing any authentic considerations from actors more affected by this expansion into the commons.

In sum, the counter-movement's propositions for public life and associations between the Global North and Global South, human and non-human from the counter-movement are founded on limiting and excluding certain considerations. These considerations include long-term political economic history (i.e., of slavery), development and progress as equivalent to affluence, while the counter-movement places poverty as undeveloped and discovered (not created), and salvation in the extension property control and enclosure of the commons—an expansion of predatory Industria as if it were an unmitigated benefit for everyone. Economism is indeed triumphant in these themes, relegating other ways of living and inclusionary associations to silence and this type of public discourse attempts to frame appropriation as freedom—and is riddled with infidelities to those that it claims to represent.

Indigenous Peoples

Hall and Fenelon (2004) note that indigenous groups form a global network of resistance to the world capitalist-system.

> These movements are so diverse, so fluid in organization, goals, and methods they all but defy summary. Probably the most salient difference between typical class based forms of resistance, as opposed to global capitalism forms of resistance is the emphasis on local community, identity politics, land claims, and rights to a variety of traditional practices, which include alternative family organizations such as matrilineality and/or polygyny, communal ownership of resources such as land, the use of land for sacred ceremonies, and indigenous knowledge, that occasionally includes use of psychoactive substances. Many

> of these practices contradict, challenge, or threaten deeply held values in state-based systems. *The most fundamental challenge to capitalism, though, comes from communal ownership of resources because it denies the legitimacy of private property rights* (156, emphasis added).

While these movements around the world are diverse, just as the tribes and indigenous nations themselves are diverse, they find themselves with a common bond of historical genocide, loss of land, and hegemonic cultural oppression with European colonial powers. Since environmental skepticism operates from a contemporary conservativism, it should not come as a surprise that skeptics look upon the legacy and potential of indigenous tribes as something that needs to be encompassed and absorbed more fully into colonial modernism. The threat to tribes here appears to come in at least two levels—direct cultural antipathy, and the diffuse efforts to emphasize the civilization-nature dichotomy (placing tribal peoples in the category of nature with the false promise of bringing them into civilization), both of which are discussed below.

Environmental skepticism has established a hostile position to American Indian tribes. Skeptic authors often point out that indigenous peoples were not only uncivilized but that European colonization and capitalism more humane, and even good for indigenous people:

> … we do not idealize primitive people (people 'more in harmony with nature'). Although we find little statistical information, we surmise that societies closest to nature, the most primitive, are generally the cruelest in terms of how they treat each other … European civilization in early days were certainly cruel by modern standards as a look at any castle's torture chamber will show. Yet, as civilizations became evermore sheltered from nature, as they created wealth and the 'Good Life,' they became—guess what?—more civilized. Certainly, inhumanity still exists in developed nations, but it is relatively minor. Although few people can look with total pride at the record of all modern people, statistically, democratic, high-tech, wealthy civilizations are relatively benign, very probably the most benign civilizations of all human history. Asmus (1993) puts it clearly: 'It is a plain historical fact that the treatment of many by man became conspicuously more humane side by side with the rise of capitalism' (Dunn and Kinney, 1996: 10).

Further, environmental skeptics Dunn and Kinney believe that environmentalists in particular idealize indigenous people because they have been insulated from the real brutality of indigenous cultures.

> Many people in modern civilizations have an opposite problem: they have been so sheltered from nature, from primitive cultures, and from their own history that they exaggerate the 'inhumanity' they find in modern societies. They glorify nature and primitive cultures. Theirs is the world of the idealist (ibid).

Thus, in the above quote indigenous peoples are primitive occupants of the state of nature. They are promised civilization if only they give up their brutal, backward, "inhumane" history and life-ways. The above utterly dismisses the genocide of American Indian people as important or relevant or violent, and certainly does not count the breach of sacred trusts and treaties with tribes as a violent history, since these were decided upon to bring the "savage as the wolf" (George Washington) into civilization and may even be a benevolent action of the modern industrial capitalistic state. In fact, Dunn and Kinney by saying that the wealthy civilizations (many of which have either a direct or intermediary imperial history) are the "most benign civilizations of all human history" imply that colonists did indigenous peoples a favor in this genocide—maybe something like "tough love." Of course, with friends like that … One is also reminded of the charge that empires are committed on the pretense of humanitarianism and "saving" groups who have large endowments of land or natural resources. More importantly, though, again we see that the discourse proposes that these conditions of extending modernity and capitalism and the state system (Industria) are in the best interest of the colonized.

Dunn and Kinney believe that environmental leaders "depict the American Indian as the ultimate environmentalist. They ignore his enormous influence on America's environment, despite his low numbers" (171). Thus, for skeptics, who are working to defend the dominant social paradigm and a possessive individualism—which could hardly be more counterposed to tribal social structures and governance systems—modernity is much more environmentally sustainable through the innovations of capitalism and protections that come from affluence. Further, they believe that American Indian peoples had the same, if not more, environmental impact than the modern industrial nation-state and its accompanying political economic apparatuses. Typically, the evidence for the ecological destruction wrought by tribal peoples is usually their use of fire to clear land (now realized as essential for some habitat like longleaf pine systems), buffalo jumps, and the mass extinction of megafauna during early occupation of the continent. The latter would likely be the most important and destructive of these charges, which cannot and should not be evaded. The idea of an essentialized ecologically-minded Indian is just as stereotyped as the "savage as the wolf" model, and should be carefully understood. However, to say that indigenous peoples were more destructive than modern industrial societies—which have developed nuclear power and weapons, ubiquitous chemical, toxic, and hazardous pollution (the underlying risk in the risk society), climate change, changes to global soil chemistry, freshwater depletion and massive change to hydrology, as well as the sixth great extinction—is hardly a generous distribution of history. Latour might call this a conspicuous lack of perplexity.

To the extent that the skeptics see indigenous people as linked with an essentialized nature, it is a small philosophical step for indigenous people to be cast as less human (the quote above: "inhumane") and less of a concern, because the overall project of skepticism is to annihilate the possibility of inclusive

associations with non-humans, salvage modernism and globalism, and reinforce the modernist dichotomies of control through a "hands off" citizenship with little to no obligation to ecological changes.

For some, this argument takes an evangelical turn, such as for Michael Coffman (1994) who equates environmentalists to a malignant pantheism that carries Satanist overtones. Peter Huber (1999) self-identifies his brand of conservative environmentalism as Judeo-Christian, and notes,

> In traditional Judeo-Christian ethics … one thing is quite clear: man and nature are not equal, not ever. David Gelernter sets out the argument in his 1996 essay, "The Immorality of Environmentalism" … 'The moral universe of Judaism and Christianity centers unequivocally on man. Human beings have rights and moral duties—kindness to animals being one. Animals have neither. The duty of kindness to animals is a duty owed not to nature but to God, a morally crucial distinction … *In the Judeo-Christian view, man is emphatically not part of nature*. *Human life has an entirely different value from animal life, and protecting and preserving human life is a moral duty that sweeps away all* "*duties*" *to nature whatsoever—that sweeps the very idea of* "*duties to nature*"' (164, emphasis added).

By extension, when skeptics see indigenous peoples as part of nature, then their ethical call has no obligation or duty to tribal peoples; to the extent that tribal people are fully incorporated into the ethical realm, they are expected to participate in the capitalist modern society. To the extent that tribal peoples resist this, they are cast into the state of nature as animals which are "entirely different" (Other). Also, the counter-movement could hardly be clearer than Huber's note above: "human moral duty … sweeps away all 'duties' to nature whatsoever." Associations to non-human life and certainly to non-living actors have no credibility and are not compelling in modernism, and no other values are permitted.

Because skeptics are coherent and unified in their movement to place the free market in a primary position in universalistic terms, contradictions are viewed with cynicism, and in some cases, antipathy. This is the second cultural threat. This book describes (Chapter 3) and elsewhere (Jacques, 2006b) that skepticism is designed to be a rearguard of the dominant social paradigm. Remember that the DSP includes the free market, private property rights, faith in science and technology (though we should now understand some tensions exist here), a fear of planning, individualism, and *laissez-faire* governance.

Tribal social organization and their historical non-human associations come into tension with nearly all of these values, and it should come as no surprise that opposition to the paradigm from a tribal level would probably be met with hostility. However, the point this chapter seeks to draw out here is the position of sustainability and history.

In the same way that skeptics see no problems with sustainability and are content with the dominant social paradigm, they also see little problem (in that

it needs redress) in the history of tribal-State relations, nor of the consequent natural resource policies of land seizure or resource leasing that result. Genocide, to be frank, is left to silent margins as demonstrated above, and this history is a non-problem along with environmental decline. This same discourse is visible in the politics of economic globalization which is having notable concomitant homogenizing effects on biological diversity *and* of cultural diversity in the world (Sponsel, 2000; Jacques, 2006a).

In some cases, such as in Coffman (1994) or O'Leary (2003), the potential for non-Christian values through Goddess worship or beliefs in Earth-based religious values are seen in the context of a religious or cultural war where the counter-movement sees their dominance threatened and argue for a complete abandonment of ecological associations. Given the preponderance of tribes that maintain traditional values related to Earth spiritual values, *and* the preponderance of non-capitalist political ecology, tribes may be uniquely positioned as contradictions to the counter-movement ideals. Indeed, Coffman (1994) notes that early conservationists and indigenous thinking were connected in a scandalous fashion, for example when he discusses Leopold:

> Aldo Leopold searched for a metaphysical explanation of the connectedness of all things in nature. He eventually became a convert to the Russian mystic Peter Ouspensky, who urged, along with transcendentalism, that all things in the universe are infused with spirit. Every particle of the universe, according to Ouspensky, was pulsing with consciousness. This reinforced Leopold's dawning sense of 'the indivisibility of the earth.' Such animistic beliefs are common to aboriginal religions. According to Stephen Fox, after his Canadian wilderness experience John Muir 'had more in common with Indians than with most civilized Christians' (72).

Coffman presents these connections to Eastern mysticism, among other things, as well as the "New Age Counterculture Movement" that has "propelled the fledgling environmental movement to dizzying new heights of god/nature worship, mysticism, and radical antimodernism" (73) as proof that environmentalism is corrupted. Coffman sees environmental concern as a movement that has "embarked upon a holy war against anyone they believed was destroying god [which is equated with nature]" (79). This "holy war" is justified by an anti-Christian morality and religiosity, which favors biocentrism and "permits no pro-human compromise" (91). Importantly, this has led for an ecological interest in indigenous cultures:

> Ironically, the biocentric blindness that causes these believers to glorify native cultures for their supposed harmonious life with the Great Mother Earth also has blinded them to the reality that those cultures never existed (91).

On the one hand, we can read the above statement of "those cultures that never existed" as a denial that the racist stereotype for the "noble savage" and "eco-

Indian" never existed, which is true in the sense that such racism is clearly an artifact of modernist prejudice and thinking straight out of Rousseau. Ironically, while the statement denies this first racism, it concludes with a different one—that globalism and modernism are the only ways of being and favors an erasure of possibilities of tribal life that hold different associations. These themes are quite common in the counter-movement, because while environmentalism has idealized tribal peoples—perhaps as a form of cultural angst related the historic cultural associations that tribes often hold with non-humans. The denial of different life-ways (ontologies) appears to come from a reaction to connections between modernity and ecological loss that the counter-movement wishes to wave away. But, as criminal as the first stereotyping of tribal people for these associations is, it is much more so to deny the possibility that tribal cultures and non-human associations have not and could not have existed.

Coffman then identifies research from Denevan that shows modified forests and the use of agriculture which had negative environmental impacts as justification for saying that "early American cultures," caused more environmental destruction than the European-centered culture that followed them. "In some cases these pre-Columbian Indians altered the environment more than the Europeans and their descendants have in the 500 years since Columbus landed" (Coffman, 1994: 91).

In the two aspects of the counter-movement discourse, we see an overt hostility to indigenous peoples, and a rigorous defense of the nature-culture dualism that comes with an overt admission that this dualism places human over non-human, and "civilized" over its opposite. The counter-movement indicates that the advance of European imperial violence and dispossession was a balm to the supposed ignorance and brutality (savagery) of tribal peoples who now have the promise of "civilization" held out to them like it was a gift they had been waiting for. The discourse—like that involving the Global South—indicates that Industria and its predation has been and continues to be good for those it consumes. This is another example of infidelity of representation sponsored by the counter-movement.

Women

The Counter-movement has mostly focused a great deal on development and economism, and through this focus has had at least two specific gendered concerns that emerge as most important. The first is population issues, where skeptics often deny that population is typically a concern, and infused in this discussion is the health and welfare of women in the Global South discussed above. The second concern comes from the specific issues of trace chemical exposure and the skeptical rejection that these exposures are harmful in any important way. Through trace chemical exposure politics, we find many gendered issues including breast cancer politics, the events leading to Love Canal and Louis Gibbs' activism, and the contamination of food, air, and water which are all played down or discredited.

The more interesting of these two directions in the counter-movement literature is on population. Skeptics regularly point to population as one of the identified key issues that figures in the mainstream (United States) environmental movement, but which the counter-movement thinks has been fully discredited because specific events warned of (famines) principally by Paul Ehrlich, Lester Brown, and Donnella Meadows' *Limits to Growth*. Oddly, conservative Garrett Hardin, whose most famous essay, "The Tragedy of the Commons," is squarely focused on the same Malthusian dynamic, is usually spared criticism.

Nonetheless, these major figures identify exponential population growth as a key threat to sustainability, but the counter-movement insists that Malthusian tragedies they warned of did not occur and the environmental movement *writ large* is therefore discredited. These figures—Erlich, Brown, *The Limits to Growth* team—are also the central controversial figures for ecological feminists criticizing population as part of environmental destruction. This is because population is immediately about women and children, and by positioning population as a matter to control, women are positioned to be controlled through population policies where the One Child policy in China is a cogent example. For example, the One Child policy has resulted in an extreme gender gap as that single child is pressured to be a male child and parents are pressured toward female infanticide, buttressed by the increased violence against women. Therefore, the fact that skeptics might be allies to ecofeminists is enough of a disjunction that it begs our attention.

This chapter does not have the space to recount the specific population considerations, but what is important is that ecofeminists like Betsy Hartman (1999) and H. Patricia Hynes (1999) have analyzed population problems as an element of gendered domination by the global male dominated political structure of patriarchy. It is useful to remember that this male dominated system is not simply "men" but a hyper-masculinized gender politics that allows for the domination of a specific masculinity to dominate other gender configurations, including other non-violent or homosexual masculinities. For an excellent discussion of this issue see Tickner (1992). Hynes writes in her criticism of the IPAT model[2] forwarded by Erlich and Holdren (1974):

> The appeal of IPAT lies in its simple, physical insight: All people use resources and create waste, and many have children who use more resources and create more waste. Complex, close-grained social and political factors that identify *who* among the universal P is responsible for *what*, and the *how* and the *why* behind much pollution—such as the military, trade imbalances and debt, and female subordination—are outside the scope of the formula (Hynes, 1999: 39).

For Hynes, patriarchal power allows population to be cast as a problem and justifies further excesses by those enjoying patriarchal benefits and silences the

2 Where I = impact on the earth; P = population, A = amount of goods per person or affluence/consumption, and T = technology.

agency of women and the political context that they live within as they make choices (or are forced) to have children. Mies and Shiva (1993) note that in population politics, women become "wombs and targets" objectified as perpetrators of world ecological decline, while they provide the production and reproduction of family and society.

At the same time, Julian Simon is perhaps most famous for criticizing Ehrlich and Brown and the *Limits to Growth* for looking upon people as a problem in the environment when he believed that humans are the "ultimate resource" (Simon, 1981). Of course, characterizing people as "resources" which are presumably to be used for another end is objectionable, but Simon does not leave the ethical debate to titles. In an interview at the CTT, Acton Institute on Religion and Liberty, he says the following:

> R&L: In China there have been coercive family planning policies in place for some time, including forced abortions. What kind of arguments do you give against state efforts to coerce couples into having families of a certain size?
>
> Simon: The first reason I oppose these coercive policies is because they are morally wrong. They deny individual liberty in one of the most important choices a couple may make—the number of children they will have. So I would be against this coercion even if there were an economic rationale for it. The most tragic aspect of the matter is that there is no economic warrant for forcing people to have fewer children (Liberty, 1995: 3).

Like Hynes, Simon notes that the minute a population target is set, then coercive and oppressive politics is afoot, and both reject population-focused politics on these grounds. Simon does not speak of women's rights or male privilege, but leaves the comment at the level of "individual liberty" and "choices a couple may make." Simon, in a fully expanded version of *The Ultimate Resource*, re-titled *The Ultimate Resource II* (1996), chides feminists for not seeing the conservative-feminist common cause after describing the authoritarian population policies of China:

> There is a puzzle here: Why do we not hear from the feminist movement about this violation of women's rights? Or from Planned Parenthood about this violation of reproductive rights? Or from the African-American organizations about the U.S. actions in Africa to coerce governments to reduce their birthrates? Noninterference with other countries is a nonissue in this context; Planned Parenthood has long been involved in international population-control activities. What's going on here? (571)

However, Simon appears to be purposely provocative here because he was fully aware of the other contradictions between his position and the feminist positions. Also, the work of Hynes and others already described indicates that there were

calls from feminists, but the call was specifically from ecological feminists, not US liberal feminists who are focused on domestic gender politics and who may be the most recognizable feminist voices in higher profile discourses.

The two perspectives—the skeptical environmental/cornucopian view that Simon represents and the ecofeminist perspective—are not compatible at any other level than a belief that focusing on population is wrongheaded. Simon believes population is not a problem because more people equals more ideas and more products that these ideas create, and on this basis, supported immigration as a way to increase wealth (Liberty, 1995). Thus, Simon ultimately is concerned that governments are getting involved in society and interfering with individual productive and consumptive capabilities to drive growth in capitalism. Conversely, ecological feminists are concerned that population policies place authoritarian controls over an already besieged female population, particularly in the Global South where population concerns are principally about the "bottom billion" [we might now speak of the bottom two billion in exactly the same way] who live in depravation and are marginalized in their ability to command food, space, and necessary living conditions. Ecofeminists place the burden on this poverty on a colonial history and a current neo-colonial capitalist-system. They argue that when population is the focus, the most poor people in the world who are saddled with ecological destruction and are expected (or made) to change while the privileged consuming classes consume more and more ecological space.

For example, Mies and Shiva contend that looking at population as the issue for carrying capacity obfuscates the predatory conditions that really allow for world ecological change, and therefore it is also clear that ecofeminists *are not skeptics* and should not be confused as such: "Most ecosystems in the Third World, however, do not merely carry local populations; they also carry the North's demand for industrial raw material and consumption" (282). Mies and Shiva, as well as Salleh (1997) and Hynes all call fundamental restructuring of an imperial global capitalism, patriarchal militarism, and a more emotive and even spiritual relationship with the Earth, whereas Simon is interested in expanding global capitalism, justifying the instrumental use (fetishizing) of the Earth as a commodity, while protecting industry from environmental claims that would challenge this ontology and political economy (see Simon, 1999). One argument made by Salleh in particular is that the movement of movements, which is to "embody" and "engender" global political economy in order to ground its politics in the labor and ecology that the world capitalist system requires, is directly counterposed to the dis-embodied conditions of global capitalism that Simon sees as natural.

The point of this discussion was to examine the interface between population politics in skeptical and ecological feminist positions, because on the face of this discussion we might have inferred that there was enough agreement that perhaps women were actively placed in the counter-movement's discourse as full actors and not essentialized Others. But, even when we engage Julian Simon's ethical discourses, he does not argue for women's rights, but individual rights commensurate with property rights and some abstract dynamic where the aggregate

of all people create ideas that are good because they ultimately add growth to capitalist production and revenues. When talking about family planning, he identifies "couple's" choices, not women's social or political-economic conditions that are unique. However, in a place where women do not even have the right to refuse sex from their husbands, a "couple's" choice may really be the "man's" choice. Much the same might be said for social systems where there is inadequate female education or health care. Thus, beyond the first position that population *problématiques* lead to oppressive politics, the two discourses disagree about what kind of oppression is empowered.

Consequently, we can reject the apparent synchronicity between ecofeminists and the counter-movement that fades away as soon as we look into each discourse and understand the reasons, assumptions, and goals of each agenda. How, then, are women discussed, and what are the implications of gender relating to the counter-movement?

First, we might look to the data in Appendix 1. Out of the 141 identified skeptical books identified in Jacques, Dunlap and Freeman (2008), ten women are involved with twelve books making up 8.5 per cent of the skeptical literature, and only three of these women authors write after 2000. Thus, the evidence indicates that the counter-movement is dominated by and almost exclusively operated by men.

The CTT, the Independent Women's Forum, provides an interesting starting point for looking at the counter-movement's consideration of women, ecology, and risk. Unlike the CTT Congress on Racial Equality, which started out as a progressive organization in the non-violent struggle for civil rights but later was reorganized and re-directed through the conservative leadership, IWF started out as a conservative organization aimed at mobilizing elite resistance against the feminist movement. Yet, CORE and IWF are similar in that they both *appear* to be focused on defending marginalized and underprivileged social groups while they actually are protecting privileged groups and promoting a conservative menu of projects. This is something that is not easily understood from either the CTT names or the front pages of their websites and documents. Yet, the IWF fits the model of a CTT described in Chapter 1:

> The Independent Women's Forum is a non-partisan, 501(c) (3) research and educational institution. Founded in 1992, IWF focuses on issues of concern to women, men, and families. Our mission is to rebuild civil society by advancing economic liberty, personal responsibility, and political freedom. IWF builds support for a greater respect for limited government, equality under the law, property rights, free markets, strong families, and a powerful and effective national defense and foreign policy. IWF is home to some of the nation's most influential scholars—women who are committed to promoting and defending economic opportunity and political freedom (Forum, 2007).

At least since 1997, IWF has made "junk science" a principal interest, such as through their conference at the National Press Club called "Women's Health, Law, and the Junking of Science." Ruth Conniff reported on this event through *The Progressive* where the moderators, such as AEI fellow and affiliate of IWF, Christina Hoff Summers, "shut up" questions dissenting from the day-long program of skepticism about health risks to women on various fronts (as "junk"). Conniff noted that the dissent that was shut down indicated exactly what the idea of "junk science" represented politically for women:

> The Independent Women's Forum's whole mission, however, is to point out just how pervasive and damaging feminist ideology and "the politics of victimhood" really are. For the last few years, the group's members have been busy attacking everything from affirmative action to the Violence Against Women Act to the notion that women have not achieved pay equity with men. The idea that women are not yet equal is itself "victimology," according to the group's press kit, which proclaims: "Since 1992, the Independent Women's Forum has been taking on the old feminist establishment-and winning" (Conniff, 1997; Ebscohost online).

Thus, according to Conniff, IWF is working for power and privilege of the status quo by framing complaints against the status quo of gender relations as "victimology." Apparently, much of this victimology is blamed on college Women's Studies departments who enforce a regime of radical deconstructionist politics, *in addition* to the knowledge claims that come from studying gender in society.

In a nutshell, this branch of the counter-movement argues that feminist claims make women dependents and—anyway—the claims of feminists are false. This is reminiscent of Queen Gertrude's well-known quote in *Hamlet:* "The lady doth protest too much, methinks." And of course, the lady protesting too much ends up being Queen Gertrude, which would be IWF in this metaphor as they criticize feminist critique for "junk science" (say in terms of breast implants and trace chemical exposures, etc …) while themselves using a base of reasoning that extends only to the boundaries of conservatism. Either the counter-movement has a fix on Truth, there is such a thing as "conservative science," or there is something missing from the analysis. Conniff reports that, like Herrick and Jamieson (2001) in their content analysis, the term "junk science" itself is a social tool to silence dissent. Conniff's report reads:

> Denouncing "junk science" is their [IWF] latest crusade. And they repeat the term so often it becomes a deafening drum beat. … "What's starting to happen is that this term, 'junk science,' is being thrown around all the time," Finley [one of the dissenting panelists who the organizers attempted to silence by trying to wrest away a microphone and marginalizing the concern for breast implants as "junk science"] says. "People are calling scientists who disagree with them purveyors of 'junk.' But what we're really talking about is a very normal process

> of scientific disagreement and give-and-take. Calling someone a 'junk scientist' is just a way of shutting them up."

