

“PLANET IN PERIL”: THE END OF THE WORLD IN ENVIRONMENTAL DISCOURSE

By

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To the garden whose fruits I've not yet tasted.

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This study examines how the phenomenon of environmental apocalypticism, or the expectation of imminent, widespread societal or ecosystem collapse due to environmental degradation or pollution, has expressed itself in U. S. culture since the 1960s. I argue that in light of its half century of existence it needs to be examined in its own right, and should not be simply subsumed under the broader umbrella of secular apocalypticism. Second, I find that while it is based on science, it has both secular and religious forms. Both of these forms have contributed significantly to environmental discourse during the past 50 years.

Secular environmental apocalypticism is distinctive in that it has a physical basis, accepts a scientific epistemology, affirms human agency, believes the future is indeterminate, has gained mainstream acceptance, and vehemently advocates averting the environmental apocalypse. Additionally, secular environmental apocalypticism contains two apocalypses, one of which is “ecocentric” and has to do with fears related to the drastic reduction of biological diversity, and the other of which is “anthropocentric” and fears threats to human health and wellbeing. The ecocentric apocalypse, which de-centers humans as the beings whose fate is of primary importance, is unique to environmental apocalypticism. Secular environmental apocalypticism thus continues trends of pessimistic eschatological speculation which have existed from time

immemorial, while also developing distinctive set of characteristics based on the risks and rewards of life in modern industrial culture.

Religious environmental apocalypticists are also deeply concerned about evidence of environmental destruction and deterioration, but they incorporate a variety of religious practices, beliefs and epistemologies into their understandings of the crisis. They do so in two ways. First, the prospect of environmental apocalypse has spurred the call for a return to religion by individuals who otherwise embrace naturalistic explanations for the origin and function of the universe. Second, I examine how several religions which have been deeply influenced by the environmental crisis combine practices such as ritual and visualization with beliefs about prophecy, intuition, and deities into their understanding and assessment of the crisis. Often, they do so in ways that are compatible rather than in competition with scientific findings. Through examining such interactions, I suggest that environmentally apocalyptic beliefs may be significantly shaping religious discourse and practice.

Although they are often treated separately, I argue that these secular and religious apocalypticisms are both part of the larger phenomenon of environmental apocalypticism. Environmental apocalypticism is thus best conceived as an umbrella covering a wide spectrum of both religious and secular forms which often, moreover, overlap. Understanding environmental apocalypticism in this broad manner not only helps situate it in the study of apocalypticism but also contributes to recent research in the field of religious studies on environmentally related religiosity.

## CHAPTER 1 INTRODUCTION

### **Situating Environmental Apocalypticism**

Apocalyptic movements have a long history of often contentious interaction with the larger societies in which they are embedded (Robbins and Palmer 1997; Talmon 1968; Wessinger 2000). Particularly since the publication of Rachel Carson's *Silent Spring* in 1962, environmental discourse has been characterized by the use of strong apocalyptic language, yet its apocalyptic claims have also managed to capture mainstream attention and increasing acceptance worldwide. Despite its importance in motivating thousands of individuals, non-profits, non-governmental organizations, international panels, and occasionally, governmental bodies toward pro-environmental action, no larger study has yet been devoted to analyzing environmental apocalypticism's unique characteristics and social impact, nor to situating it carefully within the larger field of apocalypticism studies. How has environmental apocalypticism managed to be so long-lasting and credible, and in what ways is it distinctive from other contemporary forms? This study aims to address these questions by examining the discourse of environmental apocalypticism as it has developed in the United States since the early 1960s.

When discussing environmental apocalypticism, many scholars have subsumed it under the larger category of "secular apocalypticism," which can include nuclear war, economic disaster, disease, and technological breakdown, among other fears. However appropriate this broad categorization may have been—particularly during the Cold War era in which environmental apocalypticism first gained momentum—a major theme of this study is that environmental apocalypticism has since developed into a distinct and prominent strand within the modern eschatological vision, and should thus be considered in its own right. In particular, while acknowledging its thematic continuities with prior apocalyptic traditions, this study seeks to

highlight its unique characteristics, including the acceptance of scientific epistemologies, affirmation of human agency, belief in an indeterminate future, lack of hopeful anticipation of “the end,” achievement of mainstream acceptance and emphasis on the importance of averting apocalypse. Additionally, I identify an innovation unique to environmental apocalypticism: the concept of an ecocentric apocalypse. All of these suggest that environmental apocalypticism is a persistent stream unique enough to be considered in its own right.