Much like Herrick and Jamieson, Conniff reports that the words "junk science" are an attempt to discipline women and others concerned about environmental impacts on women's health into silence. And, this silence serves specific interests:

> "It's a pejorative term mainly used by industry and its friends to try to trivialize evidence about the risks of medical devices, drugs, and other consumer products," says Sidney Wolfe, director of Public Citizen's Health Research Group. Wolfe has been denounced as a "junk scientist" for promoting the idea that women have been harmed by breast implants. "But the public is right to be concerned about products that have caused harm, or haven't been adequately tested," he says. By promoting the idea of "junk science," the Independent Women's Forum is doing just what its members accuse the much-maligned "feminist establishment" of doing—trying to silence disagreement and promote an ideological agenda that could warp science and public policy. But, of course, to accuse them of that would only be the typical, paranoid feminist response (Conniff, 1997; Ebscohost online).

Consequently, women are framed (often by other women from the counter-movement) as dependent and hysterical, wrapped up in phobias that should be dismissed. Scientists and women activists then are actively disciplined, though not all adhere to this direction, to "shut up" and go along. In this discourse, perplexity and difference are specifically conditioned, and the number of voices that are allowed to comment in the counter-movement is limited to those who agree with its demands for obedience to Industria and the patriarchy that it accompanies. Also, the discussion about public life (our life together) is really an ultimatum, where perplexity and accommodation have been directly supplanted with singular ideas of the good and what associations are legitimate. Responsibility and obligation, indeed citizenship, are trivialized as "victimhood" and complaints are disciplined as hysteria while conversations of duty are dislocated by the demand for gross accumulation and possession.

Nature as Other in Skepticism

A final category of the Other in the counter-movement is non-human nature. Provided the deep anthropocentric ethics of the skeptical environmental counter-movement, the dismissal and disposal of non-human nature as Other should be already be plain (see for example the quote from Huber above in the section on indigenous peoples). However, beyond the ethics already discussed, non-human nature is the ultimate Other in skeptical discourse.

Several philosophers and cultural critics (Burchard, 1996; Eckersely, 1992; Fanon, 1963; Mies and Shiva, 1993; Plumwood, 1993; Plumwood, 2002; Merchant, 1989) have commented that rationalism and cultural dualisms, such as nature/culture and savage/civilized and developed/undeveloped (as in the above discussions), have conditioned a "mastery of nature" and others who are caught in a construction of disempowerment. These master/slave dichotomies condition hierarchy and the power to abuse—abuse women, abuse indigenous peoples, abuse the Global South, and abuse non-human nature *because* they are designated as less-than and inherently inferior. If a human or a non-human is constructed as inferior or less important or good, then it is of less consequence to dispose of the Other without much thought and certainly without much restraint. According to Winona LaDuke, our ethical challenge comes at least in part from having a settler mentality of using up, and moving out to the next "frontier." But, the frontier is in our mind, not on the land, and eventually we are accountable to the land. But, in order to curb this destruction we have to recognize "all our relations"—which includes all the four leggeds, winged, two leggeds, and finned relations (LaDuke, 1999).

The deep anthropocentrism of the counter-movement finds this consideration designed to halt "progress" and contradictory to modernity—and therefore their own possessive individualism. Consideration of the non-human Other is part of what is implied by skeptic Dixie Lee Ray (1993) who titles her book in reference to considerations for non-human nature in *Environmental Overkill: What Ever Happened to Common Sense?* This is also captured in John Berlau's (2006) book *Eco-Freaks: Environmentalism is Hazardous to Your Health!*, and Bast, Hill, and Rue's (1994) book entitled *Eco-Sanity: A Common Sense Guide to Environmentalism.* All of these skeptical books take on an incredulous tone that non-human nature has gained even the *possibility* of recognition and non-economic and non-instrumental value. They showcase episodes of an overzealous and inept (mostly United States) government stepping on the common [man] to protect a wetland, a snail darter, or some other space or biological entity that they consider to be unworthy of recognition. Consider Bast, Hill and Rue's plea that, while the "crisis of the month club" has exploited people's fear of environmental problems to generate money and support (because these problems, like global warming, ozone depletion, acid rain, deforestation, threats from pesticides, threats from nuclear power, problems with cars, the potential of resource depletion, threats from plastics, threats from electromagnetic fields, oil spills, and toxic chemicals are all manufactured or seriously over-exaggerated), real environmental problems are created by a lack of ownership.[3]

> It can hardly be a coincidence that virtually every serious environmental problem, historically and today, occurred or occurs in those areas where well-defined systems of property rights are lacking. Indeed, upon further reflection, it

3 See also Smith (2002), which in above section on the Global South.

> becomes clear that this is the essence of pollution and wildlife problems: *No one owns the resources involved, and the consequently no one protects them*.
>
> The failure to protect nature is commonly blamed on the free enterprise system. Since markets fail, the argument goes, we must rely on a non-market mechanism: government intervention. But this reasoning misses the essential point: It is not *markets* that have failed, but the *judicial system* that defines and enforces rights. In the discussion that follows we ask whether a system of rights to clean air, clean water, and wildlife could be established and enforced within the context of a free enterprise system (Bast et al., 1994: 216, emphasis in original).

Of course, each author in this book has a tie to a CTT (in this case, either the Montana-based Property and Environmental Research Center, or PERC; or the Heartland Institute), and they believe that environmental protections would be far more effective with more intensive free enterprise system. Making wildlife property is the most alarming of their considerations, where the problem of lost species is simply a matter of assigning better ownership. Under this type of proposition, wildlife would only be as valuable through fetish, and the idea of "will" in non-human actors is supplanted by sponsorship, possession, and commerce. Wolves and muskrats and field mice and elephants and California condors, mountain sheep and mountain lions and everything in-between are assumed to be vacuous and devoid of their own purpose or even intermediary ecological functions. In short, non-human nature is designated the ultimate Other, the ultimate possession (Plumwood, 1993).

So the biosphere is left outside of consideration as an empty space to occupy and use as we see fit—as property. No other term disembodies agency from the life that fills the Earth so fully, as property is utterly without agency, and its purpose is to be used. Private property is to be used to the exclusion of even other humans, and as the expansion of economic globalization marches onward, the commons become enclosed, used, and disposed of as property. We might think that this is one reason the counter-movement sees no threats to sustainability, since the disposal of property is normal and encouraged; and, it is a personal decision, not a public one.

For these and other related reasons, international relations (IR) scholar Paul Wapner (2002) also argues that non-human nature is the "paradigmatic" or ultimate Other. Wapner analyzes the discursive politics that socially constructs non-human nature as Others. He warns us against privileging nature as a "given," and, he contends that doing so enlivens anti-environmental discourses:

> For example, every time environmentalists call for respecting nature and justify a given policy decision based on what is "natural," antienvironmentalists can rightly respond that since there is no authentic entity called "nature," we need not treat the natural world with any special kind of respect or follow the dictates of any given line of policy. Trees, animals, canyons, and rivers are just like

> anything else: we should feel free to exploit them as we see fit. At the extreme, this view can justifiably maintain that since there is no single, unproblematic understanding of "nature" and nothing outside of human values to tell us to do otherwise, we can freely choose to pave the rainforest, wipe out the last panda bear, or pump high levels of carbon dioxide into the atmosphere. The only things preventing us from doing so are our own interests, desires, or beliefs, and these differ depending on who is expressing them (176).

Focusing this self-interest and intensifying the modernist approach to political economy and world politics via free enterprise, as Bast, Hill, and Rue and the counter-movement generally argue—as above, makes sense to protect non-human nature from public tragedies of the commons. Wapner continues, that we all tend to "reify our own interpretations of the world" and then forget we have done this, then act as if what we have construed is objectively real and immutable, that is, that it is real with or without our personal interpretation that constructed it to begin with. He insists that his brand of post-modernism does not call into question the physical reality of the world, but the dimensions of social context that create the meaning we find in physical reality. Part of this social context is deeply ethical, and forgetting about our own socially designated interpretations becomes, "an ethical failing insofar as it inevitably silences the views of others. Reification is a form of hegemony in that it asserts authority in a way that delegitimizes others' perspectives on human experience and the world in general—a type of 'violence' many postmodernists find unacceptable" (178).

Wapner then goes on to say that non-human nature has been violenced in just this way:

> Instead of toning down one's voice to listen to the other-than-human world, when it comes to nature, postmodernists are happy doing all the talking. There is seemingly no need to heed the voice of the nonhuman, no reason even to assume that, from the vast world of rivers, chimpanzees, rainstorms, and orchids, anything is being said. Postmodern critics look at the nonhuman world and say to themselves that they are essentially looking in the mirror. There is nothing "out there" with its own authentic voice, because as soon as we imagine it expressing itself, we recognize that *we* are verbalizing, and therefore constructing, its "words." (179)

Thus, Wapner indicates that this assumption of human-centeredness is problematic, but that all efforts to define non-human voice are suspect—save one. This one aspect is that we can assume that non-human authentic voice will be concretely silenced, even beyond the symbolic negations in discourses, if flora and fauna are not permitted to exist. If we take Wapner's eco-criticism seriously, we cannot assign a voice to non-humans without authentic skepticism, but neither can we silence and impose our own voice over it.

Latour adds to these thoughts in an interesting way. First, he points out that we cannot be sure of any voice. And, just because humans can talk, this does not mean we are having meaningful discourse even between ourselves using speech, and at the same time, just because non-humans do not necessarily talk does not mean that meaningful discourse is not occurring. In any case, we are reliant on many representations of voices, human and non-human. Thus, we must be skeptical of all representations, human and non-human, relying on good-faith witnesses and a publicity of how such representations are made. As an Other, non-human actors are taken for granted and their voice is obstructed and substituted by human voices just as hegemonic voices supplant the voices of human Others. Wapner really opens up the consideration that even though we may socially condition our understanding of what authentic voices are saying, we nonetheless do violence to the penultimate Others when we extinguish them from the Earth. Authors in the Counter-movement see no *possibility* of voice in non-human nature and have distanced themselves so far from this reckoning that the conceptual annihilation of non-humans is sometimes couched in terms of a *right*.

This is part of the pathology of Industria, technological optimism, cornucopian thought, economism, and modernity itself—that "all our relations" are represented as instruments and the system is hardwired for denial of reciprocity, dependence, and love or virtue for our relations in the biosphere. Plumwood writes,

> The face of global capitalism shows the lineaments not of ignorance but of denial. As the pilchard disaster illustrates [these fish were devastated by a virus introduced by commercial salmon farmers in South Africa which then resulted in a mass starvation of Fairy Penguins where Plumwood lived at the time in Tasmania], the ecological relationships its disembedded economic system creates are irresponsible, unaccountable, and especially for those in privileged contexts, invisible (Plumwood, 2002: 15).

At least one reason that Industria is allowed to be disembedded is because it has been able to displace the voice of non-humans and the discourse about public life in Industria has been limited to economistic parameters. While economism and Industria thrive off of the conditions of rationalism that promote the decision to pursue profitable farmed salmon at the expense of the pilchard and the penguins, this type of reason has environmental skepticism as its logical conclusion.

So long as the pilchard and the penguins are invisible, there is no change in the important associations with non-humans, and there is no (short-term) threat to sustainability in, say, the changing structures of marine systems themselves because these systems are unimportant, non-vital, replaceable instruments within the modernist moral universe. The structure of Industria and its world capitalist-system, of modernity, and of Enlightenment-type rationality, all promote an invisible and disposable ecology made up of constituent non-human strands of life on Earth. The fact that life on Earth has been constructed as disposable, and that this process has so permeated our modern consciousness and political structures

makes it a radical departure to even raise questions about "all our relations." Through such depoliticization the existence of the pilchard and the penguins is destabilized.

Further, inasmuch as the humans are reliant on marine systems (such as the structure of fisheries, the climate stabilization from ocean currents, the production of oxygen from algae, and the function of disease as it is introduced by red tides and rising sea temperatures as in the case of typhoid) then the de-politicization of non-human's wellbeing threatens people as well but displacing voice in the discourses empowers physical displacement of some environmental problems where industrial fisheries, for example, simply switch to other stocks or fish down the food chain until some rock of the physical world insists itself into these political representations. Then, we might ask "why did we not give authentic audience to the fish?"

Re-polititicizing the discourse of the biosphere, then, is a liberatory and counter-hegemonic tactic that will prove essential to creating alternative class alliances that Gramsci saw as essential to resisting hegemony. Specifically, working to extend recognition to the interlocking domination of the global poor, indigenous people, women and the Earth, we can create effective political alliances and public action based on guardianship and virtue that stands in opposition to wanton exploitation.

In sum, we see from the above analysis of counter-movement discourses, that when the counter-movement actors discuss the global poor, indigenous peoples, women and children, and the Earth's non-humans, there is a specific infidelity to these very voices in the counter-movement's representation of them. In each case, the counter-movement argues that modernity and globalism is in the best interest for each of these groups, while supplanting the voices from these groups and entities that might well disagree to their own disposal. Such infidelity demonstrates that a more open and inclusive set of representations in public discourse are needed for more democratic and non-violent associations in public life.

Summary

The counter-movement is using leading conservative women, and a women's CTT, to confront the advance of concern over potential threats to women's health and political positioning, just as the counter-movement has placed African-American conservatives to defend against the advance of progressive racial claims. These groups have even planted satellite CTTs in the Global South to defend the current political ecology. Of note, in the course of several years' investigation into CTTs, the author has not discovered any CTT representing indigenous groups, however. Nonetheless, these CTTs and other representatives in the counter-movement have placed exactly those most marginalized and most threatened by Industria in positions to defend Industria and its advance, and thereby use the master story of Industria and colonization to appropriate resistance against dominion.

We might think of this appropriation of resistance as an elegant example of Marx's idea of false consciousness in action where these CTTs made up from marginalized groups work to strengthen the structure and power that positions and keeps such groups on the "lower rungs" to begin with. If it is not false consciousness, then a more cynical view might explain such strategic placements of women against women's liberation, and African-Americans against anti-racism, and the Global South as against Southern advances for more Northern equality as the creation of a new lumpen-proletariat, assuming that defending status quo power and privilege is not in the interest of marginalized political groups. Either are plausible, but false consciousness is more likely however, leaders like Innis, and Michelle Bernard of IWF, appear to really believe that their advocacy represents the "good" and the "good social life." Perhaps, these leaders have been convinced of possessive individualism, and the counter-movement has then supported their efforts with money and network connections as a matter of opportunity.

Nonetheless, more structurally, the counter-movement has specifically positioned *counterintuitive* actors of change in places where knowledge claims can be turned on their head and dismissed as these knowledge claims threaten Industria and elite privilege in society. The context of interaction is distorted between these CTTs and the efforts that one may assume they represent, i.e., Third World empowerment, African-American empowerment, and women's empowerment, to hide the configurations of infidelity. Most newspaper readers and t.v. viewers, when they see CORE leaders interviewed, will not be tipped to the fact that CORE is ideologically positioned as contrarian to both environmental conditions and the efforts of the original intentions of CORE founders. If the ideological foundations of these CTTs were exposed in more publicized and transparent discourse, then the skeptical position loses the appearance of authenticity and credibility.

However, this part of political life and context is not publically understood, and along with the positioning of skepticism, the counter-movement is able to frame the Other as hapless undeveloped Africa, savage Indian, women as psychosocial phobic dependents of victimology and hysteria, and nature as disposable property designed for possession. By fleshing out and re-politicizing these issues, we can see that the biopolitics and wellbeing of these groups in particular are precariously mediated by the counter-movement's projects that seek to maintain power and privilege. If we think about the converse implications of first reproducing the dualized Other, then appropriating their resistance, modernity becomes a salvation, while industry, commerce and global capitalism are framed as the hero to the underprivileged and bottom rungs of world politics—at the same time that the counter-movement works to delegitimize claims and complaints that come from below.

Chapter 5
Environmental Skepticism and the Dynamics of Collapse

> Ultimately, there is no institution, neither concrete nor probably even conceivable, that would be prepared for the 'WIA,' the 'worst imaginable accident,' and there is no social order that could guarantee its social and political constitution in this worst possible case. There are many, however, which are specialized in the only remaining possibility: denying the dangers (Beck, 1999: 53).

If readers have been unconvinced that this book has fulfilled the "so what" question about skepticism's counter-movement thus far, perhaps this chapter will—because the ultimate consequence of being mystified about the nature of ecological changes in critical *life support* systems is that life is no-longer supported in various forms, depths, and patterns. Right now the world is already in crisis, and there is little need to wait for some oncoming apocalypse, but things appear to be getting much worse because neoliberal globalism and its logic are protected from critique—and therefore restructuring and rearrangement of the way we live in the world. It is protected by the set of dominant social values in the DSP and problems resulting from this are denied by projects like the skeptical counter-movement so that the imperial and expanding apparatuses can continue to consume and displace. We no longer have adequate life support systems in place for the Florida Panther, or the sawfish, the whale shark, the polar bear, etc, This list could go on for some time, and indicates at least one depth and layer to which our failure to live within the means and dynamics of ecological processes goes toward right now. No predictions of collapse are needed because collapse is happening right now as much of the world literally and fundamentally comes undone in the Sixth Great Extinction (Vitousek et al., 1997).

The above quote from Beck refers to the dangers produced by "first modernity" where modernity's attempt to exert super-control over nature and people, has resulted in what Beck calls a "world risk society" where *uncontrollable* and irreversible comingled transnational dangers are a result. His hope (and assertion) is that this generates a cosmopolitan politics below the nation-state level where transnational world citizens exert more scrutiny on modernity thereby creating a second, more reflexive modernity. Further, modernity itself creates contradictions where modern firms like insurance industry firms refuse to insure climate-related risks or nuclear facilities demonstrating that the risks of modernity are being forced upon modern institutions, like it or not.

Short of this, however, denying and protecting first modernity is an obvious effort of the skeptical counter-movement. Because the counter-movement works

hard to suppress key discourses, such as the sustainability of modernity, this chapter takes the opportunity to try and ask some of the questions we are not supposed to ask. We will look here at the idea of civilization collapse.[1] However, we will not be evaluating the estimated oil currently in reserve, or the specific projections of global water scarcity, or the loss of old-growth forests, or look at any statistics whatever. Instead this chapter will focus on the dynamics and discourses of collapse to argue that modern hubris—the hubris that indicates contemporary industrialized societies can not perish or catastrophically change—is misplaced. The arguments here indicate that many perspectives tell us we should take the prospects of continuity for current world populations, in and out of industrialized countries, seriously. Statistics have a powerful way of focusing discussions on the date on "peak oil" rather than understanding that the date does not matter; and, if someone predicts one date and then the collapse does not come at that specific time, the whole lot of concern for sustainable dynamics goes with it, castigated as another prophecy failed. But the dynamics of oil require little future predicting—it will become and is becoming exhausted (see below). Oil is a finite resource, if we use it; perhaps we should think ahead and have some alternative ways of generating energy, maintaining transportation and mobility, and otherwise supporting ourselves and others. Further, dynamics of collapse help us ask quite a different question to the date of peak oil, which is "what happens" when societies neglect the role of adapting to changes in ecological dynamics?

Exhaustion and Civil Discourse

This chapter is meant to explore essentially two problems. The first problem is the irrevocable issue of what is at stake for the transnational public when confronted with the skeptical counter-movement or movements that operate under similar logics. This problem is collapse of civilizations. In addition to the very real security threats that come from marginalizing life on earth, we are confronted with another threat that is quite plain: not adapting to the changing world we live in together. Not adapting to environmental change or creating too much change has historically resulted in de-population through mortality or emigration—though it is unclear how successful migration from global ecological change could be.

Abrupt collapse has been implied in discussions about sustainability, especially those discussions which surround resource depletion (Meadows et al., 2004). There were complaints from multiple camps that the *Limits to Growth* work used population as an oppressive device against women, and that it did not allow for the adaptive features of humankind (Holling and Gunderson, 2002). Of course, the counter-movement may illustrate the power of the maladaptive features of our current lives as well. Notably, these discussions, and the *Limits to Growth* work

1 The author does not wish to make a distinction between civilization and societies, or to imply what societies are considered "civil"—rather the terms are used interchangeably.

was responded to by numerous skeptics like Herman Kahn, Julian Simon and several others who argued that this was the epitome of "doom and gloom" and "doomsaying" making the skeptics "doomslayers" of faux prophets capitalizing on our fear. We are told that environmentalists and ecological scientists are shouting "fire" in a crowded theater and are therefore alarmists for even raising the issue of exhaustion and adaptation. Do skeptics have fire alarms in their own homes, and if they do, do they value the voice of such an alarm when it sounds? Sometimes there is no fire and we must work in exasperation to silence the alarm—after corroborating our own views that there really is no fire. But sometimes there is a fire.

Indeed, research in a top journal by Turner (2008) compares 30 years of observations to the models in the 1972 *Limits to Growth* (LTG). The findings indicate that these observations closely track the LTG "standard run" model which puts "overshoot and collapse" midway through the 21st Century. Turner warns that this adds some level of validation to the most startling claims by LTG, despite the claims by skeptics that LTG was "proven" false (many claimed that LTG saw an overshoot and collapse in the 20th Century, but LTG did not make this claim). The only way to really validate LTG models is to wait and see if such collapse does occur, but Turner hopes we are wiser than this and that the international community sees enough potential in the proposition to begin changing course.

In any case, like Johnston et al (2006), we might be better off thinking of "exhaustion" as a term more appropriate, and layers of exhaustion in particular are proposed in Text Box 5.1. Exhaustion implies the idea of depletion, where, for example, there may be much more oil in the world we have not discovered, but this is pretty unlikely and currently there are various pressure points that have created the first layers of oil exhaustion *in our lives*. Exhaustion also refers to a "wearing out," and in this context, ecological change may exhaust our ecological life supports, more than simple scarcities of resources. Thus exhaustion includes all these ideas including ecological changes that are more relevant to societies and collapse than simple scarcity.

Text Box 5.1 Layers of Exhaustion

1. Increased difficulties in obtaining a resource, such as sudden increases in price, labor, or capabilities needed to command the resource; non-humans using the resource may be specifically pressured and deprived.
2. Reduction of choices as what was formerly available disappear in areas, deprivation still avoided for most humans, but non-humans begin to face deprivation through loss of habitat, water, and other key resources taken to compensate for the first layer problems. Non-humans begin to suffer deprivation.
3. Deprivation of the margins of global human society.
4. Widening circle of deprivation out of the margins, exacerbated by hoarding and reverse quarantines of the affluent, that impose deprivation on more and more actors, including surviving non-humans.

Thus, there may indeed be more oil, but right now we are living with increased prices and pressure to move to alternatives. That might be the first layer. A second layer of exhaustion may be a reduction of choices available for alternatives as one aspect of ecology changes, such as the oil scenario. During the first or second layer of exhaustion, we may see more oil come online for temporary breathing room temporarily reducing prices, but the dynamics of using the oil have not changed and we should be getting prepared for deeper layers of exhaustion, not a reprieve from it in the long run. This aspect is one reason why it is not helpful to put a timeframe on depletion, because it may fluctuate and fool us, and there are large uncertainties in our understanding of key conditions underground or underwater, etc. However, if changes to the dynamics of using the resource do not occur, the third layer of exhaustion occurs where some actors go without the resource, and some of these actors may perish as a result, especially if such deprivation affects critical life support. If there are still no adaptations made, it is possible that the circle of actors going without and living or dying with deprivation will widen until it fully encompasses even the core elite who will likely exacerbate exhaustion through reverse quarantines (Szasz, 2007). Since these reverse quarantines are already occurring, it is possible that we are deeper into the exhaustion of some things being quarantined than perhaps was thought.

The threat of not adapting is an evolutionary problem though, since we should all know what happens to firms, organizations, individuals, organisms, institutions, households, villages, communities, nation-states, regions, or civilizations that do not adapt—they become some artifact of history. Skeptics argue that these global environmental problems are inauthentic in one way or another, and that they do not represent a public interest; thus, interventions in these problems to allow mitigation of them or adaptation to them are irresponsible and damaging obstructions to the market.

Some scientists in the 1960s such as Paul Ehrlich and Lester Brown have long warned of impending collapse, with a metaphor that is something like the human bicycle hitting a wall and ending. However, rather than a wall, collapse seems to be more like a "falling away" where the metaphor is a rug with a thread being pulled or a steep slope that becomes more and more irresistible towards the bottom, eventually ending at a canyon that we and our associations fall into. Civilization mortality or reorganization occurs at this point. Exhaustion puts pressure on the margins first, but the insulation from exhaustion in the core continues to stave off adaptation, and exhaustion then worms its way deeper into our life together with increasing deprivation. Again, at some point, if the resource is critical enough, whole new societies may have to form, if there is enough left from the prior regime to allow this.

Some parts of the past may conditionally live-on but in a new order, in new regimes, in new groups, and in new worlds. When ancient societies talk of previous worlds, this might refer to the collapse of previous social orders, which seems to very often include loss of population (much death), loss of organization (loss of community and law), and emigration (loss of place, former subsistence).

Consequently, we are left not with a question of what will lead up to global population collapse and death, but how do we adapt to keep the current world from fraying so badly that our lives *together* now remain tenable. One answer is to radically restructure the world political system away from the hierarchies of modernism and the metabolism of Industria.

To adapt, history, philosophy and socio-political science indicate clearly that if we ignore the social structure that drives unequal exchanges (core-periphery relationships) and the marginalization of others, we will not have adapted at all but simply "shifted the deck chairs on the Titanic" as they say. Thankfully, the North is not a fully homogenized block, but a powerful set of nodes that can be changed, and perhaps there is a possible good, transnational future that can be made through transition rather than the misery of further collapse. But to do this, it is incumbent upon the powerful in the world to change and thus far they are not going peacefully.

To successfully adapt to global problems means that we must have something more than one-way conversations between what is true, who counts in the world, and what the Good Life is about. To open up our public life to more inclusive structures and rules for consideration, we may actually get somewhere in adapting to global change, because accountability starts with a discussion. However, in order to get to a discussion, actors must want to talk. Right now, the people in places like the World Economic Forum ignore the World Social Forum, but the social group must be ever-watchful of the economic group. In order to get to discussion, we will have to demand that law and governance be accountable and operate through more than a one-way press release. Discourse can be liberatory, but only if even the most powerful actors feel that they are actually responsible to others in the discussion.

For example, in the Diné (Navajo) peace-maker courts, when someone has done something wrong against another, the peace-maker court holds session between all involved parties. The one who has transgressed must take responsibility for their actions, and the court is not dismissed until this is done and the crime's consequences are accepted by all. Discussion then is not about the transgressor denying they committed a crime, but eventually owning-up to that crime in order that change and healing take place. The person who commits the crime, though, lives in a community that makes life difficult for that person if they fail to respect the discussion. It is time for the North to listen to the demands of the rest of the world, or Industria will chew its way outward until it really does find a cliff and the world is fully undone. But long before that time, life in these circles will have lost much of its meaning, and perhaps that is the worst of it.

The counter-movement denies the reality or importance of problems of the collapse of modernity and decries attempts to even talk about such an issue. Yet, there are so many multiple corroborating perspectives about the need to mitigate and adapt to global structural changes to critical life support systems. Even if some spasm of collapse fails to appear and all these different perspectives are wrong, which is possible, if critical life support systems change, the *way* we

live life will be changed regardless. Even as this chapter is written, the Orlando *Sentinel*, had a large political cartoon with a fellow surrounded by a gas hose and a water hose aimed at a giant head (presumably the figurative Orlando citizen), with the captions "High fuel prices and water restrictions: Hosed." These are signs of exhaustion from our surrounding ecology, but we have not really had rich discussions about how to change the way we live in a way that would respect the dynamics of ecology, especially including the needs of non-humans.

The Central Floridian subtropical climate has lots of rain. Still it has begun to encounter at least the first layers of water exhaustion and probably the second layer. In a 2007 speech by the St. John's water district director, it was stated that there would be no more water for growth by 2012. But the director urged the audience not to fret because they were in the process of tapping another source. Instead of changing the dynamics that tapped out water in a subtropical climate to begin with, the St. John's district is ignoring the first layer of exhaustion and is looking for the second. It turns out that other districts and authorities also want the water the St. Johns wanted to tap, and now there are conflicts. This is a wet climate that is facing water shortages—perhaps studies in sustainability are studies in irony. Partially, our water situation is explained by the fact that the region spends a majority of its water on watering lawns. Worse, we are growing our national lawn ecology famously, which requires not just water but toxic petro-chemicals for fertilizer, pest and herbicides, and labor—without which the lawn fails to be a velvet carpet of uniformity that "lawn people" require (for one of the most compelling discussions on "lawn people" see Robbins, 2007).

Changing this dynamic, for example, means that we should change the lawn ecology to something closer to xeriscaping while reforming our ideas of "anything goes" local development. Meanwhile, it is very tough to resist the lawn ecology because home owners associations, which are often divorced and antagonistic to the actual home owners, will fine home owners if they have a poor lawn.[2]

Indeed, people in Orlando may be "hosed" but not for the reasons implied by the cartoon. The cartoon implies that the consequences of water and fuel exhaustion are the reason we are in trouble. But it is worse than that. Instead, we are hosed because of our inability to root out and change the dynamics of Industria. As hard

2 In this development, my grass died within months with no sprinkler system to regularly and evenly water a lawn that would die in patches without it; having refused to put chemicals on it, the lawn which is a non-native St. Augustine grass is vulnerable to pests and weeds if it is not supported by industrial forces. Having called the lawyer who runs the homeowner's association to ask what options were available, and whether a less water dependent variety like bahia (itself still a problem grass, ecologically) could be planted, the laywer replied, "that's white-trash grass," and "that's for people in trailer parks..." The lawyer informed me that he could not plant anything but the St. Augustine's. Incur a violation of these rules and a fine is issued. If the fine is not paid, ultimately the association's lawyers can sue an individual and then put a lien on his or her house. Individually we can avoid living in something like this, but structurally, millions of people in the region and elsewhere live exactly this way regardless of what we may decide to do as individuals.

as it is to challenge the lawn ecology, it is harder to challenge the brute power of developers, and this observation has traction for more than just Central Florida. Even in the face of a hard limit like water exhuastion in the St. Johns district, we have utterly failed to raise the issue of extirpating the lawn in order to continue to have a reasonable abundance of water—in a subtropical climate. This is supportive evidence that we are living in a period where human exemptionalism (see below) may be at its height.

The counter-movement argues fiercely that impeding capitalism and its expansion through environmental concerns is a "war against progress" (Meyer, 1979; North, 1995). If collapse is at stake, or maybe it is not even collapse but some variation on the theme, prudence demands we ask "progress toward what?" In Orlando, we continue progressing towards a horizon of sprawl that is fully dependent on oil-based transportation, developers can take whatever they want (essentially), they bulldoze their lot and burn the resulting pile; we are progressing toward and deeper into water exhaustion for the region; we are progressing toward a further and further degraded Everglades through a tyranny of small decisions (the water from the district feeds the Everglades) (Odum, 1982); and, we are progressing toward a culture of extinction as we extinguish other non-humans in this landscape of destruction. We really must have a much better, more rich and empowering discussion and ultimately social action *against* this kind of one-way dictum—say, in the case of St. John's, much of what developer's say goes, and economism is fully triumphant. It may be that things will not change until disruption of the system takes place, such as through occupation of the coasts, sit-ins in critically imperiled mangroves, civil disobedience in court rooms—all perhaps mounting towards support for general strikes until the industrial monologue becomes an actual discussion. Right now, however, there is not nearly enough support for this kind of action, probably because the changes to ecology are distanced and we do not have to have our lives disrupted.

Suggestions for a better democratic conversation are made in Chapter 6, but so long as Industria and modernism rule, action will very likely have to come before general discussions because the world capitalist system is not interested in many other values other than economism. Until then, "all our relations" are left to deprivation and extinction, and, so are the rest of us at some point.

What causes civilization to collapse and how does the counter-movement mystify civilization threats and connections between globalism and modernity? What are the implications for failing to create transnational adaptive governance to environmental exhaustion, including ecological change?

Much of the intellectual work on collapse is framed around the terms "civilization" and "society." The term is meant to usually refer to human social groups coherently organized in a specific ecological place. Yet, Latour and other philosophers have challenged our conceptions of firm boundaries so that we might also think of civilization as our full set of human and non-human chosen associations, our built network of identities which are blurred more than they are crystallized and clarified. And, again, inasmuch as the world is experiencing a sixth

great extinction of life on earth and these associations are being erased, we are clearly in a civilization collapse, a Dark Age. But even under the narrow classical ideas of civilization, the dynamics of collapse require us to consider the problems seriously and attempt to wrest away power from globalism and Industria as they push civilization to the flirtatious edge of a canyon we refuse to concede exists.

The Skeptical Environmental Counter-movement: What is at Stake?

Part 1: Globality of Threat

When we take up the notion of collapse, we pick up the spirit of what the counter-movement has successful injected into public discourse as "doom and gloom." Immediately this phrase is so disempowering that there may be friendly readers of this book who will skip or dismiss this section. It is such a potent pejorative, that anyone or idea connected to the figurative assault is immediately precluded as rational, plausible, or credible. The pejorative of "doom and gloom" indicates through symbol a flight of irrational fancy, and many scholars and thinkers readily disassociate themselves from ideas of severe social spasm or civilization threats when talking about even the most potent poisons to life on earth. To be saddled with the label of "doom and gloom" is to be framed alongside the prophets who stand with sandwich boards on the side of the street warning of apocalypse—or worse, the leaders of throngs of people who wrongly agree to some suicide pact to avoid the coming of the end of the world. The ideas of threats to civilization, in this way, have been effectively tamed, if not totally neutralized and shelved in popular discourse, meanwhile we have not really dealt with the dynamics that underlie the calls for concern.

A first point, is that the world is no longer made up of exclusive, discrete groups, but the world is organized as a set of very large systems within globalization—the attendant processes of global capital and Industria as discussed earlier in conjunction with local, regional, national and transnational civil societies operating in inventive and new ways. Thus, some of the fresh conditions that come from globalization are not secular in any way—they are utterly global. Even when talking about disease, epidemiologists, such as those who study influenza, cannot think in terms of localized effects because diseases now shift with ease between continents through transnational travel.

Consider this: in 2007—16 years after the end of the Cold War—the Bulletin for Atomic Scientists moved the "doomsday clock" from seven to five minutes until "midnight." Midnight is the figurative moment of collective human destruction, and global civilization collapse.

> As Eugene Rabinowitch, one of the cofounders of the Bulletin, wrote, "The Bulletin's Clock is not a gauge to register the ups and downs of the international power struggle; it is intended to reflect basic changes in the level of continuous

> danger in which mankind lives in the nuclear age, and will continue living, until society adjusts its basic attitudes and institutions. As inheritors and trustees of the Clock, we seek to warn the world that this level of danger has escalated precipitously" (Bulletin of Atomic Scientists, 2007b: 67).

If we stick to the pejorative skeptic's rhetoric against the possibility of modern collapse, then figures no less than Stephen Hawking and Sir Martin Rees (Master of Trinity College at the University of Cambridge) of the Royal Society, become caricatures, making us fools if we stop to listen. However, this is a dangerous metaphor for the clock, because we might also see the doomsday clock as something like the evolutionary function of pain—when we feel pain, it is there to warn us of something hurting our bodies, like a burn. Block out the pain of the burn, we may not remove our hand from the stove because we refuse to listen to the message. These folks are observers, witnesses, to "basic changes" to human potential; and, they are not alone.

This highlights the point that the "politics of the pejorative," inasmuch as they discipline those who see modernity's contradictions, they institutionalize the refusal to listen, *the* principal skill in public life. Listen to what the *Bulletin* authors are saying. First, they have added two new fundamental threats to humanity—climate change and "biological security" having to do with genetics and biological manipulation. No longer is nuclear warfare the *only* "worst imaginable accident" as Beck phrases it. The clock moves closer to midnight in part because we have multiplied the "human made threats to civilization," where the "threats of climate change are nearly as dire as those posed by nuclear weapons" (Bulletin of Atomic Scientists, 2007b: 66). In terms of biological threats, they warn that:

> Unlike the biological weapons of the last century, these new tools could create a limitless variety of threats, from new types of "nonlethal" agents, to viruses that sterilize their hosts, to others that incapacitate whole systems within an organism. The wide availability of bioengineering knowledge and tools, along with the ease with which individuals can obtain specific fragments of genetic material (some can be ordered through the mail or over the internet), could allow these capabilities to find their way into unspecified hands or even those of backyard hobbyists (Bulletin of Atomic Scientists, 2007a, online).

They report, for instance, that scientists in Australia "accidentally" created a new and virulent mousepox virus when they were "attempting to genetically engineer a more effective rodent control" (ibid). The ability to reach into the genetic structure of life on earth, the Bulletin notes, provides great advantage but—all the same—edges us closer to midnight because it allows intentional or unintentional, lethal or non-lethal (e.g., sterilization that may affect entire ecologies) ability to destroy human civilization *and* non-human life.

But, the clock is still just one message, a heuristic of threats. There are other voices from other perspectives that offer the same categories of warning, adding

to the perplexity and layers of corroboration that add credibility to the proposition that modern society faces a globality of risks that may cause it to collapse. Consider again the Hopi. In *The Book of Hopi*, the threat of collapse is offered in several ways. First, it is offered as history, where Hopi creation stories place us in the Fourth World, the other three had been destroyed by human avarice, greed, and forgetting the creative sources and unity of life on earth while pursuing exclusionary individual gains. Second, collapse is offered as prophecy in the context of Hopi spiritualism, where humans are an inseparable part of the same cosmic stamp "rooted in the soil of this continent, whose growth is shaped by the same forces that stamp their indigenous seal upon its greatest mountain and the smallest insect" (Waters, 1963 at x in the introduction). Hopi stories and traditional life see a complex array of actors in the world, many of whom are simple, dead objects to modernity. "For to the Hopi the cornstalk, the talking stones, the great breathing mountains—all are significant and alive, being mere symbols of the spirits which give them form and life" (125).

To break this tapestry is to destroy the basis for living in the world, and "They remind us we must attune ourselves to the need for inner changes if we are to avert a cataclysmic rupture between our own minds and hearts" (Waters, 1963). Waters believes we will mostly reject the Hopi attempt to "Reassert a rhythm of life we have disastrously tried to ignore." For most people in modernity, Waters warns:

> Nor will the Hopi view of the universe as an inseparably inter-related field or continuum be quite palatable to those who tacitly accept the role of man as a rational entity created to stand apart from nature in order to control its politically ordered cosmology with an imperialistic mechanization (xi).

But, it is exactly this process that has drawn out the secretive Hopi traditions to be revealed to Frank Waters, to whom thirty elders worked to produce the *The Book of Hopi* and whom agreed to its contents—it was their "book of talk," their part of the discourse about collapse. Thus some readers will see this as an irrational voice, and certainly the Hopi traditions do avoid rational*ism*, but if we ignore their voices we impoverish the public discussions and also set ourselves up for hubristic, catastrophic loss. The Hopi elders did this to warn humanity that it is on a cataclysmic path that ignores the lessons of losing the other three worlds, and denies our elemental associations to the non-human world, perhaps viewed as an ontological mutualism. This Fourth World will end as the races of the world, which were created together, descend into continued alienation of each other and the non-human world, instead of world harmony and unity that the Hopis see as the mandate of humanity. The end is described as World War III.

> The United States will be destroyed, land and people, by atomic bombs and radioactivity. Only the Hopis and their homeland will be preserved as an oasis

> to which refugees will flee. Bomb shelters are a fallacy.[3] 'It is only materialistic people who seek to make shelters. Those who are at peace in their hearts already are in the great shelter of life. There is no shelter for evil. Those who take no part in the making of world division by ideology are ready to resume life in another world, be they of the Black, White, Red, or Yellow race. They are all one, brothers (Waters, 1963: 334).

The Hopi prophecy offers insight that comes from a people who have lived and learned on the fragile desert mesas of Arizona as one of the first people of this continent, distilled through over a thousand years of history, perhaps much longer. It is also consonant with the reasoning of many others that come from very different perspectives in that modernity has denied non-human associations in order to control them, division has been bred and ruthless imperialism has been a result, rending the fabric of life. The Hopi stories indicate that there is a price to be paid and that there are consequences for radical exclusion. Even the Bulletin of Atomic Scientists position themselves in a way that sounds something like the need for a more peaceful set of associations where, "Turning back the Clock will depend on *humanity's* ability to think in new ways about how to cooperate to achieve common goals" (Bulletin of Atomic Scientists, 2007b: 70, emphasis added).

And, in Jared Diamond's (2005) book, *Collapse: How Societies Choose to Fail or Succeed*, he recounts the history of collapse among several societies, and finds that all of these societies collapsed for a conjunction of reasons, including climate variations, soil degradation, and deforestation. But all these societies that collapsed, did so first because they ignored the signs of trouble in these critical life support systems for one reason or another and continued on a road to ruin, thereby "choosing to fail." Diamond believes that we are globally on a similar road, and therefore one of the key tasks for environmental governance is to take notice of changes to critical life support systems, and arrest their decline at the very least, and reinvigorate them to the extent possible in the best cases. Diamond writes in the *Environmental Change and Security Report:*

> Our world is interconnected and interdependent, like Easter Island's 11 clans. Today, we face the same problems—loss of forests, fisheries, biodiversity, fresh water, and topsoil—that dragged down past societies. But for the first time in world history, we are producing or transporting toxic materials, greenhouse gases, and alien species. All these environmental problems are time bombs. The world is now on an unsustainable course, and these problems will be resolved one way or another, pleasantly or unpleasantly, within the next 50 years (2004: 8).

Unlike Easter Island's clans, he notes that we can look to the history of Easter Island for lessons and wisdom in averting some similar, grave insecurity. In (2006b) I wrote that:

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3 See the discussion of this very issue in Chapter 6 by Szasz.

> Skeptics however wish to postpone this change. Their placations sound good to the elite who are part of the dominant world order. From Diamond's lessons, this skeptical song is like lulling the boiling frog to sleep, ignoring that someone put the frog in the pot to begin with, and then telling the frog that things are, "in fact," getting better all the time (97).

The next section takes this analysis further, exploring global issues of sustainability as discussed in Diamond and by Sing Chew (2001; 2002; 2004; 2007). Then governance and power within a world capitalist-system are discussed.

Part 2: Human Exemptionalism and Collapse

One reason we might globally fail to adapt to ecological change is a socially developed blindness that Dunlap and Catton (1979) describe as "human exemptionalism" which assumes humans or specific societies are exempt from the demands and realities of ecological principles or limits, and therefore have no need to adapt like all other organisms to evolutionary pressures. This paradigm is a standard function of core powers that use the flow of resources often from outside their own nodes since the people in these core powers do not see ecological changes occurring as a function of everyday life. Everyday life in industrial, core power cities, goes on through people getting their food from the store, their fuel from a pump, and their household energy from a distant and abstract "grid" that sources its own fuel from coal and uranium mines that are, by definition, somewhere else.

For many people, this exemptionalism is not something that is necessarily their own making, but is part of the political-economic history that they have been born into. One of the reasons this exemptionalism occurs, appears to be the assumption that complex societies are more robust and resilient than others, and that technology and the structure of their everyday lives that does not include interacting with water or energy sources separate them from the vagaries of less complex societies. However, the resilience of industrial societies is largely unknown because they have only existed for 200 years, while collapsed civilizations that fill anthropology books often lived for thousands of years.

In part, we have forgotten some important keystones of human history which empowers the sensibility that "what is here has always been here, and will be here in the future."

The skeptical work of Huber and Mills (2005) is consonant with sociological exemptionalism. They argue that humanity has tapped into a perpetual supply of energy, because we can use energy to seek out more energy. They describe this process as "power in motion" which pursues "power standing still." If we locate this power within Industria, Mills and Huber make perfect sense because the core power nodes and elite in the world capitalist-system pursue the energy and material in the periphery to feed the machinations of modernist modes of production and mass consumption. Huber and Mills see this vision as liberating for humankind *en masse* from the demands of ecological limits, where the use, accumulation,

expansion, and predation of and for energy will free us from not just non-human nature—but they believe this dynamic has liberated us from the confines of the Second Law of Thermodynamics:

> End users consume increasingly compact and intense forms of high-grade power, relying on suppliers to pursue and capture increasingly distant, dispersed, and dilute sources of raw fuel. The gap is forever widening, as the history of oil extraction reveals, but that doesn't stop us—the more energy we consume, the more we capture. It's a chain reaction, and it spirals up, not down. It is, if you will, a perpetual motion machine (Huber and Mills, 2005: 3–4).

Of course we can devise a motion machine, and we ourselves as life forms can appear to run against entropy—at least until we die—if we consume and use enough energy to temporarily offset the entropic losses of our metabolisms. This goes for individuals and civilizations.

So long as a civilization can expend enough energy to maintain its complexity (organizational energy) and its metabolism, it can carry forward in time. If a civilization, however, uses more energy than it has, entropy—perhaps like karma—catches up and the civilization either needs to expand outward and appropriate more "power standing still," change its metabolism, or collapse. This logic propels imperialism because the world capitalist system that is consuming its own energy capital will eventually run out, and it will need to continue to move outward to find more power to consume. Without this logic, a society would need to maintain a leveled-off growth and maintain a steady-state level of throughput (take-make-waste).

In order to think more concretely about this process of what happens to "complex" societies when entropy catches up to them, consider the work of Joseph Tainter (1988). Tainter defines complex societies as those that have social hierarchical inequality and functional heterogeneity in a society (e.g., specialized divisions of labor). He notes that complex societies tend to "expand and dominate, so that today they control most of the earth's lands and people" (24). Tainter plumbs the archeological record to understand the collapse of complex civilizations, such as the Mayan and Roman empires, the Harrappan Civilization, Mesopotamia, the Hittite Empire, and Minoan Civilization among others. Consistent with all the writers highlighted in this section, Tainter sees collapse as *political*—which means it is about choice and is manifest in social change.

> Collapse, as viewed in the present work, is a *political* process. It may, and often does, have consequences in such areas as economics, art, and literature, but it is fundamentally a matter of the sociopolitical sphere. *A society has collapsed when it displays a rapid, significant loss of an established level of sociopolitical complexity*. The term 'established level' is important. To qualify as an instance of collapse a society must have been at, or developing toward, a level of complexity for more than one or two generations. The demise of the

> Carolingian Empire, thus, is not a case of collapse—merely an unsuccessful attempt at empire building. The collapse, in turn must be rapid—taking no more than a few decades—and must entail a substantial loss of sociopolitical structure (Tainter, 1988: 4).

Tainter then looks at many cases of collapse to develop his theory of why and how collapse is chosen. The first lesson we get from Tainter's work is that complex societies collapse *as a regularity*. "Collapse is a recurrent feature of human societies, and indeed, it is this fact that makes it worthwhile to explore general explanation" (ibid, 5). In other words, complex societies are ephemeral, fragile creatures. To think that modern Industria and its specific nodes of power are immune to collapse—say, Orlando, Florida—is to expand human exemptionalism from ecological pressures to exemptionalism of its own history.

Tainter outlines several principal theories of civilization collapse, and first among them is "depletion or cessation of a vital resource or resources on which the society depends" (42). This theory posits that a civilization is subject to,

> gradual deterioration or depletion of a resource base (usually agriculture), often due to human mismanagement, and the more rapid loss of resources due to an environmental fluctuation or climatic shift. Both are thought to cause collapse through depletion of the resources on which a complex society depends (44).

This is also related to the argument that collapse comes from a loss of traded resources, networks, and external sources because civilizations always rely on access to material from outside their geographic region to maintain their metabolism. Therefore, as control of necessary imports is lost or becomes vulnerable, so does the civilization. Consequently, the continuity of these vital goods is globally important. Nonetheless, Tainter identifies several important problems with this theory of resource exhaustion. First and most importantly, he argues that this theory assumes that civilizations sit idly by as their future slips away, but that complex civilizations are designed to *solve* exactly these problems. Thus, he rejects a simple resource exhaustion theory of civilization collapse because complex human organization is specifically designed to avoid this most basic civilization problem. However, Tainter assumes that complex civilizations remain adaptive, and that the configuration of power continues to be adaptive in the face of changes in the world.

Importantly, the study of skepticism demonstrates that information flow and centralized decision making can themselves be circumvented by cognitive and political denial that there are problems that really threaten the civilization. Not only is the elite resistance to change irrational on this level, but it should be understood as a way to frame what rationality and reason mean to social action, thereby providing a cognitive structure to justify what would otherwise appear quite insane. It is possible to imagine the current counter-movement as the

latest incarnation of what may be a recurring political psychology, as well as an explainable behavior of elites who do not want to lose what they have.