Despite its many secular characteristics, a second major finding of this study is the ways in which religious beliefs are often intertwined with environmental apocalypticism. First, apocalyptic views of crisis have been central in spurring calls for a return to “religious” or quasi-religious worldviews. This discourse demonstrates an enduring linkage between religion and environmental apocalypticism in the literature, and suggests that the apocalypse has become a new means of orientation which has significantly shaped the ways in which religion is constructed. Second, I also explore the ways in which apocalypticism associated with the environmental movement has shaped, and been shaped by, the nature-friendly religions which have developed (in part) in response to and awareness of it. The eschatologies of these religions are deeply influenced by science-based environmentally apocalyptic discourse, even while they also incorporate a variety of non-scientific epistemologies, ontologies and practices into their understanding of the crisis and visions for the future.

By and large, the findings of this section serve to highlight the ways in which religion has been understood as important in light of the perceived threat of environmental apocalypse. Additionally, the finding that religious aspects of environmental apocalypticism have persisted alongside—and sometimes in tension with—apocalypticism rooted primarily in scientific evidence both draws from and contributes to the recent growth of scholarly interest in exploring

the ways in which scientific worldviews are being incorporated into nature religiosity in America.<sup>1</sup> In particular, I find that the religiosity related to environmental apocalypticism is for the most part constructed so as to be compatible with scientific findings.

Taken together, the findings of this study suggest that the secular and religious attributes of environmental apocalypticism have both contributed to its endurance and persistence in a variety of environmental subcultures, even as its claims have also become increasingly credible to scientific and political intelligentsia globally. Furthermore, by developing a theoretical lens which puts in focus both its secular and religious components, this study aims to situate environmental apocalypticism more carefully within the larger field of the study of apocalypticism, while also describing, exploring and analyzing its persistence in environmental discourse as it has developed in the United States since the early 1960s.

### **Apocalypticism in Context**

Apocalyptic movements have occurred in many cultural and historical contexts, yet scholars have identified two main traditions in the United States during the twentieth century: “secular apocalypticism” (which usually includes environmental apocalypticism) and Biblical apocalypticism, which Paul Boyer has described as “the conviction that the course of history, and the sequence of events that will herald the end of the world, are foretold in the Bible” (1992: ix). This Bible-based apocalypticism has gained increasing attention as scholars have realized its persistence and enduring importance in American culture (Barkun 1983; Weber 2000; Wocjik 1997). Although this study is not primarily comparative in nature, and thus does not seek to present a detailed portrait of Biblical apocalypticism (such work having been exhaustively explored elsewhere), I have found it necessary throughout to use Biblical apocalypticism as a

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<sup>1</sup> See for example Albanese 1990, Crosby 2007, Gatta 2004, and Taylor 2008.

point of reference. Such a strategy is essential because without establishing a baseline of “what apocalypticism is,” it would be impossible to show both how environmentalism departs from it, as well as which continuities it maintains.

Thus, while recognizing that Biblical apocalypticism itself is not a monolithic phenomenon, I follow apocalypticism scholar Michael Barkun (1983) in characterizing its main tenets as the belief in a sacred, divinely guided history in which God, the supernatural agent, has predetermined an apocalyptic, retributive end at some point in the imminent future. As he notes, in light of this, most Biblical apocalypticism is concerned with determining, through the correlation of signs and portents to Biblical prophecies, how close the present moment is to that end (1983: 267). Such a portrayal is by necessity simplistic, yet it provides an important point of reference in the present study, and one that is particularly apt because both Biblical apocalypticism and environmental apocalypticism occur in the same culture and during the same time period. While not being the main topic of exploration, Biblical apocalypticism is thus an important backdrop.

Additionally, rather than arguing that environmental apocalypticism can be simply fit in to the mold created by other forms, I argue that the environmental crisis is actually re-shaping the idea of the apocalypse. First, the idea of grave future risk related to environmental degradation is supported by consensus science (“Ecosystems” 2005; IPCC 2007). Second, unlike other apocalypses, many of the processes which are predicted to lead to catastrophic change have already begun. Third, however, the possibility of a truly catastrophic disruption—such as the collapse of world economic systems due to ecosystem collapse or dramatic biological simplification—still hovers, ever in the near future but never quite in the present. Increasingly, thus, apocalypse has come to signify something that it never signified before: it refers not only to

potential catastrophe in the future but to actual, present, socio-ecological decline and concomitant suffering.<sup>2</sup> The very meaning of the word apocalypse is thus being re-shaped by the experience of environmental destruction and the real possibility of catastrophe. In light of the changing nature of the apocalypse, then, to simply compare environmental apocalypticism to prior forms would be naïve.

Similarly, the use of the term “apocalypticism” in environmental apocalypticism is not meant to imply that the phenomenon under study is intrinsically religious or can be simply compared to religious ideas or movements. Environmentalism is not a religion, although it has some important parallels (e. g. Dunlap 2004, Gatta 2004, Taylor 2005). Nor, however, do I mean that environmental apocalypticism can be understood as simply a secularized version of the religious phenomenon. Rather, as this study shall explore, environmental apocalypticists employ both religious and secular resources in thinking about the future and (often) humanity’s purpose in light of it. In this study, then, apocalypticism refers to a deeply pessimistic orientation toward the future and to a set of religious responses to these pessimistic expectations, both of which are oriented around the idea of incipient environmental catastrophe. Thus the environmental crisis pushes the word apocalypticism beyond its original reference to a religious phenomenon to signal something more broad.

### **Apocalypticism, Millennialism, Millenarianism? Appropriate Terminology**

Perhaps related to the fluidity of the topic itself, there has been little scholarly consensus on the definition of terms used describe people’s views of the future and the movements associated with them. The word apocalypse comes from the Greek word meaning simply to uncover or reveal, yet it has come to be associated with “final things, with the end of the present

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<sup>2</sup> Beck (1992) suggests that the awareness of widespread, unavoidable and persistent risk is the hallmark of modernity.

age, the Day of Judgment, and the age to follow” (Zamora 1982:2). As such, *apocalypticism* is understood to refer to a form of eschatology which believes that the final events of history are imminent (Robbins 1997: 4).

Daniel Wocjik identifies three main uses of the word ‘apocalypse.’ First, among biblical scholars *apocalypse* refers to “Jewish or Christian literature involving revelations and prophecies about the end of time and the establishment of a new world, expressed in esoteric, cryptographic or symbolic language” (1997: 11). Second, some scholars have construed it more broadly as referring “to a sense of an ending, decline, societal crisis, and transformation, whether associated with actual historical events or expressed as themes in modern literature” (1997: 11). Finally, “in popular parlance, *apocalypse* is now used loosely to refer to any sort of disaster, with no reference to divine revelations about the end of the history, or expectations of a supernatural scenario involving worldly destruction and renewal” (1997: 12). Scholarly treatments of environmental apocalypticism and popular environmental discourse draw from the latter two definitions of apocalypse.

The terms millenarianism and millennialism also refer to end time beliefs. In the classic definition, millenarism refers to “religious movements that expect imminent, total, ultimate, this-worldly, collective salvation” (Talmon 1968: 349). More recently, Thomas Robbins and Susan Palmer have distinguished between scholarly uses of millenarianism and millennialism by observing that *millenarianism* “has generally referred to the belief in a final endtime with a compensatory or retributive significance” while *millennialism* “is equated with millenarianism but has special biblical reference to the postapocalyptic thousand-year kingdom to be established on earth under the rule of Christ” (1997: 9).<sup>3</sup> Catherine Wessinger extends the definition of

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<sup>3</sup> Scholars further distinguish between pre- and post-millennialism, in reference to whether Jesus will return before or after the 1000 year reign. This distinction need not concern us here.

millennialism beyond a specific belief about Christ to refer to the “audacious human belief that suffering and death, i.e. evil, will be eliminated, so that collective (not simply individual) salvation is accomplished on earth” (1997: 48). She further distinguishes between two forms of millennialism. *Catastrophic millennialism* is roughly equivalent to apocalypticism, and holds that “catastrophic destruction is *imminent*” (1997: 49), while *progressive millennialism* “entails a belief in progress” (1997: 49) and is associated with modern eighteenth and nineteenth century narrative of collective Earthly salvation (1997: 50-51). While the preceding provides a general introduction, these definitions are hardly universally agreed upon. Indeed, most scholars who study apocalyptic, millennial and millenarian movements articulate their own definitions or modified these ones.

Although arguments could be advanced for the application of other terms, I have chosen the term *apocalypticism* to refer to environment-related fears of imminent catastrophe for two reasons. First, it is the term most often found in environmental literature. Additionally, unlike millennialism and millenarianism, apocalypticism retains both secular and religious connotations. Since I argue that environmental apocalypticism contains both streams, the choice is particularly apt.

### **Explaining Apocalypticism**

A number of scholars have sought to explain why apocalyptic beliefs arise and persist. Norman Cohn’s classic study of medieval millennialism argued that social unrest due to oppression was a major force in propelling millennial prophets to power (Cohn 1970). In a second important argument, social psychologist Leon Festinger hypothesized that apocalyptic beliefs persisted because of a phenomenon called cognitive dissonance. When prophecies failed, believers were faced with the possibility that their most deeply held beliefs were incorrect. In

such cases, they sought to reduce cognitive dissonance by reaffirming their faith and continuing to proselytize about the coming apocalypse, rather than admitting failure (Festinger 1956).