Consider the idea and political economy of a world capitalist system where the purpose is an endless pursuit of capital—or as Huber and Mills put it above, "power in motion" as it pursues "power standing still." Core powers very often rest on a colonial or intermediary colonial legacy of advantage and accumulated capital wrested from "overseas." Perhaps, if Tainter is right, this is done to solve some political problem at home by providing the home citizens with more wealth by taking it from elsewhere, as the Roman Empire did to pacify peasants and Roman social elite together. At the point that Industria runs out of a world with frontiers the ability to support such a system then is lost, just as the means for the societies "overseas" was lost as their wealth was exported. In the end, Industria consumes the ecologies abroad in peripheral zones, looking to deeper layers of the periphery (e.g., genetic resources) to sustain its hunger but eventually deprives both the periphery and core from key life support and ecologies. Industria then exposes the periphery and the elite Industrians to the end logic of an endless pursuit of energy and capital:

> A complex society pursuing the expansion option, if it is successful, ultimately reaches a point where further expansion requires too high a marginal cost. Linear miles of border to be defended, size of area to be administered, size of the required administration, internal pacification costs, travel distance between the capital and the frontier, and the presence of competitors combine to exert a depressing effect on further growth. … Once conquered, subject lands and their populations must be controlled, administered and defended … Ultimately the marginal returns for the conquest start to fall, whereupon the society is back to its previous predicament (125–6).

Immanuel Wallerstein (1989) has made much the same proposition, but puts this analysis on world systems, such as the current unified capitalist-system, where after the world system expends its energy to keep up its various metabolisms the system itself collapses. On the one hand, then, Industria may be its own worst enemy. Refusing to understand its own limits very well may result in the collapse of the present world system of trade and international relations through present-day core powers. This is much like Beck's (1992) second modernity, where first modernity and its attempt to control people and non-human space, generated so many deepening complexities and crises that the modernity breaks under its own logic.

On the other hand, this also implies a collapse on a global scale with attendant globalized misery. We could see the current misery in the system, particularly in the Global South, as such collapse. Discussions about sustainability then are about attempting a smooth transition to a system that "maintains the middle" (consumption levels) and converts the present political-economic structures into institutions that impose more ecological limits as a way to stem the unraveling of the world system. If Tainter is right, then there are current signs of declining

marginal returns in minerals, energy, and agriculture, but if these declines can be smoothed to a "normal human condition of lower complexity" (Orr, 2002: 1458) we may be able to avoid a globalized "worst imaginable accident," or collapse, or Dark Age.

In summary, the work of Tainter is taken to indicate that we ignore the history of collapse at our own peril, and that the world system is the most extended and complex perhaps in the history of social systems—even if the projects of this complex social organization are to reduce the incoming complexity (diversity) of that which it uses—people and non-human nature. Thus resources and energy are a critical element to the idea of supporting complexity and come back as a recurring theme for sustainability. Ecology, therefore, matters even in Tainter's model of how complexity is achieved and supported, abstracted through the notion of energy. And, even if we dismiss the resource depletion hypothesis (and this chapter has provided reasons that rebut Tainter's main complaint of this rejection), then the sheer complexity of Industria implies a heavy burden to sustain. Modern complex societies, therefore may be better at adjusting to the complexity needed for sustainability, but they are also more global and more intense, subjecting them to the same logic and systemic threats that Tainter suggests for past civilizations. And, if we look at the mounting complexity that comes from using complex social structure to solve problems, then as more and more complexity is needed to stem increasing problems, we are justified in asking—where is the public? Who is feeding the machine and who are they responsible to? Is it, in fact, possible that civilizations collapse because their social systems do not allow for authentic discourse, remembering that complexity is defined by social hierarchy? In this way, we might logically propose that social hierarchy in itself is a dysfunctional way to solve problems because it displaces them and diverts accountability that might otherwise inspire more radical shifts and save the people, but in some new order.

Further, two other very important contributors to the study of civilizations over the long duration of history add to our ideas of collapse. The first is historian, Clive Ponting, and the second is sociologist, Sing Chew, founder of the journal *Nature and Culture*.

Ponting, in his enormously important *A Green History of the World: The Environment and the Collapse of Great Civilizations* (1991) takes a bit of a different approach. He structures his thinking around key conceptual issues for changes in human history, starting with a dependent relationship between society and the material conditions of ecology in terms of things like food and energy. He traces the most important ecological-social changes in agriculture and industry, urbanization, pollution, and population support. He concludes that, "The foundations of human history lie in the way in which ecosystems operate" (393). For Ponting, human history is about the ecosystem limits on human populations, and "the story of how these limitations have been circumvented and of the consequences for the environment of doing so" (ibid). Ponting points out the first great transition (circumvention) was moving from hunter-gatherer groups to settled agricultural areas that released some pressures on food production, "but the end result was

to disrupt or destroy natural ecosystems, since all farming involves creating an artificial environment to grow selected plants and tend domesticated animals" (394). This transition was experienced around the globe. But the second transition to industrialization supported by fossil fuels was less evenly distributed, but allowed for unprecedented exploitation of Earth's resources using this industrial capital and machinery to alter ecosystems for human production. Ponting describes this second transition as one that has fostered control and domination in a new way across the earth, starting in 1500 with Europe, then North America, and then Japan:

> Since 1945 these countries have been able to ensure their continued domination of the world's economy not just because of their overwhelming political, military and economic power, but also through international institutions and control over aid and surplus food distribution. Until the last four or five centuries all societies in the world depended almost entirely upon the resources they could obtain from within their immediate area—trade was limited and transport was poor. *Since 1500 Europe and the industrialized countries have had access to the resources of the whole world*, first to provide a wider variety of food, then important staples and second to provide a source of raw materials (and also markets) for continued industrial expansion (397 emphasis added).

From this perspective, to deny global environmental change denies history as much as science, but the denial of history—as we see from Ponting's comments—also protects the layers of social strata that have been created and recreated through a long human history of interaction with each other and the Earth. In an essay in *Environment*, Ponting provokes just this kind of question:

> Is it possible to understand the present situation in the Third World—its poverty and dependence on cash crops and commodity exports—without understanding how Europe remade not just the political but also the economic and social relationships in the world after 1500 (Ponting, 1990)?

In denying global environmental change now, the counter-movement would also be denying or ignoring the legacy that has led up to these structural ruptures in the Earth system:

> How can someone put into perspective the current deforestation of the Amazon basin without considering what has happened in Europe, China, and North America? Originally, 95 per cent of western and central Europe was covered in forest, but that amount has now fallen to about 20 per cent. Ten thousand years ago China was 70 per cent forest; it is now about 5 per cent. In the 100 years after the 1790s, about three-quarters of the forests in the United States were cleared. How can anybody understand the current problems of soil erosion,

> desertification, and the salinization and waterlogging of irrigated land without studying the historical examples of all these events (Ponting, 1990: 4–5)?

Perhaps most importantly, in rejecting global environmental changes now, we reject the importance of environmental changes in the past to past societies—such as the Mesopotamian soil erosion and salinization, Mediterranean deforestation, or Mayan swiden agriculture-driven environmental losses. In the ashes of civilizations that are the subject of archeological digs, we find a consistent record of environmentally-linked collapse. These collapses are mournfully reminiscent of the stories we hear today regarding changes that principally interrupt the food chain—such as climate changes that are the harbinger of changes in water supply and temperate growing seasons, soil depletion, and erosion. Drawing on Ponting, the history of environmental change and social collapse tells us about the scope and depth of meaning for global environmental changes today. He reminds us that,

> To give an accurate chronological account of human history in 30 minutes, one would have to spend 29 minutes and 51 seconds on gathering and hunting groups, a little more than 8 seconds describing settled agricultural societies, and a fraction of a second considering the problems of the modern industrial world … Without a doubt, it was the most long-lasting and well-adapted way of life in human history. It also was one of great ecological stability, involving minimal environmental alteration and damage. *And it was adaptable enough to enable humans to settle almost every area of the globe and find enough food to survive* (Ponting, 1990: 5 emphasis added).

Our experience with environmental change is so deeply connected with the sustainability of human societies, and the world of humanity has only experienced life as a globalized industrial world for a literal blip of human existence. Further, the burst in modern population and intensive environmental exploitation is a product of this tenuous moment built on a foundation of hydrocarbon energy, industrial scientific developments that have deep and unknown impacts on life's processes (such as potential epi-genomic changes and epidemiological threats from synthetic chemicals), and a flow of power that organizes all of the above. This means that the globalized industrial world capitalist-system that is changing key factors in even just one element like food production (think of freshwater, most of which goes to agriculture, climate change, the global chemical changes in soil from green revolution technologies and approaches, and the biodiversity that *is* the food chain) is conditioned on the previous ecological limits not applying to humanity anymore, as if by magical decree. If these ecological limits do apply, they will not just impact some local civilization, but will have unknown impacts in the world economic relationships of food from cultivation, production and manufacturing, to export/import chains.

Consequently, the arguments from skeptics and the counter-movement that argue that technological changes save human lives, forget that human lives have

increased as a matter of some very tenuous claims on the world ecology operating like an enormous experiment with accumulating and aggregating trace chemicals, deep intrusions into the system of life, tinkering with chemistry of no less than the global soil, atmosphere and ocean. Further, within the counter-movement and its philosophical and even ontological identification with modernism, there is an implication that humanity is defined by its industrial existence (see for example DeGregori, 2002) which then means that humans are defined by what could hardly be a single breath from our larger body of existence.

Until now, this chapter has speculated on the systemic implications of ecological change. However, the work of Sing Chew draws the history of social collapse and human environmental history together through the study of world systems extending to the past 5,000 years. Thus, Chew's work helps us understand what systemic changes in ecology mean to *linked* social networks and civilizations. His analysis of Dark Ages and ecology come from an empirical examination of ecological degradation within the various civilizations he studies and comparing the onset of ecological degradation and the Dark Ages that these societies experienced.

Chew's contribution here is in the analysis of Dark Ages, which are fundamentally linked to ecological change:

> Over world history, the relationship between culture and nature has been punctuated with periods of ecological degradation and crisis. Given these outcomes, the history of human civilisations can therefore also be described as the "history of ecological degradation and crisis." It is the latter moment, that of ecological crisis commonly known to historians as the Dark Ages, that is of interest to us. For during these periods of Dark Ages or ecological crisis, we find political-economic and ecological patterns and trajectories that are very different from crisis-free periods. In this regard, Dark Ages are at times exhibiting ecological degradation, climatic changes, reorganisation of socio-economic and political structures, and hegemonic challenges. On this basis, Dark Ages offer us a window into moments of *system crisis and transformations* (Chew, 2002: 333 emphasis added).

From both Tainter and Ponting's historical lessons, it is clear civilizations regularly experience periods of crisis. Chew places these crises in the context of ecological crisis, and then articulates their operation within social systems. Specifically, Chew uses Wallerstein's notion of world system. In describing non-capitalist world systems that have multiple cultural locations, but united in a single interconnected economy with a division of labor (the core and periphery). Chew recognizes a pattern that links the expansion of the core with more intensive ecological changes and ultimately an ecological crisis. In combination with economic and social degradation, ecological changes (like deforestation, soil depletion, climate variability) characterize Dark Ages as a convening set of crises that lead to collapse or severe social reorganization (i.e., deurbanization, loss of

artistry and a skilled class, loss of information diffusion, etc …). Most important in Chew's findings are that these Dark Age crises are not limited to a locality as much as they are system-wide. To the periphery, such a crisis may come as a relief where pressures and extraction from the core are relieved. This may allow both the ecological systems and the peripheral areas to reorganize, though Chew notes that Dark Ages typically last no-less than 500 years. If the relevant social world system is the modern capitalist world system and Industria with nodes of power all over the world and a global division of labor, and this system follows Chew's observation of past models, then these ecological changes may trigger another system-wide crisis, though recovery in the periphery would be much more confined given the expansion of the core.

> … excessive ecological degradation leads to environmental collapse, and along these lines, there are certain phases of environmental collapses that occur mutatis mutandis with civilisation demises. This relationship between environmental collapses and civilisation demises suggests that when societal relations with the natural environment become exploitive and unsustainable over time, a social system crisis is triggered (Chew, 2007: 3).

Thus, throughout the history of human civilization, these world systems have been driven by a core power using the resources from a different area, then environmental exploitation precipitates degradation and collapse, which then creates social crisis. The key to whether or not this happens, Chew argues, is if the civilizations adapt and change the pattern of ecological stress:

> It is a crisis moment that can lead, perhaps, to system collapse, depending on the state of the natural environment at that point in time, the cultural willingness and foresight to make changes in lifestyle and social organisation, and, perhaps, the level of technology and knowledge available to address the conditions of the ecological crisis. The rarity of such occurrences in the last 5,000 years of world history suggests the resilience of the ecological landscape to human assault. In addition, it also underscores the different time duration for our understanding of the interaction between culture and the natural environment—measured along ecological time—compared with political and economic activities that are necessarily gauged along social time (Chew, 2002: 337).

Thus, in order to avoid system collapse Chew is contending that changes to important social structures are required, and this is much of what the counter-movement is fighting against. Notice too, that a key element is knowledge to address the ecological crisis; presumably this would also include the ability to incorporate that knowledge into effective action against the crisis. But, the counter-movement denies the relationship between ecology *and* human systems. Skeptics Dunn and Kinney (1996) argue that using resources through industrial modernity actually increases ecological resources:

> Industrial nations are expanding their forests, increasing many wildlife populations, improving soil productivity, enhancing water resources, and increasing biodiversity. In short, they have already evolved past mere sustainability to resource multiplication. Paradoxically, Third World nations, while using the least total resources, are depleting natural resources. Third World nations are threatening far more species of plant and animal life than industrial nations.

Further, they argue that civilizations collapse because they do *not* use their resources efficiently (that is, as commodities in a free market):

> Industrial nations multiply their resources in other ways. The use of one resource can create others[4] or one industry can live off the waste from another industry. Industrial nations are not running out of resources. *Industrial technology creates resources by learning how to use them.* Gramm puts it clearly: 'Civilizations don't die by exhausting their resources. They die by consuming the institutions that made their vitality possible.' The critical institutions of mining, agriculture, bioengineering, science, and chemical manufacture are all under attack by the environmental community. According to Wolfe, 'To demand that production of minerals or fuels be halted or locked up in preserves is a demand for impoverishment of civilization.' Impoverishment of civilization may be the exact purpose of the philosophical arm of the environmental movement (Dunn and Kinney, 1996: 149 emphasis in original).

Thus, in addition to thinking that industrial society can get around the second law of thermodynamics, industrial capitalism can also create resources where none existed before. This kind of "cowboy economics" denies the very meaning of "finite." Where the magician had an empty top hat, a rabbit now appears. The counter-movement, through its neoliberal economics, rejects the notion of a system that binds a core and periphery together, but sees the Global South eating its own resource base up, while industrial nations create resources out of ingenuity, innovation, and an entrepreneurial spirit. Important to this conversation is that there is a rejection of humanity as having any important ecological context as noted throughout this book—but here the rise and fall of civilizations—as they say above—is more about the rejection of using the Earth to its fullest capacity.

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4 Dunn and Kinney recount how the use of quarry from a mine can create a lake, which is then a new resource for people and animals. They do not mention that the water left after a mine is very often highly contaminated with hazardous and toxic elements and chemicals, and of course, the water that the planet started out with is the same water that is here now—it is not a "new" resource, the lake may be the new home for that water, but that does not immediately mean it is an asset. Dunn and Kinney break up environmental thinking into "asset" and "liability" cultures, where they believe "liability" culture sees only environmental problems and dwells on environmental issues that they think are myths.

Rather, it is when the society forgets its effective institutions that allow for the use of the Earth that civilizations apparently collapse, making the accumulation of capital the only limit:

> One serious limiting condition exists: a shortage of capital. Because of the commitment of financial resources to solve currently popular liability-side environmental concerns (e.g., global warming, acid rain, ozone depletion, and trivial quantities of industrial chemicals), the amount of accumulated new wealth is greatly diminished. A major consequence of liability activities is that they make less capital available for improving the worlds' environmental assets (Dunn and Kinney, 1996: 245).

We can see that part of the world politics of environmental skepticism is its rejection of ecology as an important limit to the comings and goings of civilizations or social crises. To consider the proposition that technology or that the market might save the world, we must first then be convinced that: 1) technology and the market can see and willfully acknowledge these problems, 2) that if it does see these problems it would attempt a solution instead of a counter-movement against environmental actors, 3) that economic actors and technological consumers understand and work within the long-term constraints of ecological systems. There is little reason to believe that any one of these criteria are being fulfilled.

Instead, the counter-movement argues that the world brings crisis upon itself if it does not engage in activities and institutions that allow for resource "multiplication" and wealth accumulation through the limitless accumulation of capital. In other words, we will bring crisis upon ourselves if we insist that ecology is a substantial context for humanity.

In summary, civilizations are tied to a complex of political and ecological conditions that explain their growth and primacy, as well as their eventual and recurrent collapses. The counter-movement denies this history, dynamics, and logic, actually reversing it to say that the use of resources to make capital and protect us from nature is what makes civilizations thrive. To block this capital accumulation is to block the rise of civilization, and this is the problem for the Global South where they simply need to open up to the Northern multinational corporations to allow for capital accumulation there. If they do not want neoliberal "development" then the counter-movement deems the resistance backward: "To remove internal obstacles [read state-based programs like environmental protection, health care, etc …] a nation *must truly want to develop*. The reason is that major and, often wrenching, societal changes will be required. Sometimes it will be necessary to change cultural patterns that are thousands of years old" (Dunn and Kinney, 1996: 251). Such implicitly racist comments indicate the African continent or South America or parts of Asia are lacking some internal desire to meet their needs, and they would save themselves if they only allowed the North to educate them through the penetration of Northern capital. Thus, the counter-movement deems the rise of civilizations in the successful accumulation of capital, and their demise in a retreat

from extensive use of the Earth. The end logic is that no-one put the frog in boiling water, and that the rising temperatures were a sign of its own promising future.

Summary

In addition, taking in the lessons of Chapter 4 regarding the treatment and construction of Others in the dominant social paradigm and in the counter-movement, governance schemes adopted with influence from the counter-movement will likely privilege economism. This privileging will come with a consequent under-privileging of non-economistic values and politics such as indigenous politics and nature, and will be unjust as well as ineffective in its projects to stem global environmental change that threatens the sustainability of the world in total. This is not to say that the entire human race will go careening off the cliff of extinction, but rather, the threads of ecological support appear to be unraveling from the edges and those on the edges will likely fall into an abyss of misery and death as they experience the "double exposures" (see O'Brien et al, 2004) of vulnerability where, for example, populations have less water at the same time they have less entitlement in a world capitalist-system to command water.

We have learned from this overview several important lessons. First, we are warned by Ponting that our experience within the industrial revolution and its effects are only a fraction of time we have had on Earth as a modern species. Almost the entire time we have had on Earth has been as small hunter-gatherer groups, and that this system—contrary to the claims of the counter-movement—was largely successful and sustainable. On the other hand, in a very short duration industrial systems have created global ecological changes and this appears as an ahistorical evolutionary experiment, and we cannot really know the effects or outcome of this experiment for some time, perhaps until it is too late and the changes impact viability for human societies. Within the time from 1500, the history of control and domination first through empires then through world governing institutions set by former colonial powers, much of the current set of ecological problems are legacies of these divisions in world politics and history.

Tainter shows that complex societies collapse as a matter of unsustainable complex problem solving. Complexity is a hierarchy and differentiation among society; complex societies usually attempt to expand outward, imposing this hierarchy and differentiation upon other peoples. However, Tainter theorizes that this logic becomes too much of a burden and the ability to uphold this expansive set of societies collapses upon itself because eventually controlling all that space becomes too expensive. This logic that Tainter exposes is much like the idea proposed in Huber and Mills where power moving pursues power that is not moving—not itself expanding and becoming more powerful, indicating that the end logic of an endless pursuit of energy and capital is non-linear cost and ultimately collapse. However, today collapse would not be local or regional. Problems created by industrial modernity are not easily reversed—think for

example of extinctions. Today's globalized infrastructure of production and transportation (even though it simplifies ecology) in an elaborate treadmill of growth for growth's sake (Schnaiberg, 1980). Also, we satisfy Chew's criteria for a world system-led degradation, collapse and crises. Chew believes it is possible we are now entering a new Dark Age (Chew, 2002). Likewise, the Hopis, and the Bulletin of Atomic Scientists warn we are edging dangerously closer to the end of human civilization. In recognizing much of the literature on sustainability, David Orr points out the project of global human survival poses four important challenges that we must overcome, or face grim consequences, likely as they are outlined in the literatures noted above:

1. Create more accurate metaphors, models, and measures to "describe the human enterprise relative to the biosphere" that transcends the idea of human as "master of the planet." This appears to mean getting beyond human exemptionalism and anthropocentrism.
2. A "marked improvement and creativity in the arts of citizenship and governance" because "Only governments moved by an ethically robust and active citizenry can act to ensure the fair distribution of wealth within and between generations."
3. Informing the public through a much improved education about human ecological inter-relationships in a way that provides skills for a population aimed at maintaining these inter-relationships and a happy, low-consuming, human lifestyle.
4. Learning how to see and cope with "diverging problems" that refer to a "higher spiritual awareness" and "spiritual renewal" that provides meaning for human life in a sustained world (Orr, 2002: 1458–9).

All of these challenges are made that much more difficult by a powerful counter-movement embedded in a globalized dominant social paradigm emanating from the world hegemon within a system of knowledge and power that opposes and denies the necessity of most if not all of the adaptations named. Drawing from Orr, then, the counter-movement is mal-adaptive to survivability to the extent it successfully mobilizes and globalizes its brand of human exemptionalism and denial, challenges civic ecological duty, advances deep anthropocentrism, and continues to institutionalize and defend economism.

Chapter 6
The Ecological Demos

> Our failure to confront mounting environmental crises shows how pervasive commodification leads to democratic incapacity (Soron and Laxer, 2006: 21).

What to do? If we remember political ecology from earlier discussions, we can begin to conceive of a political ecology that may assuage our wounds. If collapse is political, then the response also is political. If we are to continue to avoid the finality and globality of collapse or the worst imaginable accident—and the continuity of misery that many already feel today— then we are forced to improve the quality and depth and consideration of our affiliations. We must work toward a more radical (strong, authentic) democratic life together.

This chapter aims to spell out the notion of an ecological demos as a positive construction that attempts to fill in some of the space left from the deconstruction and analysis that the rest of the book has been dedicated toward. Scholarship and intellectual endeavors require both deconstructive and constructive approaches, but they are strongest when linked together. This is my attempt to link the deconstruction of modernity, globalism, and economism in the force of the counter-movement as it threatens the stability of life on earth to the construction of some alternatives.

Consequently, this chapter elaborates on an ecological demos which supports an open but evaluative epistemology, an open but not universalizing ethic of others, and a defense against commodification and enclosure of the commons. However, like all constructive political theory, we cannot work well with absolutes, so the following is more about concepts and processes and is openly an initial set of thoughts. The hope is that some of these points can allow us to make progress toward a life together that is more peaceful, fulfilling, and sustainable by developing a transnational civic intelligence and a cultural ethic that begin to counteract the homogenizing control of globalism and Industria. Ultimately, the ecological demos is forged in the spirit offered by Donna Haraway when she argues that the way forward is through the *work* of articulation: "commitment and engagement, not their invalidation, in an emerging collective are the conditions of joining knowledge-producing and world-building practices" (Haraway, 1992: 315; see also Chiro, 2008).[1] This chapter will now attempt to describe the details of what an ecological demos looks like, with the caveat that articulation is indeed

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1 Doing this work through social justice coalitions is what Di Chiro calls building "living environmentalisms" where "*all* environmental issues are reproductive issues" that find themselves in our everyday lives. In these everyday reproductive issues, it is clear that the ecological demos really finds some important traction.

our task, but even before that, articulation will have to first confront the denial that comes from the core powers in Industria that now do not want to listen. These initial versions of articulation will very likely need to occupy ecological space the industrial system wants, disrupting the system to obtain an audience for more substantial articulation thereafter.

Knowledge and Truth

Throughout the discussions of this book we have seen that there are serious epistemic problems that emanate from modernism and its tendencies to bifurcate and dichotomize knowledge and nature-as-a-thing as the antipode to politics and values. In order to fully cope with problems that are exemplified by the skeptical counter-movement, we must take a critical look at how the repressive modernist ideas of positivism, which demands separations of object and subject, nature and culture, etc …, can be exorcized without eliminating knowledge or identity.