Another significant body of research, most notably argued by David Aberle (cf. Aberle 1962), has related millenarian beliefs to the perception of deprivation relative to another group or time period. Michael Barkun has critiqued the theory of relative deprivation as overly subjective, contending instead in his important study that it is disaster that plays the pivotal role in the popularity of millennial beliefs. In his view, “men cleave to hopes of imminent worldly salvation only when the hammerblows of disaster destroy the world they have known and render them susceptible to ideas which they would earlier have cast aside” (1974:1). While disaster is necessary, however, for Barkun it is not sufficient. In order for millenarian movements to gain momentum, doctrines with millenarian themes must also be available, there must be a charismatic figure, and the disaster area must be homogenous and insulated (1974: 2, 3, 6). He also notes a shift in apocalypticism however, as manmade disasters have overtaken natural ones. In the second half of the twentieth century, he concludes “[t]he search for the millennium is by no means simply a thing of the past. . . . The pull of a perfect future in one’s own lifetime has been too great, and the ingenuity of man in generating disasters for himself is a capability that can hardly be underestimated” (1974: 211).

Picking up on the theme of modern disaster, Robert Lifton has argued that there are three factors at work in apocalypticism. First, there are external events, such as plagues or disaster. Second, like Barkun he notes a “shared theological imagery, or eschatology, that renders such imagery acceptable as a meaning structure.” Third, he argues that there is a kind of psychological trauma, an “internal derangement” which accompanies the experience of disaster (1985: 152). In particular, the invention of the atomic bomb made this derangement the “dubious common

psychic property of the common man” (1985: 163). For Lifton, persistent apocalypticism was thus related to psychological damage as much as actual disaster. More recently, Stephen O’Leary (1994) has argued that apocalypticism’s persistence has to do with its success as a form of persuasive rhetoric, in addition to other factors which may predispose people toward such beliefs.

My approach with environmental apocalypticism draws from some of these explanations, but I also argue, like Harvey Brooks (1985), Michael Emsley (1982) and Bron Taylor (1991; 1994; 2000c) that environmental apocalypticism appears to be distinct in having a real physical basis. It is not, therefore, entirely (and perhaps not even primarily) reducible to other (sociological, psychological, historical, or rhetorical) factors, although they may certainly contribute. While accepting that there is a real physical basis of many of environmentalism’s apocalyptic concerns, however, I do not attempt to evaluate the veracity of environmentally apocalyptic claims. Such a project is best left to the scientists whose research forms the basis of environmental predictions. My goal in analyzing environmentalism’s apocalyptic elements, rather, is neither to question its reality nor to dismiss the role of social construction in creating perceptions of risk (Covello 1987; Kaspersen 1988; Lorenzoni 2005), but rather to redirect attention to its characteristics and elaboration in environmental discourse and cultural production.

### **Defining Environmental Apocalypticism**

*Environmental apocalypticism*, as I will use the term, refers to the expectation of imminent, widespread societal or ecosystem collapse due to environmental degradation or pollution which threatens to fundamentally alter the world as we know it.<sup>4</sup> This expectation, I

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<sup>4</sup> Here I follow the widespread scholarly understanding of apocalypse as the end of the world “as we know it” rather than the literal end. Barkun, for example, describes apocalypticism as “the belief that the accepted texture of reality

find, pervades environmental discourse, both in its written forms and cultural elaboration. I thus understand it as both a rhetorical and sociological phenomenon.

In terms of its sociological profile, while other apocalyptic groups have taken interest in signs of environmental decline (e.g. Boyer 1992: 331), the cultural expressions I explore likely share some common features. Using survey research, for example, Anthony Leiserowitz found that global warming “alarmists” (people who tended to use apocalyptic language about the threat global warming posed) tended to hold “pro-egalitarian and anti-individualist and hierarchist worldviews, were politically liberal, [and] strongly supported government policies to mitigate climate change (including raising taxes)” (Leiserowitz 2005: 1440). Additionally, Catherine Keller has speculated that “the nineties count down to the millennium, the rhetoric of ‘the end of the world’ stimulates for most white middle-class North Americans, male or female, anxious ecological associations” (1993: 30). No studies of which I am aware have focused specifically on environmental apocalypticism, but if it follows the profile of environmentalism at large then Leiserowitz and Keller’s descriptions are probably both accurate.<sup>5</sup> Thus environmental apocalypticism is not only a particular set of expectations about the future, but also likely a sociological unit with similar characteristics, values and beliefs.

Although a great many phenomena are associated with environmental fears, the most frequently referred to drivers of collapse include “overpopulation,”<sup>6</sup> various kinds of pollution, global warming, the ozone hole, resource scarcity, and loss of biodiversity. All of these have been prominent on the environmental agenda at one point or another, while other concerns have

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is about to undergo a staggering transformation, in which long-established institutions and ways of life will be destroyed” (1983: 258).

<sup>5</sup> See also Kempton (1995) for a broader study of environmentalism.

<sup>6</sup> Technically speaking, Earth is “over” populated because *Homo sapiens* have exceeded its carrying capacity. In environmental literature and subcultures, “overpopulation” is the trope most commonly used as a proxy or shorthand for this ecological principle.

received less attention but are equally apocalyptic, including those related to disease, the introduction of genetically modified organisms, water scarcity, and soil loss.

Notably, the above definition of environmental apocalypticism says nothing about what the collapse will entail or what will happen after the collapse. This is because there is no consensus on these questions among the apocalypticists themselves. For example, *The Population Bomb* author Paul Ehrlich predicted that “three of the four apocalyptic horsemen—war, pestilence, and famine” (1968: 69) would accompany global collapse. Alternatively, journalist Fred Pearce (2007) predicted hurricanes, rising tides, heat waves and wildfires in light of climate change. Among lay-apocalypticists, speculation about the future is particularly vague and varied. For example, environmentally concerned individuals have suggested that “the survival of the human species” is at risk (e.g. Rappaport 1999: 461; Gordon 1991:1); that humans are “killing the planet” (Leiserowitz 2005: 1440); that there is an “impending ecological collapse” (Hertsgaard 1998: 16); that there is a need to “save the planet” (Soulé 1986: 12 in Takacs 1996: 128); or that there soon will be a time when “everything falls apart” (Pike 2004: 149). Thus while a variety of drivers of environmental collapse are discussed in environmental discourse, they are so many and so varied that they are often glossed, simply, as the “crisis.” Particularly for non-scientific apocalypticists, the plethora of interrelated drivers of collapse work together to form a comprehensive picture of doom. Additionally, while most apocalypticists fear the environmental apocalypse and think humans should do everything in their power to prevent it, a few see it as a necessary precursor to more ecologically sustainable and harmonious life-ways (Taylor 1991: 261). Thus, environmental apocalypticism cannot easily be distinguished, as scholars of millennialism and millenarianism have often done, by a particular post-apocalypse expectation.

Finally, although scholars have traced the roots of concern with the fate of humanity in light of ecosystem degradation go back to the 18<sup>th</sup> and 19<sup>th</sup> centuries (Grove 1995; Lewis 1992), this study will focus on the phenomenon as it developed since the publication of Rachel Carson's *Silent Spring* in 1962. I make this choice not only because this book is commonly understood by environmentalists and scholars alike to have sparked environmentalism as a political movement in the United States, but also because it did so with a particularly apocalyptic jolt, and has in many ways set the tenor for the following decades.

### **Methodology**

While this study is largely textual, my own preliminary fieldwork<sup>7</sup> and that of others suggests that these apocalyptic worldviews are pervasive among non-scientific laypeople in environmental subcultures, as well as among scientists (particularly ecologists, conservation biologists, and some climate scientists).<sup>8</sup> Additionally the publication of environmentally concerned reports by international political bodies suggests that such themes are of increasing interest to political intelligentsia worldwide. Thus environmental apocalypticism is not just what apocalypticism scholar Malcolm Bull calls “high” apocalypticism, “long the preserve of a clerical or scholarly elite” (1995: 3), but also clearly what Wocjik refers to as “folk” apocalypticism, or “widespread ideas that are not officially promoted or approved by mainstream organizations but that exist at a grassroots level apart from the formal sanction of these institutions” (1997: 3). At the same time however, there is a cleavage between scientists and a nonscientific “laity” (who may or may not be religious) which parallels Bull's high/low

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<sup>7</sup> My research consisted of participant-observation followed by hour-long semi-structured interviews with participants a four-week long study group on climate change that took place at a Unitarian Universalist Church in Gainesville during the month of October 2007.

<sup>8</sup> See especially Arthur (2008 forthcoming), Taylor (1994; 2000c) and Leiserowitz (2005). Additionally, although Takacs (1996) does not use the word apocalypticism, his interviews and textual analysis reveals that apocalyptic language is common among conservation-oriented scientists.

distinction between theologians and laypeople. True to the parallel, scientific studies can be equally esoteric to non-specialists as Revelations would be to those untrained in Biblical exegesis.