The first move in rejecting the object/subject binary reasons that distance separates what we want to know and ourselves can be thought of as an opaque wall. When we are connected, we may better know the world around us *because* we are a part of it, and epistemic separation has clearly provided barriers to seeing parts of the world that swim around us—for example, the modernist focus in fishing on maximum sustained yield, which attempts to control fluctuations of a single atomized (lucrative) species of interest. This approach is bolstered by modernist ideas of objective population science that has *blinded* us to critically important elements, like an accidental catch that has by-itself likely depleted stocks, such as some shark species. It has also provided a false sense of control over ecology. We then develop political economy around this temporary control. In fisheries, the first years of intensive effort yield tremendous and stable results until the stock plateaus and hits a threshold from which its population cannot recover. Then, when other complexities set in which are unrelated to the fishing, like changes in sea surface temperature that affect the availability of forage, reproductive considerations, and metabolism among other issues (Lehodey et al., 2006), the fish are more vulnerable to collapse, sometimes unbeknownst to the people who set themselves up for catastrophe. In ecology, control is an illusion because the very efforts to control the fish results in an uncontrollable, irreversible change that deepens and widens the more we try to control ecology. More sustainable interactions of humans and fish occur when humans instead anticipate chaos and work with disturbances (Acheson and Wilson, 1996; Berkes et al., 1998; Gunderson, 2002; Holling and Gunderson, 2002). Indeed, in many ecological circumstances, the modern approach to "resource management" has failed in more than one way.

This chapter will now offer some thoughts on a more open but evaluative epistemology. Let's begin by noting that ecological sciences—crisis disciplines—are situated in opposition to modernity in several ways, which also helps us understand some of the antagonism of the counter-movement towards ecological

sciences. It also highlights that crisis disciplines are evolving away from the dominant social paradigm that normally holds a faith in science and technology. Thus, the DSP is not really a "faith in science and technology" but a "faith in industrial science and technology," as the DSP clearly does not sit comfortably with disciplines like conservation biology.

Indeed, ecologist and former President of the American Association for the Advancement of Science, Paul Sears, once asked if the study of ecology was inherently subversive because if it was, "taken seriously as an instrument for the long-run welfare of mankind, would it endanger the assumptions and practices accepted by modern societies, whatever their doctrinal commitments?" (Sears, 1964: 11) Sears' answered his question by saying that "By its very nature, ecology affords a continuing critique of man's [sic] operations within the ecosystem" (at 12). Part of this critique is leveled at the dynamics of vulgar economism:

> To me at least, it is disturbing to hear the current glib emphasis on economic "growth" as the solution to all ills. Growth, in all biological experience, is a determinate process. Out of control, say by pituitary imbalance, it becomes pathological gigantism and by no means the same as health (ibid).

Sears was not unaware of the political economy of a capitalist world system in a way commensurate with Wallerstein's definition set out in Chapter 2:

> With the concept of a healthy economy, there can be no quarrel, but to equate this with an ever-expanding, ever-rising spiral is to relapse into the folly of perpetual motion, long since discredited with a sane understanding of energetics (ibid).

In a telling biography of Sears, the journal *Science* described him as a "biological statesman"—someone who represented life on earth "against the wide background of human affairs" (Sinnott, 1955: 227). Sears and other ecologists then help make propositions and *bear witness*—part of a representative's task—for non-human actors and consequently becomes a science that is observation and voice for what modernism considers the ultimate Other. Ecological work—whether via experiential history or satellite tagging—is quintessential to transnational civic connections in an emerging world risk society.

Likewise, Leopold sought conservation education as "as a means of building citizens" but that:

> One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on land is quite invisible to laymen. An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself to be well and does not want to be told otherwise (Leopold, [1949] 1966: 197).

To pay attention to ecology and the wounds inflicted is subversive, and is a form of resistance to the continual impositions of such wounds. Consequently, Michael Soulé has described conservation biology as a "crisis discipline" for similar reasons:

> Conservation biology differs from most other biological sciences in one important way: it is often a crisis discipline. Its relation to biology, particularly ecology, is analogous to that of surgery to physiology and war to political science. In crisis disciplines, one must act before knowing all the facts; crisis disciplines are thus a mixture of science and art, and their pursuit requires intuition as well as information (1985: 727).

The crisis disciplines of ecology have become conspicuously placed into a position of wondering what systematic drivers exist for such long duration crises that we would actually need whole *disciplines* to understand and cope with the respective and interlocking problems. These are disciplines that have grown up as a contradiction to Enlightenment Science of control, where various categories of control (private property and enclosure, rationalism) have driven a conspicuous *absence* of control, manifest in the term "crises."

While disciplines like conservation biology and climatology exist and have been developed at first within normal science (read: Enlightenment science of objectivism and control), the ecological disciplines have at least partially been transformed epistemologically by crisis and chaos. The study of ecology, for example, has led to the intermingling of other disciplines, and it has demonstrated that ecology is so interwoven and consists of so many constituent relationships that control is an impossible dream that ends in catastrophe. See for example the breakthrough work of C.S. Holling, Lance Gunderson, Fikret Berkes, and others in the Resilience Alliance who have promoted the ideas and theories of "panarchy" (Holling and Gunderson, 2002). Panarchy is the hierarchical, nested sets of complex systems across various scales prone to catastrophic shifts precipitated by a constant exploitation phase. This "release" phase may be eventually followed with a re-organizing phase if enough material and energy remain in the system. Fire-prone pine forests are a good example of such a system. It is quite clear from the Resiliance Alliance work that attempts to control against disturbances like fire or shifts in fish populations from climate change may actually increase the likelihood of transitioning the system to an entirely different, and more impoverished, perhaps irreversible, state. At the same time, their collective work and that of Berkes (Berkes et al., 1998; Berkes et al., 2003; Berkes and Folke, 1998) in particular, have demonstrated that tribal communities, those outside the modern paradigm of control, have institutionalized norms that attempt to prepare and live with disturbances, increasing the chances that the system in question will be able to re-bound after shifts that occur regardless.

Similarly, Ervin Laszlo and Peter Seidel have called for the development of thinking that attempts to make connections in as many directions as possible

with "survival research" (Laszlo and Seidel, 2006). This call is akin to Jane Lubchenko's (1998; 2003) call for a new constitution for science grounded in "sustainability science" in an age of complete human domination (see Vitousek et al., 1997). This is also related to the concerns of Paul Stern (1993) who insists that sustainability science essentially includes human interactions and drivers of change. In all of these efforts, empiricism and formal theory building meet the full complexity of our life together replete with uncertainty, more adaptation and mitigation than efforts to control, and a bit more humility than the Enlightenment science that gave birth to sustainability science's methods and modernity's crises to begin with. Even if these sciences have epistemic gray areas, they are hopeful directions because they are not the same Master's tools found in normal science or scientism.

The relevance of pointing out sciences that study ecology in this way is to show that there are counter-hegemonic and subversive implications that come from concentrating on ecology and ecological changes. While there are veins of Enlightenment in ecological sciences, ecological sciences appear as a dialectic-type contradiction. Conservation biology may have been raised by people trained in the classical norm of objectivism, but this field in particular is doing "post-normal" science challenging the legitimacy of the science vs. politics dualism by doing rigorous field observation that have inescapable political questions inherent to their design. It has also specifically addressed the concerns of social constructivism in a very insightful way (see specifically Soulé and Lease, 1995). Inasmuch as modernism lives and breathes off of the science versus politics dualism, ecological sciences are moving into a new paradigm of knowledge making and values. For example, conservation biologists may be trained in rigorous physical science techniques that allow for reproducibility, but they openly study the diversity of life because life on earth is important and valued by the discipline (Soulé, 1985).

Scientism, which reinforces the bifurcation of objects to be discovered by unaffiliated subjects, and which impounds dissent and discourse, attempts to control knowledge and its interaction with how we conduct our life together. In this way, scientism is a fully modern project, where Truth is supposed to be discoverable by a select few and is regularly wielded to maintain control over an outside nature and politically marginalized groups who, by definition, are not allowed to hold critical insight about the world. As much as this process reinforces modernist control it lends itself to muting non-modernist ontologies. Thus, as crisis disciplines have been born out of the modernist project only to expose its tender underbelly, the counter-movement has re-mobilized modernist scientism but has ironically left the sciences untouched. Where the counter-movement attempts to discipline transnational publics and suppress democratic propositions and more inclusive associations, it has very little to do with the establishment of vetted propositions open to critique and correction, not to mention closure. Thus, the counter-movement is scientistic but has nothing to do with the sciences. It has propositions, but insulates these propositions through conservative think tanks, whose only vetting process is often one of ideological scrutiny. Then, when the propositions are given space in

the public sphere, corroboration and good faith witness, multiplicity, transparency of process and interest, are deflected by a hegemonic authority of economism over the "junk science" of radical environmentalists bent on the end of progress. This position makes the same fact/value claims as objectivism, confounding the public conversations and paralyzing them beyond closure because modernism offers few tools to evaluate the difference between competing truth claims. This is the science trap.

Democratizing knowledge claims and avoiding the science trap does not result in relativism because not all claims have the same merit when judged against our expectations for making propositions. Instead, we may have a rich public sphere that is informed by growing understandings of a biophysical world as it is filtered through social iterations. Latour provides compelling terms for democratic knowledge claims. Propositions are better articulated if they allow for the "power to take into account" and the "power to arrange in rank order" (LaTour, 2004: 109). Latour believes that these criteria allow us to explore life together according to "due process." The criteria are that:

1. We do not arbitrarily simplify the number of propositions taken into account (perplexity).
2. We do not arbitrarily mute voices making propositions (consultation).
3. We evaluate new propositions in relation to established propositions (ones that have been instituted) (hierarchization).
4. Once a proposition is instituted we must accept the legitimacy of the presence of the proposition (institutionalization) (ibid).

However, we should modify this list to the following requirements for taking into account propositions. First, we do not really know the difference between arbitrary and authentic simplification in the universe of propositions, and should therefore be quite open and inclusive in the realm of what propositions are first allowed into the polis.

Second, evaluating propositions requires a bit more than Latour provides, namely emotional intelligence. We know from work in cognitive science that thought and rationality operate from an embodied, evolutionary context (Lakoff and Johnson, 1999). Here, the principal cognitive tools that help us make sense of the world through deriving connections between familiar rules and knowledge and new rules and knowledge are our bodies (e.g., our brain) and the biophysical world we live in, where rationalities have evolved from interaction with the ecological world and our very flesh.

What we know and how we categorize what we know, comes largely from what we have lived, now and from millennia past. Emotional intelligence is therefore not a reactionary hysteria, but rather a grounded and experiential intelligence learned. The more we learn about cognition, reason, and behavior, the more we see them as inter-related, and the more the old hyper-exclusionary paradigm is

discarded so that behavior is jointly managed by cognition and emotion (see also Gray et al., 2002):

> Within philosophy there is a long tradition that views emotion and reason in direct opposition. Such an oppositional relation has been questioned on the basis that, under certain circumstances, emotion-related processes can advantageously bias judgment and reason (Dolan, 2002: 1194).

And, this advantage in judgment is situated biophysically and has a function in adaptation and evolution.

> An ability to ascribe value to events in the world, a product of evolutionary selective processes, is evident across phylogeny. Value in this sense refers to an organism's facility to sense whether events in its environment are more or less desirable. Within this framework, emotions represent complex psychological and physiological states that, to a greater or lesser degree, index occurrences of value. It follows that the range of emotions to which an organism is susceptible will, to a high degree, reflect on the complexity of its adaptive niche. In higher order primates, in particular humans, this involves adaptive demands of physical, socio- cultural, and interpersonal contexts (Dolan, 2002: 1191).

And, finally, without key brain-related functions that help guide emotion—empathy in particular—we lay the groundwork for sociopathic behavior. Thus, knowledge and reason are embodied and evolutionarily drawn from emotional intelligence that is critical for a functional personal life, let alone a workable life together. How we feel about something informs why we see something as a logical or rational proposition, and it always has been this way even if emotional intelligence has been marginalized as (ir)rationality in Western modernity.

Bodies are imbued with a species-wide intelligence, and they have an evolutionary wisdom that is the base for our everyday framing of the actors and world around us. This indicates that our cognitive domain is a product of millions of years of living on earth, and that "feeling" and "reason" cannot be disentangled. While even in our personal lives we know we can be deceived by our feelings, we cannot say that modernist rationalism and positivism provide a better map. And, to create hyperbole between reason and emotion is again descending into a problematic binary opposition when it is more productive to see the co-production of the two.

Thus, the following reforms of Latours requirements for productive and fair discourse:

1. *All* propositions should be given space for articulation in the demos (radical perplexity).
2. *All* actors are permitted to voice a proposition and make a claim (radical consultation).

3. Propositions are made in a historical context, and should be evaluated and discussed in light of fit with prior institutionalized propositions (responsibility to history).
4. Propositions only occur in communities, and therefore communities contextualize and mediate propositions and are not alienated from it (epistemic socialism).

With the above criteria, propositions are taken into account (heard) in the ecological demos through these criteria. Thus, when we hear a claim, we understand these requirements. Then in hearing the claims, we can discern between the panoply of other claims by using these notions:

1. Propositions are more compelling if there is corroboration between multiple ontologies, perspectives, voices (concurrence).
2. Propositions are more compelling if they evoke concurrence in feeling across multiplicity (emotional concurrence).
3. Propositions are more compelling if they are transparent in terms of process, production and support, and much less compelling if such transparency is refused (disclosure).
4. Propositions are more compelling if there is fair treatment of competing propositions, and competing propositions are more compelling if they offer criteria for closure of a dispute (humility).
5. There is potential for closure of debate for social action within perplexing uncertainty, but that once a proposition is institutionalized actors must periodically reconsider its relevance according to criteria #1 and #2. Institutionalization allows for temporarily closing of debate for social action (impermanent conclusion).

The criteria of impermanent conclusion differs from Latour, because it appears imprudent to "no longer question [the] legitimacy" (ibid) of a proposition once it is institutionalized. We can imagine numerous historic propositions that were institutionalized, such as eugenics, but which deserved to be questioned. And, while it is unlikely that a racist program like eugenics could become institutionalized under the condition of consultation, it is also likely that such criteria would operate more like heuristics. Impermanent closure allows for action but does not keep the issue from being revisited and corrected if there is an error. Also, the record of institutions indicates that they can easily become sclerotic and this may help keep institutions dynamic.

The criterion of emotional concurrence provides the acknowledgement that we have an embodied emotional intelligence, but also that most of the time we are not *making* propositions as much as we are being exposed to them. Propositions are compelling, in part, given their reception, and listening with all our faculties becomes a prime civic occupation, particularly when a proposition entails social action and is controversial.

These criteria for judging propositions prohibit the summary judgment of skeptical claims, and overtly include skeptical voices as part of democratic conversations. In the demos, it is wrong to mute the skeptics because they are inconvenient, but we need not move directly from allowing skeptics to make propositions to treating them as having equal merit—this quandary is exactly what lead to the "bias of balance" explained by Boykoff and Boykoff (2004). The bias of balance occurs when news media reporters have their balancing norms triggered by controversy. They then engage a professional ethic to provide both sides of a controversy feeling unable to neither see how the controversy itself was manufactured, nor distinguish between the propositions that fit well with a mass of vetted propositions and those that had no such corroboration. We do not need to be so confused that we either reject actors from speaking or that we treat all speech acts as the same, as if they were equally compelling "dueling scientists" (see McCright and Dunlap, 2000). Propositions are more or less compelling based on the above criteria that help us move beyond epistemic problems that otherwise immobilizes conversations about our life together.

The above criteria also give us good evaluative means for favoring some propositions over others, and making choices for social action, as our life together demands. Such an epistemological approach also denies the idea of nature if nature is that object that Science discovers, and instead allows for an embodied and complicated place for the sciences, a mysterious ecology, and multiple knowledge claims. None of this denies the actuality of a physically-existing biophysical reality, nor does it empower omniscient control over articulations about actors.

The Ecological Self and Other Actors

To create an ecological demos, it is clear that we need a more inclusive epistemology that escapes Plato's Cave and the dualisms that establish Western positivism. There have been many scholars who have concluded that it is exactly this will-to-knowledge that provides the oppressive dynamics of the modern world political system because this epistemic hierarchy also creates hierarchies of being and a radical exclusionary politics (for some discussions see Smith, 1996; Tickner, 1992; Wapner, 2002). Consequently, the above discussed epistemology is only part of the work needed to create an ecological demos. Another critical function is to think about not only how we create associations between actors in the world, but to think about how we should treat others, with whom we have no explicit association.

Plumwood describes one ethical solution as the ecological self.

> The truly social self is the mutual self; the social self salutes the social other as another *self*, a centre of subjectivity like mine but a different one, one which imposes limits on mine, and incorporates this salutation into the concept of 'I' … Similarly the ecological self recognizes the earth other as a centre of agency

> or intentionality having its origin and place like mine in the community of the earth, but as a different centre of agency, which limits mine (Plumwood, 1993: 159, emphasis added).[2]

The ecological self provides some important insight into the nature of this problem, and is a way to mend the severed ties we have to all others while rejecting colonizing culture. The ecological self fosters recognition for others in the world, including Earth others, which empowers the colonized to retake power appropriated by Industria that had been stolen, volunteered or disciplined into order. The notion does this in several ways.

First, the ecological self is ecologically situated. The ecological self is a self that exists in a network of constitutive relationships on earth. The self is incomplete and incapable of being in a hyper-exclusionary world without functional dependencies, such as the food web or the hydrologic cycle, but is also itself incomplete without other life on earth. Constitutive relationships indicate that we are at least partially made in our relations with each other. I am partially made as a person in my neighborhood by my situated relationships with my neighbors with whom I interact and live; by my relations with the birds that live near me; by the marsh behind my house, and the coastline and animals that live in the ocean; by the ecologies I consume in food that come from around the world. This is partially because actors have an infinite number of interactions that they impose on the world, and because the way we feel is part of our identity and how we feel is partially made by the quality of the relationships we have with each other. This should immediately indicate that our public life, our life together, is more than a matter of governance, but of identity and the quality of our life's experience.

But, we are not all "one" in the sense that I am totally you or you are totally your spouse or neighbor or whales in the ocean in that we have distinct sets of interests and dissimilar ways of seeing our lives together. Recognition is a key to understanding the power of the ecological self, because if we are to first reject an essentialized Other for disposal, sometimes a cosmopolitan answer is given—we are all "one" which can be construed as we are all the same. This then replaces a domination of difference for what Plumwood calls the "empire of self" where there is nothing else in the world but the self. This is both politically and philosophically problematic, something that Beck also agrees with even as he works to build a different sort of cosmopolitanism (Beck, 2004).

First, this type of universalistic cosmopolitanism is disingenuous—I live in a world where I encounter many beings and they are not the same as me, they have neither the same goals, functions, and limits as I do. In fact, there are "others" in the world, even as others and selves are made up of non-other and non-self

2 Note that deep ecologists have a notion they also call the ecological self, but which is positioned differently from Plumwood's conception. The deep ecology version is criticized by Plumwood as going too far and incorporating everything into the self without acknowledging difference.

parts! The innovation that Plumwood is advocating here is not to obliterate the other through a hyper-separation or obscure the other in a hyper-appropriation but acknowledge the other through recognition. Other beings exist in the world and are important—they have their own ends and are not designed simply for another or the self to dispose of at will. Others in the world are not the same as me, and like Wapner (2002) suggests, we must assume that others have their own voice and the *minimal* obligation is to allow that voice to exist on its own terms. This does *not* mean that as humans, the United States, or Florida, or my university or myself we (as groups or individuals) will not exploit others, but it does mean that we are limited from wanton exploitation. I still need to eat, and this does take life, but there is a difference in saying I can consume whatever and however much I want, as opposed to developing a sense of "enoughness"—sufficiency (Princen, 2005). Plumwood sees these limits coming from a sense of obligation to others to only take what is needed as we consume others. I think, for example, of the thanks that some tribal people are known to give to their prey. They still hunt, kill, and eat the prey, but not wantonly. They acknowledge that the life taken was important and valuable, and therefore there is a limit to how much other life one is ethically and socially permitted to consume. In neoliberalism and the world capitalist system, the idea of unlimited accumulation is in direct contradiction to the idea of "enoughness." This means that the idea of sufficiency and the ecological self is incompatible with the current world political order, and if politics changed to incorporate the principle of sufficiency, the expansionary, predatory nature of Industria would be countered. Princen, notably, believes that a modest capitalism is still possible with the ideas of sufficiency, which implies sufficiency might avail us to some kinds of meaningful reforms—though this modest capitalism is quite different from Wallerstein's capitalist systems that are always searching for more profit and which penalize "other" priorities.

Second, to imply that we are all the very same obfuscates disproportional duty that comes from disproportional impact in the world. When a European country like Slovakia pollutes through its steel production in Kosice, it is not the job of Hungary to clean it up while Slovakia agrees they are all part of the same European Union—so it does not matter who cleans up. Beings in the world have different ecological impacts, and Andrew Dobson's notion of "ecological citizenship" introduced earlier as a concept of political obligation determined by how much ecological space we consume is relevant. Importantly, this space is not only consumed within one nation-state or one town, since an economically globalized world contains commodity chains that extend around the globe with the "1500 mile salad." Thus, our obligation moves with the chain, and the chain's respective consumption of ecological space more precisely, and is only bounded at the national border if that is where the space is contained. However, it is important to specify that we have this obligation, and the obligation is substantial *because* others have a need as well, and the wanton disposal of their ecological space or themselves is illegitimate.

Consequently, the ecological self solves both the problem of instrumentalism and appropriation of difference by providing recognition to others that are ends in themselves, with or without "us." But, as is highlighted by the second objection to a universalizing appropriation of others, the ecological self must have a public face. Virtue ethics and obligation for our ecological space extend into our public, collective selves and therefore the ecological self is not just an individualistic reconsideration of culture, reason, and identity—it is an acknowledgement that our actions are politically bounded and occur in communities.

In her book on *The Green State*, Eckersley expresses a similar position where domination is resisted by critical political ecology, or a political ecology that does not take for granted what is deemed common sense or is unreflexive, and which extends recognition to those most impacted by environmental projects:

> A central insight of ecofeminism and the environmental justice movement is that the domination of nature is a complex phenomenon that has been managed and mediated by privileged social classes and impersonal social and economic systems that have systematically brought benefits to some humans at the expense of others. The result is that certain privileged social classes, social groups, and nations have achieved what Mary Mellor, building on the work of Martin O'Connor, has called a 'parasitical transcendence' from human and nonhuman communities. In effect a minority of the human race has been able to deny ecological and social responsibility and transcend biological embodiment and ecological limits (i.e., achieve greater physical resources, more time, and more space) *at the expense of others*, that is, by exploiting, excluding, marginalizing, and depriving human *and* nonhuman others (Eckersley, 2004: 10).

By resisting wanton exploitation, the cultural system that empowers the material systems of Industria are unable to operate—but this a political battle that cannot rest on individual virtue. Rather it rests in the "deepening of democratic accountability" for the "relevant community" (ibid, 14 and 113). Eckersley proposes the following proposition to reconfigure how communities engage members and others:

> Let us begin with a very simple, but ultimately politically challenging, ambit claim for ecological democracy based on a familiar principle: all those potentially affected by a risk should have some meaningful opportunity to participate or otherwise be represented in the making of the policies or decisions that generate the risk (111).

The phrase "otherwise be represented" is critical here because some communities cannot participate directly in present day human conversations, such as animals and future generations. Thus, recognition to the other is granted by moving decisions "as if all those affected were present, well informed, and capable of raising objections" (ibid).

Further,

> This reconceptualization of the demos as no longer fixed in terms of people and territory provides a challenge to traditional conceptions of democracy that have presupposed some form of fixed enclosure, in terms of territory and/or people. The ambit claim argues that in relation to the making of any decision entailing potential risk, the relevant community at risk, tied together not by common passports, nationality, blood line, ethnicity, or religion but by the potential to be harmed by the particular proposal and not necessarily all in the same way or to the same degree (113).

Here we are witnessing a concurrence of thought between Eckersely, Dobson and others who believe that the relevant ecological democratic space is transnational and connects communities through ecological impacts, not borders.

For this kind of politics to take hold, we not only have to extend recognition, but we have to acknowledge that risks, harm, and damage are real and important. To the extent that the counter-movement denies both, the skeptical program is as much a rejection of civic and social responsibility as it is a rejection of ecological sciences.

Comm-Unity

Eckersley's ambit claim is consistent with some trans-cosmopolitan arguments from the world indigenous movement that is opposing industrial expansion and appropriation, found in the "subsistence perspective" coming from the Global South, *and* ecological feminism. While we see a rejection from Plumwood of the kind of cosmopolitanism that equates everyone and everything being the "same" there is an embrace of unity. Unity marks out a concept where distinct entities with dissimilar interests and values live in a world together; this is related to Mary Parker Follet's rejection of the term "melting pot" of people for "salad bowl" where power-over is rejected for "power-with" (Parker, 1984). L.D. Parker explains that—at a time when Frederick Taylor's oppressive "scientific management" became the standard dictate from experts for efficiency—Parker Follet's ideas established a creative notion of self-control and shared control:

> The individual was not to be dominated by others because "A" did not control "B," nor did "B" control "A." Instead, they intermingled and exchanged views and ideas in a continuing process in order to produce the collective thought and the collective will (ibid, 740).

In order to live together, we must listen to each other, but historically it is clear that we only listen to those we recognize, and we only recognize those entities we see as important either from a parochial self-interest or from acknowledging

legitimacy beyond the sphere of the self, regardless of interest or similarities to our own selves.

Importantly, David Schlosberg (2004), using the work of Iris Marion Young, argues that "recognition" is the critical factor for environmental justice movements because prior to receiving equal ecological treatment and a just distribution of ecological goods and "bads" (like toxic waste, dumps, incinerators, and other harmful environmental threats), one must obtain standing in a community to make a meaningful claim.

Plumwood speaks a similar language when she connects the illegitimate means of hyper-separation that allow for *dis*regarding others, including other communities and instrumentalizing them (construing them as Others). Further, this means that recognition needs to extend not just within communities to make a claim, but between communities. And, human communities are not the only actors, and are therefore not the only important communities. In recognizing non-humans and non-human communities, e.g. packs of wolves are a valid limit to our own actions in the world, we will have less of an impact on the wolves and on the other human communities; and, human drivers for global environmental change would face a new set of institutions that restrain the advance of things like climate change, biodiversity loss, and marine decline.

Peaceful, sustainable human relations—the Good Life—is met with neither imposed exclusion nor sameness, but mutualism. Maori scholar, Makere Stewart-Harawira—while rejecting a politics of "sameness"—argues that the imperial, violent, and exploitive world order can be resisted by understanding a profound "interconnectedness of all existence" if this understanding is taken with deep introspection of human place and purpose concurrent with a fundamental change toward egalitarian democracy. This is what is implied in the Song of Waitaha, quoted by Stewart-Harawira below:

> In the beginning, Io Mata Ngaro, God of the Gods, Father and Mother of the Unborn Creator of All, called the Universe into being. And all those born of the stars were brothers and sister, kin within one family (2005: 238).

Similarly, in Hopi tradition humanity is created from the same material and energy, and the Hopi remain hopeful of a multicultural, multiracial unity as part of the "plan of Creation." The initial relationships between people and Earth others was one of recognition, peace, and unity:

> So the First People [from the First World in Hopi creation stories] kept multiplying and spreading over the face of the land and were happy. Although they were of different colors and spoke different languages, they felt as one and understood one another without talking. It was the same with the birds and the animals. They all suckled at the breast of their Mother Earth, who gave them her milk of grass, seeds, fruit, and corn, and they all felt as one, people and animals (Waters, 1963: 12).

But in *The Book of Hopi*, we see the emergence of this unified (but different) people who eventually re-make difference into exclusion from the Earth and each other, *and this causes the demise of three worlds*:

> But gradually there were those who forgot the commands of Sótuknang [a primary god] and the Spider Woman [who made people] to respect their Creator. More and more they used the vibratory centers of their bodies [akin to the idea of chakras actually] solely for earthly purposes, forgetting that their primary purpose was to carry out the plan of Creation. There then came among them Lavaíhoya, the Talker. He came in the form of a bird called Mochni [bird like a mocking bird], and the more he kept talking the more he convinced them of the differences between them: the difference between people and animals, and the differences between the people themselves by reason of the colors of their skins, their speech, and belief in the plan of the Creator. It was then that the animals drew away from people … In the same way, people began to divide and draw away from one another—those of different races and languages, then those who remembered the plan of Creations and those who did not (ibid).

This world view of unity is threaded through ideas of what is sacred; and, that by creating Others, we establish a benchmark for the profane. Notice the Hopi creation story here relates a consent—where people are convinced and agree—that they are fundamentally different from each other, and separate from the animals, and this leads to warfare, and ultimately the destruction of the First World. Ultimately, the Hopi stories tell us that we live in the Fourth World now, which Waters editorializes, "is the full expression of man's ruthless materialism and imperialistic will …" (26). This problem is apparently part of the reasoning that Hopis are raised with the awareness that "he was a member of an earthly family and tribal clan, and he was a citizen of the great universe, to which he owed a growing allegiance as his understanding developed" (9). The more a Hopi person understands about the world, the more this person owes and is obliged to protect this world and the associations that build an inclusive life together.

A rejection of an essentialized, instrumentalized Other and an embrace of a recognized, inherently valuable universe of interconnected others bases itself on a reverence for life. The ecological self takes it upon itself to build virtue—guardianship, friendship, companionship, and love—with others within a span of all interconnected existence even though there is so much difference. However, together we re-make the universe into something more rich in our relationships, and the universe itself grows in public life into something it is not under the yolk of modernist radical exclusion.

While we are not all the same, we are all valuable and worthy on our own terms, and we exist within an ecology that brings all humans and all non-human life together in common space. To embrace this common space of living in a peaceful community or sets of communities means a fundamental rejection and resistance to ontologies that impose hyper-separations, like the ethic of Deep Anthropocentrism,

political economies of expansion and accumulation, and the hegemonic and disciplinary projects of Industria. The skeptical environmental counter-movement understands this as an existential threat to the possessive individualistic and exploitive identity that requires the disposal of Others and is working in world politics to keep us from seeing our fundamental interconnectedness and worth.

Critically, like young Hopi children, the more we realize our connections and the value of life around us, the more we need to defend those who have been made into the wretched of the earth and subjugated. Resisting the hegemony and Industria means leaping forward to defend those cast as Others, and a defining moment in our lives is that moment when we extend guardianship, friendship, protection, and love to our common ecological space—the ecological commons.

Defending the Commons

In this section this book will elaborate on the third leg of the ecological demos. The demos is ecological because we live together in particular spaces, occupy and change ecological functions, and rely on ecological conditions.

We live a more rich life because humans are not the only entities with will or purpose; we live a better life because there is the opportunity for love, friendship and virtue in our associations and these are some of the elements of life that make us happy. For example, we may have a terrible job but share it with compatriots who make it a good space; we may have a wonderful job and be affluent but be miserable because our families only show antagonisms. Partly, good relations make up the Good Life because relationships are constituent. If we have good relationships, we are well individually and collectively. If we live in repressive, oppressive, exploitive, deceitful, shallow, opportunistic or otherwise maladaptive relationships, we are much less well off, individually and publically.

Because we live in ecological spaces with different integrated scales ranging from more local to more global, such as the difference between a watershed and the global atmosphere, we must protect the ecological spaces we are a part of and which also make-up our mutual existence. On the face of this proposition, if communities and actors in the world make up humans and non-humans, enclosing any part of the world for wanton use and disposal is illegitimate. But, we need to dig a little deeper here to be compelling.

First, let us set the terms of "commons" and "commodification." Soron and Laxer (2006: 16) define commons in this way: "Generally, the commons refers to those areas of social and natural life that are under communal stewardship, comprising collective resources and rights for all, by virtue of citizenship, irrespective of capacity to pay." This is really quite different than the typical natural resource management definition of a resource system that is exhaustible but non-excludible, where it is difficult or costly to keep users out (an excellent resource for this literature is NRC, 2002). Instead, the commons are a more political battle line, they are socially constructed. Commons exist between mutual

and exclusionary uses where the commons are normatively positioned as goods and services that should be determined by the collective—citizenship values that control when and how commons become used. Further, when some aspect of the world is commodified, users of the commodity are no longer accountable to the collectives that otherwise had control of it, and the controller of the commodity may fetishize it and exploit (what has now become a simple) resource in a number of ways allowed for by logics of capitalism. It should be recognized though while all commodities and commons are socially constructed, all commodities were in the public universe first, and these resources have been somehow transformed. Part of the predation of Industria is, then, not just to expand out into new "territory" but to expand out into new depths of transnational public life to wrest out some new commodity—water, air, food, genes, labor, and of course land and sea (Laxer and Soron, 2006). The predation is meant to continue the ability of Industria to consume and run its metabolism, and ever-new horizons are masticated for more luxury, power, and privilege.

De-commodification is both re-capturing what has been inappropriately commodified and defending the commons against further intrusion. None of this means that there can never be any commodities—just like the ecological self does *not* stop exploitation. Problematizing commodification indicates that in the ecological demos, the moral dilemmas of each transition are fully considered, especially giving weight to those most affected, including non-humans and future generations. In the ecological demos, one of the key political jobs is to create dynamic closures of the community, where political decisions must realize what community they exist in and which ones they are affecting/affected by to generate social action. Latour argues that the skills of the politician help create hierarchies and institutions of social action, but moralists continue to press for reconsideration of actors left out, demanding communities to constantly reconsider who and what they are responsible to. This is where the commons receive attention as well, where political communities decide what closures occur, they also decide what is legitimately under collective consideration and where such consideration ends. In the ecological demos we should expect that each transition of a commodity from the commons would receive full discussion under the constraints issued above for propositions. Where the community defines its own consensus, it can transition with full moral authority commons into commodities, but if these commodities are transitioned without a full moral discussion they are transitioned illegitimately, stolen.

That so much of the vital elements of life have been commodified in globalism indicates that Industria has been able to suppress political discussion about what rightly belongs in the collective and what is appropriate, as commodities. Instead, the power of Industria presses upon varied and new ecological layers and spaces at the same time it presses upon/suppresses full political discussion about, say, whether or not water should be a private good limited to those who can pay, controlled by those who are paid. Or, should water be an actor with which we are integrated and of which is part of a larger public, transnational discourse and consideration? So far, water is being commodified at a rate that is breathtaking;

and, this commodification has left many of the ecological costs socialized, e.g., lower aquifers, the refuse and the footprint of the plastic bottles, etc…, without much public consideration.

To the extent that a predatory world system extends privatizing and enclosing public ecological space for private elite consumption and is spurred on by a suppressive political discourse, the ecological demos works to recapture this public space for public considerations, through recapturing epistemology and a richer ecological self. This must be done discursively because commons and commodities are socially constructed, though to jumpstart such discussion, Industria will likely need to be disrupted in some way forcing it to take notice, otherwise it will not relent in commodifying the rest of whatever it can.

Nonetheless, we determine through social mediations (policies, etc) what is allowed to be enclosed and privately consumed, and what we hold accountable to the public interest.

Consider water. Water is a vital (life) necessity. All life appears to need water, and many non-living areas are at least partially defined by their water content and cycles from rivers to the Havasupai reservation noted earlier on to the Aral Sea (now in crisis for its changed water flow) to the Everglades (similar to the Aral Sea) to Lake Victoria to the Yangtze, Tigris, Euphrates and Nile basins. But, the astounding trend, even in affluent countries that have extensive sanitation systems, is towards bottled water. Remember Beck's risk society is inundated with dangers that surround even the most affluent. The more we use a bevy of expanding and ubiquitous chemicals, say in our lawns or in agriculture, these chemicals end up in our water supplies. The more we learn about the extensivity of contamination and the difficulties of purification from expanding threats, the more it is clear that we are flooding ourselves with exposure to things that, either by themselves or in concert, will continue to threaten those who consume this concoction; which is to say, everyone. What is the solution? Encrypt your own supply with barriers and guarantees against the march of risk upon your private sphere. Ironically, most bottle water does no such thing—it can be as much or more polluted than tap water. But, what is especially clear and consistent with a long tapestry of environmental politics, is that to the extent that elites can conceptually protect themselves at the individual level with bottled water, the less likely they are to have a concern for a clean, abundant *public* supply. A battle for the tap, where tap water exists, is an elegant and powerful project of terrible importance. We will not escape the risk society in our water, but we will protect the supply more. Of course, where there are no taps, it is essential for public health and wellness, especially in urban areas, that taps be made available. Publicly, we require enough clean water to maintain ourselves individually and collectively, but currently we are moving toward a system where drinking water is an elite commodity.

This water comes from somewhere. In some cases it actually comes from tap sources, where perhaps Coca-Cola or Pepsico will be interested in keeping that source clean-enough or they will have an incentive to further capture this public source. Some of this water comes from aquifers, in which case the

bottling companies are using a common pool resource, enclosing it in the bottle, commidifying it in the market, and collecting private profit where elite consumers purchase this public resource for themselves. The same goes for oxygen bars, and to a lesser extent, more expensive organic food among a host of green consuming that transitions the people from citizens to consumers.

Inverse quarantines, as Szasz (2007) calls them, work to delude consumers into thinking they can find their own safe harbor out of the way of first modernity and the effects of rampant ecological wreckage while disempowering Beck's second modernity of reflexivity and critical change. Quarantines are meant to segregate out individuals with substantial contagions. Inverse quarantines instead segregate the healthy from the contagion, and their unintended consequence is that inverse quarantines actually spur on the contagion. The response of an inverted quarantine is a "commodified response to risk" (ibid, 44). People with the monetary ability understandably move to protect themselves from the risks around them to literally save their lives—and that such a calculus is made should underscore what is at stake—but they do so in a way that undermines social decision making and adaptive responses. Szasz's research indicates that we should be concerned at this type of phenomenon:

> Here is why we should be concerned, in fact alarmed: Inverted-quarantine products do not work nearly well enough to actually protect those who put their faith in them. But consumers believe they work. That belief, in turn, tends to decrease our collective will to truly confront serious environmental issues (Szasz, 2008, online).

He argues persuasively that while there has been increased awareness of problems, they have driven a response of "shopping our way to safety" that anesthetizes our political response to defend the collective. Our social efforts become neutered, all the while, the green consumption, as in the case of bottled water, is usually no safer than the public alternatives, despite what consumers believe. We are no safer in this inverse quarantine, but we leave political gaps in adaptive responses and a public discourse on a collective good for essential, vital elements like air, water, and food. Thus, even while some aspects of each of these elements will continue to be commodified, we can defend the public safety of them as a collective good and as a public interest.

From the research and analysis of Szasz, we get other important insights as well. Inverse quarantines from the ubiquitous risks found in our home cleaners, air, agricultural pesticides, fertilizers and fungicides that we eventually eat, comes from what Szasz calls an *ontological individualism*, much like the possessive individualism, that is planted in the acidic soil of denial. In a case study of the burst of interest in backyard fallout shelters in 1961, after a warning from United States President Kennedy that the United States may be bombed and face a likely demise of the civilization, there was a delusion that two-week fallout shelters would be of any use on the "15th day." In other words:

> To believe in such Crusoesque images of survival, one had to be in denial of an individuals' complete and total dependence on society, in other words in denial of the very existence of society as a complex set of interrelationships that are, as Emile Durkheim first taught us, outside of and beyond individuals but on whose continued existence and functioning every individual human life depends. One also had to be in denial of society's profound dependence on an ongoing, stable, sustaining relationship with nature (Szasz, 2007: 43).

And, it is not irrelevant that environmental skeptic, Herman Kahn, was a leading advocate and optimist for the human and American ability to look death in the face and move on, pull ourselves from the radioactive rubble and re-build. But, the ability to adapt had already been dislodged, and the individual responses, like those of fallout shelters on the 15th day would be utterly irrelevant, while regulatory responses had been diluted with the threat supposedly moved from the 'public.'

Szasz does conclude that what may have saved us from nuclear holocaust was the fact that the radioactive shelter craze did not last long, and eventually such inverse quarantine was rejected. He is less hopeful that the conditions are in place for us to reject inverse quarantines that are meant to sedate our fears of the dangers we have relentlessly created and that it is likely we will choose delusion and denial over authentic, collective and political answers. The counter-movement might suggest, if you want to harbor unrealistic "doom and gloom" (more discipline) keep it to yourself and your private consumption—but do not put in the collective sphere where it impedes business. So long as risks are about consumption, then answers are commodities; if the risks are about collective good, then the answers are civic. Inverse quarantine blunts our civic response, and to Szasz it is imperative that we refuse the quarantine and the delusion to really face the risks we have created for the world.

But, other water commodification is occurring as well. Currently over a billion people live in water scarcity, and by 2025, 1.8 billion people are expected to live in "absolute water scarcity" with two–thirds of the world's population likely living with water stress, the level at which low water availability limits food production and human health is damaged. Urban populations in poor countries often pay a large portion of their meager finances to private water trucks or vendors, meanwhile several urban areas have converted or experimented with privatizing the entire water supply and delivery. Privatization schemes, like the 1999 transition of Cochabamba's public water supply and delivery to the United States firm Bechtel sparked mass protest and violent repression from the Bolivian state. Ultimately, the network of anti-globalization actors, union leaders, and environmentalists put enough pressure on the city to cancel the relationship with Bechtel, but the struggle is representative of larger conflicts over water between corporate and community control (Bakker, 2006). It is also representative that mass protest, strike, and civic social movements can work to dislodge even the largest of Industria's actors. The advance of neoliberalism has forced water privatization in many cities seen from

Southeast Asia, the Indian sub-continent, South America, southern Africa, and elsewhere as a way to convert what was a commons into a commodity. Under neoliberalism, urban areas are given rhetorical "permission" from the corporate-state to convert citizenship itself into a pay-as-you-go club. This might explain this prayer from a "People's Organization" that formed to organize water for its own management in the face of looming neoliberal threats of water-commodification: "*Guide us oh Lord, for the installation of the bulkmetre. Protect us from danger, especially from the municipality*" (Chng, 2008: 43, emphasis added).

Genes are another profound example of a vital element being commodified, and this commodification is now interlinked with other enclosures, such as of seed (Mushita and Thompson, 2007). Here the very constructive elements of life are sequestered, tinkered with, enclosed via legal process, and commodified. The legendary gall of producing a variety of seed to belong to one company or one industry after it had been cultivated by generations of peasants indicates the heights of which the global capitalist system and globalism generally is willing and wanting to go. In the case of genes, plants, animals and parts of humans, have all found themselves either in the vat of commodification or flirting with its edge. In some cases, corporations, largely from or tied to the Global North invade other's ecological space, remove (pirate) living material from this space with no mutualism, no permission, and no acknowledgement of the legacy such material stands upon. Meanwhile it may change one part of a gene to patent it (enclose it) in order to control access and use of what then is commandeered by private power into a commodity.

Seeds have been shared and exchanged freely for eons, but are now becoming enclosed as a part of the advancing predatory Industria. If a seed has been patented, and it is carried by the wind (genetic pollution) to other fields, these farmers are and have been prosecuted for theft, as stealthy agents of corporations trespass (a necessary assumption) to test various fields for "their" products. Commons basic to all life are taken in the open with consent of legal institutions that ignore the protest and dissent of those who have guarded these seeds, and all the while our public life withers.

In a cartoon posted to a professor's door years ago, a news reporter was at his desk reporting something like, "And, in today's news, the private sector moved to take over the public sector." What was in the public sector were former commons that now need to be reclaimed and de-commodified, but this will only occur through politics—the politics of articulation, citizenship, and (initially disruptive) movements.

Global Governance

Eckersley (2004) and Dryzek et al (2003) among others have noted the necessity of the state as an institution to "do" environmental policy, and others have commented that environmental protection is now one of the key features expected of a state.

There is good reason, though, to be skeptical about the ability of the state to actually reform to Eckersley's conditions that she sets out in her ambit claim described above and even these scholars remain cautious and explain the large gaps between the theories and current practices of states. It is possible that current institutions, if held to higher standards of democracy than the typical liberal versions could adapt to the changes required. But, as Eckersley and Dryzek et al and others continue to note—these institutions like the state are not doing so willingly. Where environmental policy has occurred in response to modernity's pressures, it did so after counter-cultural social movements. Social movements, therefore, offer an optimistic hope for better governance and increasing accountability. Movements do not govern, but they do place demands on institutions that do govern in a different way than something like voting, which is an episodic and thin civic moment even if it is occasionally important. Social movements maintain presence and watchfulness, they provide witness and corroboration, and they can provide a voice for alternatives that are otherwise shut-out. If the state remains intact as an institution in global governance in the future, it will have to become much more open, much less enabling for Industria, and much less predatory.

Workable ecological governance must connect commodity chains and uncover the hidden industrial processes that change the world. This is *absolutely essential* for sustainability and is, at the same time, *absolutely impossible* in the current mode of Industria. Perhaps one way to make governance more sustainable is through cognitive and emotive links to the ecological spaces around us and which we specifically rely upon that we might be able to institutionalize ecological rationality described by Dryzek (1987). As they are now, economic globalization obscures and literally blinds the polis and the demos from the changes taking place in the world. Before reasonable protective action is taken against these changes, we must see them without being clouded by psycho-political denial.

Global environmental problems are special because they indicate a challenge to global sustainability of human societies as we know them today, and if Beck (1999) is right then no-one is immune from these changes—they are ubiquitous, uncontained, and irreversible. Even key modernist institutions like the insurance industry refuse to underwrite some of the most obvious risks of climate-related issues or say, nuclear plants, and modernity's own logic is turned against itself as Beck notes (1999). This is not to say that human societies will hit a brick wall and die off, but rather that the ecosystem functions that support human societies are unraveling like a thread in a rug. The division of class in environmental problems is still pernicious and definitive, but the globality of environmental change is also apparent. That said, the rug does not fall apart all at once, nor will all parts of the rug be equally affected since the edges of the rug will fray first. In other words, affluent powerful societies in the center/core of the rug will be able to continue, probably with many of the core citizens blind to the edges of the world unraveling. We can continue to go to work and play in the United States or in Germany or any other modern industrial country with little of our daily lives affected by PCB pollution devastating Arctic peoples and ecosystems (Tenenbaum, 1998; Webster,

2005), with the loss of Peruvian glaciers where the Ukuku believe the Gods reside (Regaldo, 2005), with the loss of tropical biodiversity in coral reefs (Spalding et al., 2001; Wilkinson, 2002) and rainforests (Fearnside, 2005), and we can even live mostly unaffected as industrial fleets tap out the world's fisheries since they move from one fish stock to another, simply replacing the species on our plate perhaps without us even noticing (Jacques, 2006a). But, eventually loose threads reach the center. In line with the history of other complex societies, the nodes of the Global North will likely continue to increase their bureaucratic and social complexity along with energy consumption until fundamental changes destabilize this energy flow (Tainter, 1988). Even more insidious, however, is the idea that perhaps we are not supposed to notice, and when we do, we awaken the fury and power of the giant sentries who guard industrial expansion and consumption.

To the extent that the dominant forms of world politics and social order have generated these global environmental problems, noticing changes in life support systems threatens the potential legitimacy of key conditions for globalism and its industrial production as it produces huge discrepancies between life expectancies, risks and historical patterns of consumption since these elements become all-the-more conspicuous. In denying environmental threats to critical life supports and therefore international sustainability, environmental skeptics guard against attacks on the neoliberal world capitalist-system. At stake then, are the resources for the current economic domination of G-8 and allied industrial countries to continue their affluence, power, and structure. Also at stake, is the ability to not only evade and resist this domination, but the viability to have another life-way, such as through small-scale agricultural or institutions that see animals and plants as having their own agency and lives that should be, at a minimum, privileged to exist (Wapner, 2002).

Inasmuch as the environmental skepticism counter-movement works to hide the importance and globality of environmental change, it works to protect and assert globalism that would otherwise allow for difference, choice, and a redefining of key political features away from economism that allows and generates these problems to begin with. Just as Beck (1999) notes that the globalization processes un-anchored responsibility from territorially-bound nation-states, the "socialization of risk" in a global society is part of the remedy for addressing this irresponsibility. In this light, skepticism's globalism is working to fray the establishment of global risk communities that might otherwise create a transnational cosmopolitan order and that might otherwise work to stem the destruction of modernity's control. Effective and just global governance must be able to resist the forces like the counter-movement, perhaps through adopting measures of the ecological demos. Even short of this, the world system is now only really accountable to a powerful minority of people in the world, and just global governance will have to become far more inclusive and accountable to the world's most vulnerable.

Current global governance occurs through a network of rules negotiated through states, firms, international organizations, and occasionally civil society groups. Institutions like the Kyoto Protocol or its likely successor or the Convention on

Biological Diversity are historically subservient to the power of economism in institutions like the World Trade Organization and the divisive structure of the nation-state system where countries are encouraged to pursue taking the most out of ecological systems as a long-standing right of international law. But, thankfully, these two issues are the same category of problem, which is to say that they both grow from the same root to be pulled. Economism and nationalism come from being ungrounded in the dynamics of ecology and an idea that human beings are inherently individuated rationalistic creatures. We have already covered this ground in the book so let us take the final movement—what must we do globally to allow for the ecological demos to take hold?