Nevertheless, there are several reasons why the methodology pursued in this study may be of particular merit for the topic at hand. First, apocalypticism scholar Stephen O’Leary (1999) has noted the increasing importance of the media and internet in encouraging and disseminating apocalyptic worldviews. Although many environmental apocalypticists point to first hand experience (the loss of wilderness, exposure to pollution, etc.) as important in driving their perceptions of risk, textual sources have indubitably played a decisive role in encouraging and disseminating apocalyptic beliefs that otherwise would be known only to the scientific elite. Thus, by focusing on publications, which both reflect and contribute to the risk perceptions of an era, a textual study gets directly at the source of much apocalypticism.

Second, the building of apocalyptic expectations is a complex and subtle process, in which people construct projections about the future out of a variety of signs and signals—personal experience, perceptions about the beliefs of those around them, popular accounts of scientific findings, and perhaps some direct exposure to scientific sources—not all of which are immediately apparent or accessible to the individuals themselves. When I asked interviewees to identify their sources of information about environmental threats, for example, few could point to specific sources, or thought that the specific sources I suggested were the primary drivers of their perceptions. Rather than “point” sources, then, it seemed that there were a variety of factors—“non-point” cultural sources—at work in creating apocalyptic expectations. Because they may be difficult to recall or identify, these factors would be largely inaccessible by survey or interview means, and must of necessity rely at least partially on historical-analytical works

like the present. Third, by reviewing published sources, this study can also serve as a point of reference and departure for future fieldwork. By seeking to understand and analyze environmental apocalypticism's characteristics, for example, this study provides a theoretical framework in which studies of new environmentally apocalyptic discourse and related practice may be situated.

Finally, a visit to any university library will reveal the many hundreds of books devoted to environmental topics, many of them expressing apocalyptic sentiments. Yet even these are only a small portion of the enormous body of material culture which has accompanied the environmental movement since its ascendance in the 1960s. No study could hope to survey, address or explain all of these works. Thus my study instead seeks to identify trends, providing a map to the apocalyptic territory, so that the many variations to its topography may be better understood.

CHAPTER 2  
THE STATE OF THE FIELD: SCHOLARSHIP ON ENVIRONMENTAL  
APOCALYPTICISM

The literature on environmental apocalypticism can be divided into six main approaches. First, there are *historical* accounts, which trace continuities and divergences in apocalyptic and environmentally apocalyptic thinking over time. Second, there are *ethnographic* accounts, which, based on field work, examine how apocalypticism manifests itself on the ground, and what role it plays in a movement's development. Perhaps because environmentalism on the whole is such a diffuse movement, the only extended studies using this approach of which I am aware are two focusing on radical environmentalism. Third, scholars of *apocalypticism* have often discussed environmental apocalypticism as one form within a broader category. Forth, *discourse analysis* analyzes environmental writings as a form of apocalyptic rhetoric. Fifth, *risk analysis* looks at how humans acquire perceptions of risk, how it is attenuated or amplified, and how pervasive it is within certain populations. While limited in some ways, it is nevertheless an important and relevant addition to the picture. Finally, one study has analyzed environmental apocalypticism as the eschatology of an emerging "*ecoreligion*." Although it is not well-known, its arguments relate closely to my own and thus merit treatment here.

In addition to these approaches, several treatments of environmental apocalypticism have sought to evaluate whether its claims are true, rather than situating it theoretically (e.g. Brooks 1985; Keller 1997 and 1999; Schwarz, 2000; DeGregori 1982; Emsley 1982). As further chapters will demonstrate, however, such arguments share a niche with the many cultural critics, scientists, social scientists, journalists and others who have discussed, debated and thereby contributed to the growth of phenomenon since it gained national and international attention in the 1960s. Such arguments will not be reviewed here because they are most valuable as exemplars of the ways in which apocalypticism has grasped the popular imagination, and their

conclusions are beside the point (of this study). Additionally, a number of excellent studies have examined persistent millennial and apocalyptic themes in American culture (e.g. Miller 1956; Robinson 1985; Tichi 1979; Tuveson 1964 and 1968). While related, such scholarship goes beyond the scope of current research.

Cross-cutting all of the approaches to be analyzed here is the persistent question of whether environmental apocalypticism should be understood as secular or religious. Because it is particularly relevant to my own argument, I will focus closely on what the scholars reviewed here have to add in this regard. Also, given the relative paucity of scholarship on the topic, I will review the extant literature closely, both as a means of further introducing the topic, and spotlighting what gaps still remain.

### **Historical-Theoretical Accounts: Apocalypse Divided?**

In his seminal article “Divided Apocalypse: Thinking About The End in Contemporary America,” (1983) apocalypticism scholar Michael Barkun argued that American culture of the mid to late twentieth century was witnessing the side-by-side development of two major forms of apocalypticism. The first was traditional religious apocalypticism based on the Book of Revelations, which, contrary to scholarly expectations of gradual disappearance in a secular age, was actually resurging, and perhaps had never been as marginal as assumed. The other emerging form was a “New Apocalypticism,” an emerging body of secularized apocalyptic literature, which, “couched in the idioms of social and political criticism . . . [evoked] world destruction and transformation through ecological disaster, nuclear holocaust, and technological breakdown” (1983: 258). This secularized apocalyptic literature was different from the religious genre in its premises and style of argumentation, but similar in the shared belief that “the texture of reality is about to undergo a staggering transformation, in which long-established institutions and ways of life will be destroyed” (1983: 258).

In contrast to the religious apocalypticism, however, secular apocalypticism accepted a naturalistic worldview, and relied on scientific methods rather than theological argumentation. This genre, he argued, included a number of texts critical to the environmental movement, including Barry Commoner's *The Closing Circle* (1971) and The Club of Rome's *The Limits to Growth* (1972), yet it also included others which were more concerned with the threat of worldwide war or nuclear destruction. Analyzing the themes of these books, Barkun then argued that the secularized apocalypse was characterized by concern over four causes of collapse: "nuclear war, spiritual and ideological exhaustion, environmental degradation, and overpopulation and the depletion of basic resources" (1983: 263).

Barkun's next project was to analyze the differences between these two contemporary expressions of "apocalyptic vitality." He began by first noting that secular apocalypticism did not derive from religious apocalypticism, although it occasionally relied on religious apocalyptic motifs. While both were interested in predicting the future, he identified five principle divergences between them: agency, causality, indeterminacy, interpretation of natural events, and ultimate meaning. Whereas religious apocalypticists believed history would be ended by a supernatural intervention, secular apocalypticists operated under naturalistic assumptions and saw human error, ignorance or arrogance as agents of destruction. Second, the two forms differ in their ideas of causality. For religious apocalypticists, divine intervention would bring the end about by manipulating natural forces, whereas for secular apocalypticists, events in nature are the causes themselves. Third, because this viewpoint acknowledges that present changes can alter the future, the secularists see the future as indeterminate, rather than inevitable. Fourth, in the religious view natural events, or "portents," are important as signals of how close the present was to the end of time in the sacred schema of history. Events were not intrinsically significant, but

rather “their importance [lay] in their function as markers that continually [allowed] exegetes to recalibrate the historical scale” (1983: 267). For secularists, by contrast, such events would be considered significant in and of themselves. Finally, religious apocalypticists saw the end of the world as the fulfillment of a divinely mandated moral order, and as such, the disasters associated with such order are expected to punish the evil, and preserve the good. For secular apocalypticists, by contrast, destruction would come with no promise of retributive justice, no fulfillment of ultimate meaning.

Barkun cites three sources of secular apocalypticism’s pessimism: the environmental movement, racial and political unrest during the Vietnam War era, and the oil shortage of 1973, which made fears about the continued availability of natural resources seem plausible. His approach thus fits well with Cohn’s theory of apocalypticism as resulting from social turmoil and uncertainty about the future. As he writes, “it is a truism that apocalypse feeds on conflict and withers in eras of harmony” (1983: 278). Finally, juxtaposing the two kinds of apocalypticism, he concludes that “this bifurcated enterprise is mutually reinforcing—the existence of each literature makes the other more credible” (1983: 276), and warns of the danger of self-fulfilling prophecies if the two forms converged on apocalyptic interpretations of the same events.

Responding almost a decade later to Barkun’s account, environmental historian Chris Lewis argues in his article “Science, Progress, and the End of the Modern World” (1992) that there is, rather, a “dialectical interaction between the religious and scientific discourses that shape and define the modern world view” (1992: 308). Additionally, eschewing Barkun’s “secular apocalypticism,” Lewis employs the label “ecological apocalypticism” instead, which he argues “grew out of the fear of sixteenth- and seventeenth-century Christian and cultural critics that human domination of nature would cause the decay and death of the natural world”

(1992: 309). Rather than positing separate origins then, he sees broad continuities between Christian apocalypticism during the Middle Ages and the science-based ecological apocalypticism increasingly associated with the post-Enlightenment era.

To make this case, Lewis paints a sweeping portrait of the history of apocalyptic expectations related to nature from the late Middle Ages to the late twentieth century. In his depiction, ideas of a decaying Earth heading toward apocalypse were prevalent during the Middle Ages, and were spurred particularly by anxieties related to the revolutionary discoveries of Copernicus and Galileo, and the religious crisis precipitated by the Reformation (1992: 311). Later however, with European economic expansion and the rise of modern science in the seventeenth- and eighteenth centuries, the idea of progress began to supersede notions of decay. While the idea of progress was closely associated with the rise of science, Lewis notes that it actually had religious origins, as it arose in part out of Christian millennial expectations (Tuveson 1968: 76 in Lewis 1992: 315).