First, talking to each other is essential, but right now the exclusionary powers of the world do not want to listen. But, these powers are not without their weak spots, which is the actual ecological grounding they deny—economism and nationalism need the flow of ecological throughput (resources) to march on. Local people working together across borders will need to occupy these spaces to demand a voice, to require Industria take heed. It is likely that if Industria is not disrupted, the core nodes of power will not be interested in what the ecological demos has to say. Industria itself pretends to be democratic and in some nodes when citizens begin to occupy and de-commodify commons, some elite structures will have to talk. Other nodes do not even pretend and these seizures will result in misery for the protesters. But, Industria is a network and disruptions in one node on key commons may create just enough concern from the system's managers that they will feel the need to sit down and listen.

The continued refusal to listen to the peoples of the earth, and to consider non-humans, will be a coherent signal that Industria really is not democratic and just wants to take more fish, more wetlands, more forests, more grasslands, more shoreline, more genetic space for its own control. But, the scale of the task is like the shaking off of a colonial power, and if Industria is going to listen, it is likely that people will need to peacefully and persistently occupy the wetlands, the shoreline, forests, the courtrooms, law maker's offices, and firms that allow taking and which take commons, until there is a space granted for discourse.

We have a network of global authority in the world, but we do not have global governance, because that word "governance" implies accountability. Who is accountable when the Atlantic bluefin tuna fall away, or the hammerhead shark, or great rivers of the world, or the great temperate and tropical old-growth forests? Institutions like the Convention on International Trade of Endangered Species hesitates to list species (like some listed above), and the Regional Fishery Management Organizations around the world placate unsustainable demands for continued national harvests of fish that are increasingly in trouble. We can see that these institutions are not ecologically grounded. They are instead working within the dynamics of past civilizations that now live in history books. They placate national demands that are usually demands for more taking and more enclosure, and these demands themselves are seated in capitalist structures of accumulation.

When there is accountability and grounding in ecology that flows up and down the commodity chains of global economic trade and the city nodes of Industria, we will be in a better place to have discussions. Right now, the elites in Industria have little reason to be accountable to other non-economic actors in the discussion let alone the bluefin tuna or the hammerhead. If and when popular seizures of ecological spaces occur, it would likely be more effective if it is done with the interconnected support of sympathizers across borders in order to use the fragmented nature of the state-system against itself. Myanmar is not supposed to reach across the borders to New Zealand even if it is brutal to its own citizens, so if protests in Myanmar's mangroves are conducted in conjunction with publicity from New Zealanders, the New Zealanders are relatively safe. The initial protesters in Myanmar may not be safe though, and localities would need to be judicious and purposeful in staging them.

The pretensions of democratic accountability in the larger international community will be offended at transgressions to the hypothetical protesters in Myanmar, but will forget about them unless there are coordinated protests in other places, reported by and publicized by still others across borders. The internet is an effective tool for this publicity, and has been used effectively for just the kind occupation in efforts like the Zapatista revolution in Oaxaca, Mexico (Ridgeway and Jacques, 2002), but other methods like radio provide promise as well. These demands for democratic discourse, though, should be most vigorous in core nodes, like Orlando, New York, San Francisco, Paris, London, etc… where effective resistance might demand that core metabolisms become responsible to the ecologies they are consuming, demand the just treatment of others, and demand the protection of commons.

Like all non-violent progressive anti-colonial movements, the larger system will work to discredit and immobilize it, so persistent, clearly articulated ethical codes, and legitimacy will be tenuous but necessary tools.

Again, right now there is global authority, but little global governance, little concern from business, military, trade blocs, and state authorities about where the world is headed or why it might someday soon become a subject for archeology of the future. Once there is a space where discussions are allowed, and people who might normally attend the World Social Forum are included as representatives into discussions where the World Economic Forum actually listens, then perhaps some ideas from the ecological demos can be institutionalized. There are many people who believe that a fundamental shift in our lives together is necessary, and many of these people live in the North, for example the Nobel Committee which awarded the Peace Prize first to Waangari Maathai then to Al Gore and the International Panel on Climate Change. Let us close all of these thoughts by listening to the Kenyan woman who faced Industria, oppressive patriarchy, militarism with peaceful disobedience, raised an effective ecological and democratic social movement, and who eventually won respect through persistence. This is her Nobel acceptance:

Today we are faced with a challenge that calls for a shift in our thinking, so that humanity stops threatening its life-support system. We are called to assist the Earth to heal her wounds and in the process heal our own—indeed, to embrace the whole creation in all its diversity, beauty and wonder. *This will happen if we see the need to revive our sense of belonging to a larger family of life, with which we have shared our evolutionary process.* In the course of history, there comes a time when humanity is called to shift to a new level of consciousness, to reach a higher moral ground. A time when we have to shed our fear and give hope to each other.

That time is now.

The Norwegian Nobel Committee has challenged the world to broaden the understanding of peace: there can be no peace without equitable development; and there can be no development without sustainable management of the environment in a democratic and peaceful space. This shift is an idea whose time has come.

Wangari Maathai
Nobel Lecture, Oslo
December 10, 2004
(emphasis added)

Terms and Propositions

Because there have been several terms that have been used in ways that may not seem immediately intuitive or obvious, some key terms are reiterated here for ease of reading. The principal propositions of each chapter are also reiterated. These are presented as propositions to indicate humility and circumspection about them.

Propositions of this book by chapter

Chapter 1

The first chapter of this book proposes environmental skepticism is a social counter-movement. By looking at the publication record and activism of skepticism, we see that there is a coherent social organization and clear trends in space and time. Conservative think tanks, the pivotal organizations for the conservative movement in the United States provide political insulation for industry and ideology from public scrutiny. This tactic comes after learning lessons from several other iterations of anti-environmental (anti-ecology; anti-political ecology) movements in the United States. The counter-movement is born in the United States, strongest in the United States, and only organized through the Global North. The evolution of anti-environmentalism in the United States shows a progression from overt antipathy and regional organization towards a concern for global issues and hiding its antipathies toward environmental concern. This mystification of its own purposes likely comes from the realization that anti-environmentalism is an attitude that most citizens would consider a violation of the public interest. Understanding this element of the counter-movement comes from looking at the context of interaction and the way it is mobilized, organized, and articulated.

Chapter 2

This chapter proposes that the skeptical counter-movement fits within a nested complex of hegemony and the political economy of Industria which rejects the core ideas of political ecology. Modernism has built more than ideological commitments; it has built a network of political-economic relationships that extend out in a predatory imperialism that funnels energy and value from peripheries of the South (which exists in the geographic North, e.g., Rosebud Sioux Reservation in the United States or the Diné [Navajo] reservations) to the core areas of the North. While the North has internal complexities of resistance, it is structured to reinforce rules of economism that favor increasingly concentrated capital and

martial force. The counter-movement acts as a rear-guard to the crumbling face of legitimacy that modernity and modernism have erected. Modernity requires Others to feed and work its metabolism, and this metabolism has been eating away at not only our ecological world, but rests on an impoverished set of associations that leave much of the world instruments for disposal. As the sciences and political ecology continue to cast a gaze to these unsustainable and impoverished relations, modernity and Industria need a defense that casts skepticism as a public interest.

Chapter 3

In Chapter 3, it is proposed that part of the civic program of environmental skepticism is the denial of importance and connectedness of industrial powers to the ecological world, and ultimately the erasure of non-human others through what is termed "deep anthropocentrism." In this section, it is also proposed that the counter-movement operates with a "possessive individualism" as a home ontology, or essence of being, much like the "ontological individualism" that Szasz notes drives inverted quarantines—all of which focus on possession and property. If possessive individualism is not an ontological force for skeptics, it is certainly a powerful ideological trait.

Chapter 4

The chapter specifically proposes that the counter-movement represents a particular kind of threat to specific marginalized groups. Here the skeptical literature and recorded moments in the counter-movement are used to illustrate its framing of marginalized actors. The Global South is discussed in terms of a discovered "undeveloped" and wallowing in poverty. Some of the discourse from the counter-movement indicates that the South needs to "want" development and should use the model of neoliberalism to do so, opening up further to Northern incursions. Indigenous peoples are framed within the dualized state of nature, as savages needing to be brought into civilization. Women are framed as hysterical dependents. Nature is framed as only property, and the ultimate Other.

Chapter 5

Chapter 5 proposes that there are severe consequences to skepticism and a poor public life that has a stripped down universe where the only important associations can be humans, and some humans count more given the discussion of Chapter 4. Specifically, this chapter proposes that global society is threatened with paralysis through discussions dominated by efforts like the counter-movement. Paralysis in the face of evolutionary pressures and changes in the lives of a transnational, globalized people threatens to bring collapse or collapses. Histories of civilization collapse are evaluated through multiple perspectives that range from the Bulletin of Atomic Scientists, the Book of Hopi, and the disciplines of archeology, history, and

sociology. The counter-movement disciplines and curtails productive discussions about mitigation and adaptation to ecological changes by rejecting even the possibility of collapse or even widespread misery as "Malthusian" or worse as "gloom and doom." Since few wish to be pigeon-holed as false prophets or freaks, the idea of civilization survival is hegemonically disciplined and suppressed, perhaps because to take the consequence of non-sustainability seriously will require deep changes in the way we treat each other and what we allow each other to take from the earth. It is proposed the current world system is not as durable as we are led to blindly hope. Civilizations that lasted longer than our current world-system probably also believed themselves exempt from the possibilities of collapse. But this current world capitalist-system has changed ecological structures and systems much more intensely than other human civil systems, despite is brief tenure compared to other human histories like the hunter-gatherer systems, and has been much convinced of its impervious structure. But, collapse of civilizations is a regularity of human history, and civilizations and world systems are ephemeral creatures. What is new are the nature of social organizations and the nature of ecological change—both are now global and emigration away from climate change, for example, will not be as workable as emigration from limited regional soil erosion or deforestation of the past.

Chapter 6

The prior chapter proposed that there are serious consequences to the current political-economic structure of world politics. Since these threats arise, in part at least, from an impoverished universe of permitted associations and political ecology, the remedy is found in rehabilitating our life together. In the final chapter, it is proposed that a possible response to a malignant public life is to develop an ecological demos comprised of a more democratically constructed space for knowledge, ecological selves, and public ecological spaces in a rich set of commons for public life to thrive. However, it is unlikely that Industria will listen to the (increasing and consonant) pleas for ecological democracy unless it is disrupted and forced to hear what these pleas say. These disruptions would likely be more effective as interconnected and layered non-violent mass protests on key salient issues, working toward tactics like general strikes. Once the larger system takes notice and allows us to change from a monologue to a dialogue—or better, a polylogue—the specifics of the ecological demos might be initial points to think about. Ultimately, knowledge, our lives with each other and others, and the ecological spaces that we commonly use and inhabit must be re-invigorated. First, as demonstrated throughout the book, propositions—or claims to be considered—are ways to think about what comes from science (the sciences) as well as other social places. But, not all propositions are of equal merit, and this chapter offers evaluative criteria that could be used to discern more compelling propositions from others. Thus, if a knowledge-claim is well institutionalized, this imposes a kind of responsibility to history to evaluate how well the new proposition fits with

the old. To overturn institutionalized propositions, there should be strong fidelity to representation, corroboration from multiple voices, good faith witnesses to the process of making the claim, and a feeling that what is offered is a better fit to the world around us. In order to have more peaceful politics, we also need to have an ethic that does not allow for wanton disposal of others. In this part of the chapter, the ways in which the ecological self can help develop a more full universe, a more peaceful and sustainable set of relationships, and a more meaningful life together are developed. This ecological self sees an infinite set of others in the world, a conspicuous inter-dependence between others, a problematic unity between others, and demands that we assume others have their own purpose and reason for being that is not only distinct but tacitly separate from ourselves. We still must consume and "use" others in the sense that others are inevitably found in the food chain, for example. But wanton disposal—that is, disposal that disregards the agency of others so that they are only instruments for the self and the self can accumulate and take as much as it wants without regard to the other—is expressly anti-democratic, unsustainable, and opposite of the Good Life. The ecological self works within a community that must engage social action, as Eckerseley (2004) argues, "as if" the others (including future generations and non-humans) are present at the discussion and the decision must be made in light of the interests of the most impacted. Politics and adaptation require we have social action, and social action is only legitimate when it is responsive to a specific authoritative community, which may or may not be local. This means that a core task for the ecological demos is to recognize others, but to also temporarily define community boundaries for legitimate decision making. In an ecological demos, however, the boundaries and definitions of the community are constantly re-negotiated and messy, but they are deliberate and are pressed to constantly re-consider those it has left out of the community. And, once the community is temporarily defined, communities themselves are pressed to acknowledge that other communities exist and should not be wantonly disposed of, just as the referent community believes itself to be a legitimate actor. Finally, this section argues that a critical function of public life is to defend the core vital elements that support and make public life possible. These are the commons. The commons do not have a neat definition, but at a minimum they are the essential ecological spaces and functions that everyone requires to live, such as public water, public air, public food structures, genes, etc … . Everything that has been privatized, has been done so by commodifying commons, and an essential element to averting the collapse will be de-commodifying the commons and defending them from enclosure.

Terms

Actors: Actors are explicitly humans and non-humans who modify the world and mediate each other. It is between these entities, say of people in my neighborhood,

a river, a canyon, the owl that lives in the marsh behind me, the marsh itself, that we create associations.

Associations: LaDuke uses a similar idea in the term "all our relations" (Chapter 4) that includes the human and non-human around us in our life together. Latour uses this term also as a way to describe the agents around us we decide to engage. Associations are the connections we make within a nascent, forming, or institutionalized community or between communities, but they are rooted in ideas, interests, feelings and senses that ground affiliation of actors around us in our life together. To make an association is to include.

Global South: This is neither a literal geographic term nor as a simple referent to poor countries, but instead is a referent of underdeveloped, colonized, *areas* that have been made a periphery anywhere within Industria. The Global South is a representation of those areas that are around the core nodes of Industria. Thus, while the term evokes the Southern Hemisphere, North American tribal reservations, clearly areas of the South, exist in and around what we might otherwise paint too broadly as a the North. Likewise, just as the South is more complicated, so is the **Global North**, which has spaces and citizens working to resist the brute and hegemonic force of Industria and the world capitalist-system. The North is therefore not a homogenous geography, but has internal complexities that are suppressed.

Good Faith Witnesses: Knowledge communities often develop specialized processes to vet knowledge and make the processes of how knowledge claims are generated more transparent. Good faith witnesses are not the agent making a proposal but are agents who know the process and are able to verify fairness and conflicts of interest. Good faith witnesses are those agents that help avoid the trap of parochialism in propositions, and they deter proposals from hiding their contextual information.

Other/other: Ethically and ontologically, the difference between Other and other is that others are other entities which are recognized for having agency and their own purpose. Entities that are socially constructed and legitimized as Others are instrumental objects to be disposed in service to some constructed self, which can either be a literal individual self, a culturally defined self, and other communities that create a hard distinction between an important "us" and an instrumental "them." The universe is more full when we see it occupied by others, but it is empty and has less meaning when there is only "us."

Propositions: Claims for us to consider. Propositions can come from any voice, but then are placed in the context of public discussion for evaluation.

Public Life: Our life together. Public life ultimately refers back to the associations we build and acknowledge. The idea of public life is problematized with the constant task of opening and closing the boundaries of the community to various actors in order to authorize social action.

Science Trap, the: The tendency for knowledge claims to be met with epistemic authority as a way to quiet and suppress discourse. The science trap is the tendency to meet scientism with scientism. The way out of the science trap is to use civic evaluative criteria to determine how compelling a proposal is to a community; otherwise the science trap will deepen our civic crisis that probably led to the environmental change in question to begin with. The result of meeting scientism with scientism is that the discourse is either won through muting other voices (authoritarian) or neutralized through relativism as it wrongly treats all claims with equal merit.

Scientism: Enlightenment science. Scientism sees clean cleavages between facts and values, politics and science, objects and subjects (objectivism), positive science (positivism) and relativism, truth and falsity. This is separate from "science" or "the sciences" as this book refers to them, with the lower case [s]cience referring to a post-Enlightenment awareness that objectivism and positivism are untenable, but that the project of understanding the world through specific types of training—whether in the lab as a chemist, in the field as a biologist, or in the fields as a peasant, we go through processes that legitimate knowledge without using the hammer of scientism.

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Appendix 1: Books Espousing Environmental Skepticism and Links to Conservative Think Tanks[1]

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A. United States

Author(s)/ Editor(s)	Title	Publisher	Author/Editor Affiliation with Conservative Think Tank or Other Overt Conservatism	Date of Publi-cation
Adler, C. A.	**Ecological Fantasies; Death from Falling Watermelons: A Defense of Innovation, Science, and Rational Approaches to Environmental Problems**	**Dell Publishing and also Green Eagle Press**	**None Apparent**	**1973**
Adler, J. H.	Environmentalism at the Crossroads: Green Activism in America	*Capital Research Center*	*Competitive Enterprise Institute; Political Economy Research Center*	1995
Adler, J. H.	The Costs of Kyoto: Climate Change Policy and Its Implications	*Competitive Enterprise Institute*	*Competitive Enterprise Institute; Political Economy Research Center*	1997
Adler, J. H.	Ecology, Liberty and Property: A Free Market Environmental Reader	*Competitive Enterprise Institute*	*Competitive Enterprise Institute; Political Economy Research Center*	2000
Anderson, T. L.	You Have to Admit It's Getting Better: From Economic Prosperity to Environmental Quality	*Hoover Institution Press, Stanford University*	*Property and Environment Research Center (PERC); Hoover Institution; Pacific Research Institute*	2004
Arnold, A. with Sandlin, J.	Fear of Food: Environmental Scams, Media Mendacity, and the Law of Disparagement	*Free Enterprise Press/ Merril*	Arnold: *Free Enterprise Press/Center for Defense of Free Enterprise* **Sandlin: None Apparent**	1990, 1998
Arnold, R. and Gottlieb, A.	Trashing the Economy: How Runaway Environmentalism is Wrecking America	*Free Enterprise Press/ Merril Press*	Arnold and Gottlieb: *Center for the Defense of Free Enterprise*	1994

Avery, D. T.	Global Food Progress	*Hudson Institute*	*Hudson Institute*	1991
Avery, D. T.	Saving the Planet through Pesticides and Plastics	*Hudson Institute*	*Hudson Institute*	1995, 2000
Baden, J. A.	Environmental Gore: A Constructive Response to the Earth in Balance	*Pacific Research Institute for Public Policy*	*Foundation for Research on Economics and the Environment; Reason Foundation*	1994
Bailey, R.	Eco-Scam: The False Prophets of the Ecological Apocalypse	St. Martin's Press	*Competitive Enterprise Institute; Cato Institute*	1993
Bailey, R.	The True State of the Planet	Free Press	*Competitive Enterprise Institute; Cato Institute*	1995
Bailey, R.	Earth Report 2000: Revisiting the True State of the Planet	McGraw Hill	*Competitive Enterprise Institute; Cato Institute*	2000
Bailey, R.	Global Warming and Other Eco-Myths	Prima Publishing/Forum/ *Competitive Enterprise Institute*	*Competitive Enterprise Institute; Cato Institute*	2002
Balling, R. C. (Jr.)	The Heated Debate: Greenhouse Predictions Versus Climate Reality	*Pacific Research Institute for Public Policy*	*Committee for a Constructive Tomorrow;* Techcentralstation.com[2]; *Competitive Enterprise Institute*	1992
Barrett, S. J. and Gots, R. E.	Chemical Sensitivity: The Truth About Environmental Illness	Prometheus Books	Both: *American Council on Science and Health*	1998
Bast, J. L., Hill, P. J. and Rue, R. C.	Eco-Sanity: A Common-Sense Guide to Environmentalism	Madison Books	Hill: *Property and Environmental Research Center* *Bast: Heartland Institute* *Rue: Heartland Institute*	1994

Bennett, M. J.	The Asbestos Racket: An Environmental Parable	*Free Enterprise Press; Merril Press*	*Science and Environmental Policy Project (SEPP)*	1991
Bethell, T.	The Politically Incorrect Guide to Science	Regnery	*Hoover Institution; The Independent Institute*	2005
Bolch, B. W. and Lyons, H.	Apocalypse Not: Science, Economics, and Environmentalism	*Cato Institute*	Bolch: *Committee for a Constructive Tomorrow (C-FACT*); Independent Institute **Lyons: None Apparent**	1993
Bradley, R. L. (Jr.)	Climate Alarmism Reconsidered	*Institute of Economic Affairs (IEA)*	*Competitive Enterprise Institute; Cato Institute; Institute for Energy Research*	2003
Caruba, A.	Warning Signs	Merril Press	*American Policy Center; Sovereignty International*	2003
Coffman, M. S.	Environmentalism! The Dawn of Aquarius or the Twilight of a New Dark Age	*Environmental Perspectives, Inc.*	*Environmental Perspectives, Inc.; Sovereignty International; National Council for Air and Stream Improvement, Inc.*	1992
Coffman, M. S.	Saviors of the Earth? The Politics and Religion of the Environmental Movement	Northfield (evangelical publishers)	*Environmental Perspectives, Inc.; Sovereignty International*	1994
Cohen, B. R., Milloy, S. J. and Zrake, S.	American Values: An Environmental Vision	*Environmental Policy Analysis Network*	Cohen*: Consumer Alert; Lexington Institute; National Center for Public Policy Research* Milloy: *Cato Institute* **Zrake: None Apparent**	1996
DeGregori, T. R.	Agriculture and Modern Technology: A Defense	Iowa State University Press	*American Council on Science and Health*	2001
DeGregori, T. R.	Bountiful Harvest: Technology, Food Safety, and the Environment	*Cato Institute*	*American Council on Science and Health*	2002

DeGregori, T. R.	Environment, Our Natural Resources, and Modern Technology	Iowa State University Press	*American Council on Science and Health*	2002
Dini, J. W.	Challenging Environmental Mythology: Wrestling Zeus: Uncover the Truths Environmental Extremists Don't Want You to Know	SciTech Publishing, Inc.	*Heartland Institute*	2003
Driessen, P.	Eco-Imperialism: Green Power, Black Death	*Free Enterprise Press/ Merril Press*	*Center for the Defense of Free Enterprise; Committee for a Constructive Tomorrow; Congress of Racial Equality*	2003
Duesterberg, T. J. and London, H. I.	Riding the Next Wave: Why This Century Will Be a Golden Age for Workers, the Environment, and Developing Countries	*Hudson Institute Press*	Both: *Hudson Institute*	2001
Duesterberg, T. J. and London, H. I.	Beyond the Year 2000: Perspectives on the World to Come	*Hudson Institute Press*	Both: *Hudson Institute*	2002
Dunn, J. R. and Kinney, J. E.	Conservative Environmentalism: Reassessing the Means, Redefining the Ends	Quorum Books	Dunn and Kinney: *National Council for Environmental Balance (Defunct Kentucky CTT);* Dunn: *Property and Environment Research Center (PERC)* Self-Declared Conservatives	1996

Easterbrook, G.	**A Moment on Earth: The Coming Age of Environmental Optimism**	**Viking**	**Brookings Institution (not conservative)**	**1995**
Efron, E.	The Apocalyptics: How Environmental Politics Controls What We Know About Cancer	Touchstone/ Simon and Schuster, Inc.	Reason Magazine Contributing Editor; *Reason Foundation; Consumer Alert*; Self-declared conservative	1984
Foster, K. R., Bernstein, D. E. and Huber, P. W.	Phantom Risk: Scientific Inference and the Law	The Manhattan Institute/ MIT Press	Foster: *Manhattan Institute; Fraser Institute* Bernstein: *Manhattan Institute* Huber: *Manhattan Institute*	1994
Foster, K. R. and Huber, P. W.	Judging Science: Scientific Knowledge and the Federal Courts	MIT Press	Foster: *Manhattan Institute; Fraser Institute* Huber: *Manhattan Institute*	1997/1999
Fumento, M.	Science Under Siege: How the Environmental Misinformation Campaign is Affecting our Laws, Taxes, and Our Daily Lives	Quill/William Morrow	*Hudson Institute; Competitive Enterprise Institute; Consumer Alert*	1993
Fumento, M.	Polluted Science: The EPA's Campaign to Expand Clean Air Regulations	*American Enterprise Institute for Public Policy Research*	*Hudson Institute; Competitive Enterprise Institute; Consumer Alert*	1997
Fumento, M.	BioEvolution: How Biotechnology is Changing Our World	Encounter Books	*Hudson Institute; Competitive Enterprise Institute; Consumer Alert*	2003

Gots, R. E.	Toxic Risks: Science, Risks, and Perception	CRC Press	*American Council on Science and Health*	1993
Gough, M.	Dioxin, Agent Orange: The Facts	Plenum Press	*Cato Institute*	1986
Gough, M.	Politicizing Science: The Alchemy of Policymaking	*Hoover Institution*	*Cato Institute*	2005
Grayson, M. J. and Shepard, T. R.	**The Disaster Lobby: Prophets of Ecological Doom and other Absurdities**	**Follett Publishing**	**None Apparent**	**1973**
Green, K. P.	Global Warming: Understanding the Debate	Enslow Publishers, Inc.	*The Environmental Literacy Council; Fraser Institute; Reason Public Policy Institute; American Enterprise Institute for Public Policy Research*	2002
Greve, M. S. and Smith, F. L. (Jr.)	Environmental Politics: Public Costs, Private Rewards	Praeger Publishers	Greve: *Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research* Smith: *Competitive Enterprise Institute*	1992
Greve, M. S.	The Demise of Environmentalism in American Law	*American Enterprise Institute for Public Policy Research*	Greve: *Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research*	1996

Hayward, S. F.	The Index of Leading Environmental Indicators, Ninth Edition	*Pacific Research Institute of Public Policy/American Enterprise Institute for Public Policy Research*	*Pacific Research Institute of Public Policy; American Enterprise Institute for Public Policy Research; Hoover Institution*	2004
Hayward, S. F.	The Index of Leading Environmental Indicators 2005	*Pacific Research Institute of Public Policy/American Enterprise Institute for Public Policy Research*	*Pacific Research Institute of Public Policy; American Enterprise Institute for Public Policy Research; Hoover Institution*	2005
Hollander, J. M.	**The Real Environmental Crisis: Why Poverty, Not Affluence, Is the Environment's Number One Enemy**	**University of California Press**	**None Apparent**	**2003**
Huber, P. W.	Liability: The Legal Revolution and its Consequences	Perseus Books	*Manhattan Institute*	1990
Huber, P. W.	Galileo's Revenge: Junk Science in the Courtroom	Basic Books	*Manhattan Institute*	1991
Huber, P. W.	Hard Green: Saving the Environment from the Environmentalists—A Conservative Manifesto	Basic Books	*Manhattan Institute*	1999
Huber, P. W. and Mills, M.	The Bottomless Well: The Twilight of Fuel, the Virtue of Waste, and Why We Will Never Run Out of Energy	Basic Books	Huber: *Manhattan Institute* Mills: *Digital Power Capital and Digital Power Group*	2005

Idso, S. B.	Carbon Dioxide: Friend or Foe?	*I.B.R. Books (Division of the Institute for Biospheric Research, Inc.; directed by Idso)*	*George C. Marshall Institute; Center for the Study of C02*	1982
Idso, S. B.	Carbon Dioxide and Global Change: Earth in Transition	*I.B.R. Books*	*George C. Marshall Institute; Center for the Study of C02*	1989
Jastrow, R., Nierenberg, W. A. and Seitz, F.	Scientific Perspectives on the Greenhouse Problem	*George C. Marshall Institute/* Jameson Books	Jastrow: *George C. Marshall Institute* Nierenberg: *George C. Marshall Institute; Science and Environmental Policy Project (SEPP)* Seitz: *George C. Marshall Institute, Science and Environmental Policy Project (SEPP)*	1989 via Marshall/ 1990 via Jameson
Kahn, H., Brown, W. and Martel, L.	The Next 200 Years: A Scenario for America and the World	Wm. Morrow	Kahn: *Hudson Institute* **Brown: None Apparent** Martel: *Hudson Institute*	1976
Kaufman, W.	No Turning Back: Dismantling the Fantasies of Environmental Thinking	Basic Books/ iUniverse	*The Property and Research Center (PERC)*	1994, 2000
Lehr, J. H.	Rational Readings on Environmental Concerns	John Wiley and Sons, Inc.	*Heartland Institute*	1992, 1997
Lichter, S., Rothman, R. and Rothman, S.	Environmental Cancer—A Political Disease?	Yale University Press	Lichter: *American Enterprise Institute for Public Policy Research; Center for Media and Public Affairs* Rothman: Center for the Study of Social and Political Change at Smith College	1999

Logomasini, A. and Riggs, R.	The Environmental Source	*Competitive Enterprise Institute*	Logomasini: *Competitive Enterprise Institute; Heartland Institute* Riggs: *Competitive Enterprise Institute*	2002
London, H. I.	Why are they Lying to our Children?	Stein and Day Publishers	*Hudson Institute*	1984
Maduro, R. A. and Schauer-hammer, R.	The Holes in the Ozone Scare: The Scientific Evidence That the Sky Isn't Falling	*21st Century Science Associates*	Both: *21st Century Science Associates*	1992
Mathieson, M. M.	Global Warming in a Politically Correct Climate: How Truth Became Controversial	Writers Club Press (2000); iUniverse (2004)	*The Center for the Study of Carbon Dioxide and Global Change*	2000, 2004
Maurice, C. and Smithson, C. W.	The Doomsday Myth: 10,000 Years of Economic Crisis	*Hoover Institution Press*	**None Apparent**	1984/1987
Mendelsohn, R. O.	The Greening of Global Warming	*American Enterprise Institute for Public Policy Research*	**None Apparent**	1999
Meyer, H. E.	**The War Against Progress**	**Storm King Publishers**	**None Apparent**	**1979**
Michaels, P. J.	Sound and Fury: The Science and Politics of Global Warming	*Cato Institute*	*Cato Institute; Consumer Alert*	1994
Michaels, P. J.	Meltdown: The Predictable Distortion of Global Warming by Scientists, Politicians, and the Media	*Cato Institute*	*Cato Institute; Consumer Alert*	2004

Michaels, P. J.	Shattered Consensus: The True State Of Global Warming	Rowman and Littlefield	*Cato Institute; Consumer Alert*	2005
Michaels, P. J. and Balling, R. C. (Jr.)	The Satanic Gases: Clearing the Air About Global Warming	*Cato Institute*	Michaels: *Cato Institute; Consumer Alert* Balling: *Committee for a Constructive Tomorrow;* Techcentralstation.com[2]; *Competitive Enterprise Institute*	2000
Miller, H. I. and Conko, G.	The Frankenfood Myth: How Protest and Politics Threaten the Biotech Revolution	Greenwood Publishing Group/Praeger	Miller: *Hoover Institution; Competitive Enterprise Institute; George C. Marshall Institute; American Council on Science and Health; Consumer Alert; National Center for Policy Analysis.* Conko: *Competitive Enterprise Institute*	2004
Milloy, S. J.	Science without Sense: The Risky Business of Public Health Research	*Cato Institute*	*Cato Institute*	1995
Milloy, S. J.	Junk Science Judo: Self-Defense Against Health Scares and Scams	*Cato Institute*	*Cato Institute*	2001
Milloy, S. J. and Gough, M.	Silencing Science	*Cato Institute*	Both: *Cato Institute*	1999
Moore, C. C.	Haunted Housing: How Toxic Scare Stories Are Spooking the Public Out of House and Home	*Cato Institute*	*Competitive Enterprise Institute; Cato Institute*	1997
Moore, S. and Simon, J. L.	It's Getting Better All the Time: 100 Greatest Trends of the Last 100 Years	*Cato Institute*	Moore: *Cato Institute; Free Enterprise Fund* Simon: *Cato Institute; Heritage Foundation*	2000

Moore, T. G.	Environmental Fundamentalism	*Hoover Institution Press*	*Competitive Enterprise Institute; The Independent Institute; Hoover Institution; Cato Institute*	1992
Moore, T. G.	Global Warming: A Boon to Humans and Other Animals	*Hoover Institution Press*	*Competitive Enterprise Institute; The Independent Institute; Hoover Institution; Cato Institute*	1995
Moore, T. G.	Climate of Fear: Why We Should Not Worry About Global Warming	*Cato Institute*	*Competitive Enterprise Institute; The Independent Institute; Hoover Institution; Cato Institute*	1998
Moore, T. G.	In Sickness or In Health: The Kyoto Protocol versus Global Warming	*Hoover Institution Press*	*Competitive Enterprise Institute; The Independent Institute; Hoover Institution; Cato Institute*	2000
Murray, D., Schwartz, J. and Lichter, R. S.	It Ain't Necessarily So: How the Media Make and Unmake the Scientific Picture of Reality	Rowman and Littlefield	Murray: *Statistical Assessment Service (STATS) at George Mason Center for Media and Public Affairs* Schwartz: *Reason Public Policy Institute; Hudson Institute* Lichter: *American Enterprise Institute for Public Policy Research; Center for Media and Public Affairs; STATS*	2001
O'Leary, R.	**Environmental Mafia: The Enemy is Us**	**Algora Publishing**	**None Apparent**	**2003**
O'Rourke, P. J.	All the Trouble in the World: The Lighter Side of Overpopulation, Famine, Ecological Disaster, Ethnic Hatred, Plague, and Poverty	The Atlantic Monthly Press	*Cato Institute*	1994

Ottoboni, A. M.	The Dose Makes the Poison: A Plain-Language Guide to Toxicology	Vincente Books, Incorporated/ John Wiley and Sons, Inc. 2nd Edition	*American Council on Science and Health*	1984 via Vincente Books/ 1997 via John Wiley and Sons
Parsons, M. L.	**Global Warming: The Truth Behind the Myth**	**Da Capo Press and Insight Books/Plenum Press**	**None Apparent**	**1995**
Rabkin, J. A. and Sheehan, J. M.	Global Greens, Global Governance	*Institute for Economic Affairs*	Rabkin: *American Enterprise Institute for Public Policy Research; Cato Institute* Sheehan: *Competitive Enterprise Institute*	1999
Ray, D. L. and Guzzo, L.	Trashing the Planet: How Science Can Help Us Deal With Acid Rain, Depletion of the Ozone, and Nuclear Waste (Among Other Things)	Regnery Gateway (self-proclaimed conservative publisher)/Harper-Perennial	Ray: *Free Congress Committee/ Foundation*; self-declared conservative	1993 via Regnery/ 1994 via Harper-Perennial
Ray, D. L. and Guzzo, L.	Environmental Overkill: Whatever Happened to Common Sense?	Regnery Gateway (self-proclaimed conservative publisher)/Harper-Perennial	Ray: *Free Congress Committee/ Foundation*; self-declared conservative	1993 via Regnery/ 1994 via Harper-Perennial

Rubin, C. T.	The Green Crusade: Rethinking the Roots of Environmentalism	The Free Press-Macmillan/ Rowman and Littlefield	*Marshall Institute; Ashbrook Center*	1994 via the Free Press/ 1998 via Rowman and Littlefield
Sanera, M. and Shaw, J.	Facts, Not Fear: Teaching Children About the Environment	Regnery Publishing (self-proclaimed conservative publisher)	Sanera: *Competitive Enterprise Institute* Shaw: *The Property and Environment Research Center (PERC),* Association of Private Enterprise Education	1999
Schwartz, J.	No Way Back: Why Air Pollution Will Continue to Decline	*AEI Press*	*American Enterprise Institute for Public Policy Research*	2003
Seitz, F.	Global Warming and Ozone Hole Controversies: A Challenge to Scientific Judgment	*George C. Marshall Institute*	*Science and Environmental Policy Project; the George C. Marshall Institute; Committee for a Constructive Tomorrow*	1994
Simon, J. L.	The Ultimate Resource	Princeton University Press	*Cato Institute; Heritage Foundation*	1981
Simon, J. L.	Population Matters: People, Resources, Environment, and Immigration	Transaction Publishers	*Cato Institute; Heritage Foundation*	1990
Simon, J. L.	The State of Humanity	Blackwell Press and *Cato Institute*	*Cato Institute; Heritage Foundation*	1995
Simon, J. L.	The Ultimate Resource 2	Princeton University Press	*Cato Institute; Heritage Foundation*	1996

Simon, J. L.	Hoodwinking the Nation	Transaction Press and *Cato Institute*	*Cato Institute; Heritage Foundation*	1999
Simon, J. L. and Kahn, H.	The Resourceful Earth: A Response to Global 2000	Blackwell Press	Simon: *Cato Institute; Heritage Foundation* Kahn: *Hudson Institute*	1984
Singer, F. S.	Global Climate Change: Human and Natural Influences	Paragon House/ International Conference on the Unity of the Sciences (Founded by conservative Sun Myung Moon)	*Science and Environmental Policy Project; Independent Institute; American Council on Science and Health; Cato Institute; National Center for Policy Analysis; Natural Resource Stewardship Project; Hoover Institution; Heritage Foundation*	1989
Singer, F. S.	Hot Talk, Cold Science: Global Warming's Unfinished Debate	*The Independent Institute*	*Science and Environmental Policy Project; Independent Institute; American Council on Science and Health; Cato Institute; National Center for Policy Analysis; Natural Resource Stewardship Project; Hoover Institution; Heritage Foundation*	1998
Singer, F. S.	Climate Policy—From Rio to Kyoto: A Political Issue for 2000 and Beyond	*Hoover Institution Press*	*Science and Environmental Policy Project; Independent Institute; American Council on Science and Health; Cato Institute; National Center for Policy Analysis; Natural Resource Stewardship Project; Hoover Institution; Heritage Foundation*	2000

Soon, W., Baliunas, S., Robinson, A. B., Robinson, Z. and Jones, L.	Global Warming: A Guide to the Science	*The Fraser Institute*	Soon: *Marshall Institute* Baliunas: *Marshall Institute* **Robinson and Robinson: None Apparent**	2001
Staudenmayer, H.	**Environmental Illness: Myth and Reality**	**CRC Press**	**None Apparent**	**1999**
Taylor, P.	**Green Gone Wrong: Ecopolitics Exposed**	**Writers Club Press**	**None Apparent**	**2001**
Wattenberg, B. J.	The Good News is the Bad News is Wrong	Simon and Schuster	*American Enterprise Institute for Public Policy Research; Hudson Institute*	1984
Whelen, E. M. and Stare, F. J.	Panic in the Pantry: Facts and Fallacies about the Food You Buy	Simon and Schuster/ Prometheus Books	Whelen: *American Council on Science and Health; Consumer Alert, Heartland Institute* **Stare: None Apparent**	1975 via Simon and Schuster/ 1992 via Prometheus
Whelen, E. M.	Toxic Terror: the Truth Behind the Cancer Scares	Prometheus Books	*American Council on Science and Health; Consumer Alert, Heartland Institute*	1985/1993
Wildavsky, A. B.	But is it True? A Citizen's Guide to Environmental Health and Safety	Harvard University Press	*The Independent Institute; Science and Environment Policy Project (SEPP)*	1995

B. United Kingdom

Bate, R.	What Risk? Science, Politics, and Public Health	*European Science and Environmental Forum*/ Butterworth-Heineman (Elsevier)	*Institute for Economic Affairs; Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research; Committee for a Constructive Tomorrow European Science and Environmental Forum; Africa Fighting Malaria*	1997
Bate, R.	Life's Adventure: Virtual Risk in a Real World	Butterworth-Heineman (Elsevier)	*Institute for Economic Affairs; Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research; Committee for a Constructive Tomorrow European Science and Environmental Forum; Africa Fighting Malaria*	2000
Bate, R. and Morris, J.	Global Warming: Apocalypse or Hot Air?	*American Enterprise Institute for Public Policy Research*	Bate: *Institute for Economic Affairs; Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research; Committee for a Constructive Tomorrow European Science and Environmental Forum; Africa Fighting Malaria* Morris: *Institute for Economic Affairs, International Policy Network*	2000
Beckerman, W.	Small Is Stupid: Blowing the Whistle on the Green	Gerald Duckworth, Co.	*The Independent Institute*	1995
Beckerman, W.	Through Green Colored Glasses: Environmentalism Reconsidered	*Cato Institute*	*The Independent Institute*	1996

Beckerman, W.	A Poverty of Reason: Sustainable Development and Economic Growth	*The Independent Institute*	*The Independent Institute*	2002
Boehmer-Christiansen, S. and Kellow, A.	International Environmental Policy: Interests and the Failure of the Kyoto Process	Edward Elgar	**Boehmer-Christiansen: None Apparent** Kellow: *The Institute for Public Affairs* ("The Leading Australian Free Market Think Tank")	2002
Emsley, J.	The Global Warming Debate: The Report of the European Science and Environment Forum	*European Science and Environmental Forum*	*European Science and Environmental Forum*	1996
Le Fanu, J.	Environmental Alarms: A Medical Audit of Environmental Damage to Human Health	*Social Affairs Unit*	*Social Affairs Unit*	1994
Maddox, J.	**The Doomsday Syndrome: An Attack on Pessimism**	**McGraw Hill**	**None Apparent**	**1972**
Mooney, L. and Bate, R.	Environmental Health: Third World Problems—First World Preoccupations	*European Science and Environmental Forum*/ Butterworth-Heineman (Elsevier)	Mooney: *Africa Fighting Malaria; American Enterprise Institute for Public Policy Research* Bate: *Institute for Economic Affairs; Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research; Committee for a Constructive Tomorrow European Science and Environmental Forum; Africa Fighting Malaria*	1999
Morris, J.	Climate Change: Challenging the Conventional Wisdom	*Institute for Economic Affairs*	*Institute for Economic Affairs; International Policy Network*	1997

Morris, J.	Rethinking Risk and the Precautionary Principle	Butterworth-Heineman (Elsevier)	*Institute for Economic Affairs; International Policy Network*	2000
Morris, J.	Sustainable Development: Promoting Progress or Perpetuating Poverty	Profile Books Unlimited	*Institute for Economic Affairs; International Policy Network*	2002
Morris, J. and Bate, R.	Fearing Food: Risk, Health, and Environment	Butterworth-Heinemann	Bate: *Institute for Economic Affairs; Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research; Committee for a Constructive Tomorrow European Science and Environmental Forum; Africa Fighting Malaria* Morris: *Institute for Economic Affairs, International Policy Network*	1999
North, R. D.	Life on a Modern Planet: A Manifesto for Progress	Manchester University Press/St. Martin's Press in the US	*Institute for Economic Affairs*	1995
O'Hear, A.	Nonsense about Nature	*Social Affairs Unit*	*Social Affairs Unit*	1997
Ridley, M.	Down to Earth: A Contrarian View of Environmental Problems	*Institute for Economic Affairs*	**None Apparent**	1995
Ridley, M.	Down to Earth II: Combating Environmental Myths	*Institute for Economic Affairs*	**None Apparent**	1996
Stott, P.	Tropical Rain Forest: A Political Ecology of Hegemonic Mythmaking	*Institute for Economic Affairs*	**None Apparent**	1999

C. Australia

Daly, J. L.	The Greenhouse Trap	Bantam Books	*The Greening Earth Society* (defunct CTT created by Western Fuels Association)	1989
Kininmonth, W.	Climate Change: A Natural Hazard	Multi-Science Publishers	*The Lavoisier Group, Inc*	2004

D. Canada

Baarschers, W. H.	**Eco-Facts and Eco-Fiction: Understanding the Environmental Debate**	**Routledge**	**None Apparent**	**1996**
Essex, C. and McKitrick, R.	Taken by Storm: The Troubled Science, Policy and Politics of Global Warming	Key Porter Books	McKitrick: *Fraser Institute; Cooler Heads Coalition* (formed by the Competitive Enterprise Institute) Essex: Cooler Heads Coalition	2002

E. Denmark

Lomborg, B.	The Skeptical Environmentalist: Measuring the Real State of the World	Cambridge University Press	Environmental Assessment Institute,[3] *Cooler Heads Coalition* (formed by the Competitive Enterprise Institute of the US. Congress, funded his trip for briefing); *Fraser Institute*	2001

F. France

Leroux, M.	Global Warming: Myth or Reality?	Springer-Praxis Books	*21st Century Associates* via French language magazine, *Fusion*	2005

G. Germany

Weber, G. R..	*Global Warming: The Rest of the Story*	Bottiger Verlags-GmbH.	*Center For a Constructive Tomorrow (C-FACT)*	1991

H. Netherlands

Labohm, H., Rozendaal, S. and Thoenes, D.	*Man-Made Global Warming: Unraveling a Dogma*	Multi-Science Publishing Co., Ltd.	Labohm: *Natural Resources Stewardship Council* (Canadian CTT) and Techcentralstation.com[2] **Rozendaal: None Apparent** **Thoenes: None Apparent**	2004

I. New Zealand

Gray, V.	*Greenhouse Delusion: A Critique of 'Climate Change 2001'*	Multi-Science Publishing Co., Ltd.	*Natural Resources Stewardship Council* and Techcentralstation.com[2]	2002

J. South Africa

Tren, R. and Bate, R.	*Malaria and the DDT Story*	Institute for Economic Affairs	Tren: *Free Market Foundation; Institute for Economic Affairs; Africa Fighting Malaria; Competitive Enterprise Institute* Bate: *Institute for Economic Affairs; Competitive Enterprise Institute; American Enterprise Institute for Public Policy Research; Committee for a Constructive Tomorrow European Science and Environmental Forum*	2001

K. Sweden

Gerholm, R. T.	*Climate Policy After Kyoto*	Multi-Science Publishing Co., Ltd.	*Science and Environmental Policy Project (SEPP)*	1999

Notes

[1] Bold entries indicate no apparent affiliation to a CTT.
[2] Techcentralstation.com is not a "think tank" but is conservative.
[3] EAI is a unit of the Danish Government.

Appendix 2: Conservative Think Tanks Interested in Environmental Issues[1]

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Conservative Think Tank	**National Location**	**Environmental Skepticism Espoused**
Environmental Probe	Canada	No
Rio Grande Foundation	USA	No
Center for Public Justice	USA	No
Texas Conservative Coalition	USA	No
American Association of Small Property Owners	USA	No
American Policy Center	USA	Yes
Fraser Institute	Canada	Yes
Institute for Contemporary Studies[2]	USA	Yes
National Legal Center for the Public Interest	USA	Yes
Weidenbaum Center	**USA**	**Yes**
American Council on Science and Health	USA	Yes
Foundation for Research on Economics and the Environment	USA	Yes
Reason Foundation	USA	Yes
Pacific Research Institute for Public Policy	USA	Yes
Project 21	USA	Yes
National Center for Policy Analysis	USA	Yes
Capital Research Center	USA	Yes
Competitive Enterprise Institute	**USA**	**Yes**
FreedomWorks Foundation	USA	Yes
George C. Marshall Institute	**USA**	**Yes**

Heartland Institute	USA	Yes
Junkscience.com[3]	**USA**	**Yes**
American Policy Center	USA	Yes
South Carolina Policy Council	USA	Yes
The Independent Institute	USA	Yes
National Wilderness Institute	USA	Yes
Acton Institute for the Study of Religion and Liberty	USA	Yes
Discovery Institute	USA	Yes
The Philanthropy Roundtable	USA	Yes
Ethan Allen Institute	USA	Yes
The Centre for the New Europe	Belgium	Yes
The Greening Earth Society[4]	**USA**	**Yes**
Statistical Assessment Service	USA	Yes
The Eudoxa Think Tank	Sweden	Yes
Alliance for America	USA	Yes
Alliance for America Foundation	USA	Yes
Frontiers of Freedom	USA	Yes
Frontiers of Freedom Institute	USA	Yes
The Molinari Economic Institute	France	Yes
Washington Policy Center	USA	Yes
Small Business and Entrepreneuership Council Foundation	USA	Yes
Small Business and Entrepreneurship Council	USA	Yes

International Policy Network	UK	Yes
Mountain States Legal Foundation	USA	Yes
PERC—Property and Environment Research Center	USA	Yes
The Science and Environmental Policy Project	**USA**	**Yes**
Institute for Study of Economics and the Environment	**USA**	**Yes**
Institute for Research on the Economics of Taxation	USA	Yes
The Centre for the New Europe	USA	Yes
Committee for a Constructive Tomorrow (CFACT)	**USA**	**Yes**

Notes

[1] The eight think tanks shown in bold have a specific interest in 'global warming' or 'climate change' as indicated by their listing in the Heritage Foundation's database.
[2] Coded sceptical for the publication of Singer (1992), which has no apparent ISBN and is therefore not listed in Appendix 1.
[3] The status of JunkScience.com as a non-profit think tank is unclear, so here we follow the Heritage Foundations categorization of "policy expert organization" that implies it is a think tank.
[4] The Greening Earth Society website notes that it "expired" February 2007, but may continue at a later date.

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