In the early nineteenth century, the driving force of progress came to be increasingly celebrated by many in Western civilization, yet to others its rise was somber news. In particular, writers of Romantic-era fiction began warning of the possible extinction of humanity and/or the death of nature due to overweening human hubris and sin against nature's harmony (1992: 316). Such attitudes had declined by the late eighteenth century, but as the twentieth century advanced, fears over the potentially disastrous implications of unrestrained science, technology, progress and industrial civilization resurfaced. Middle-class Americans and Europeans, as well as scientists, popular novelists, conservationists, historians, theologians, philosophers, and cultural critics were the main proponents of these fears (1992: 325). Their central message, according to Lewis, was certainly apocalyptic, but also embraced the possibility of salvation: "humanity must

recognize its interdependence with the natural world. If it fails to reject the promise of unlimited growth and development and come into balance and harmony with the Earth, then humanity faces extinction. To be saved, humanity must reject its faith in progress” (1992: 326). From the late Middle Ages to the twentieth century, then, there existed a dialectic between pessimism and optimism about the general course of history, in which proponents of millennial progress fought increasingly with its more apocalyptic skeptics and detractors.

After placing ecological apocalypticism within the larger context of the history of apocalypticism, Lewis asserts that modern apocalyptic critics of progress have actually contributed to a cultural crisis similar to those that occurred during the Renaissance and the Reformation (1992: 326). Furthermore, this cultural crisis was what lay at root in the apocalyptic upwellings of both eras. Tying together the religious and secular apocalypticisms that Barkun divided, Lewis thus argues that modern Christian biblical and ecological apocalypticisms were both responses to the same phenomenon: cultural crisis. In light of this common origin, the modern resurgence of biblical apocalypticism is hardly surprising: “like sixteenth- and seventeenth-century Europe, the late twentieth-century global industrial civilization has experienced the proliferation of Christian prophecies of an imminent apocalypse and scientific and popular images of death of nature and the extinction of humanity” (1992: 327).

Lewis concludes by noting an unexpected twist in the history of ecological apocalypticism: the proliferation of crisis talk has led ecological apocalypticists to advocate an explicit return to religion as an important means of confronting the ideology of progress: “Recognizing that the modern world and even modern science is based upon a larger religious and mythological foundation, apocalyptic scientists are trying to create a new scientific and religious foundation for a world beyond the modern” (1992: 327). Lewis credits Carl Sagan, Paul Ehrlich, and Wes

Jackson as apocalyptic scientist of this genre, as well as the theologian Thomas Berry and cultural critic David Ehrenfeld. Together, Lewis concludes, these apocalyptically inspired individuals are working to forge “a new dominant cultural myth and a new world view” (1992: 328) which will either replace the guiding myth of progress, or, perhaps, fail and witness the apocalyptic end of modern industrial civilization.

Ultimately, Lewis does not argue against Barkun’s suggestion that there are two different kinds of apocalypticism in modern America. Rather, his point is that the secular apocalypticism Barkun identified is really neither so secular, nor so recent, as Barkun supposed. Additionally, he shifts the debate subtly but significantly by exchanging Barkun’s term “secular” for his own “ecological” apocalypticism. By doing so he is able to trace continuities to pre-Enlightenment era apocalypticism that would be difficult to find with the term “secular” as one’s analytical lens. In choosing the term “ecological” he is also able to highlight a kind of naturalistic apocalypticism which, although it has mixed with religious elements during its history, is less worried about justice and retribution than about human survival and balance with nature. Substantially downplaying ecological apocalypticism’s unique characteristics, Lewis counters Barkun’s portrayal by depicting it less as a new phenomenon than the continuation of a cultural trend that has been in progress for centuries.

### **Ethnographic Accounts: The Case of Radical Environmentalism**

Taylor provides the first major account of radical environmentalism focusing specifically on its religious dimensions, one aspect of which is its “apocalyptic eschatology.” To begin with, he argues that radical environmentalism is religious because it contains elements that all religious traditions contain: “myth, symbol, and ritual: the myths usually delineate how the world came to be (cosmogony), what it is like (cosmology) what people are like and capable or incapable of achieving (moral anthropology) and what the future holds (eschatology)” (1991:

259). The primary cosmogony is provided by the theory of evolution. Rituals include monkeywrenching (sabotage for environmental purposes), as well as dances and a “Council of All Beings” in which individuals seek “to connect . . . spiritually with other creatures and the entire planet” (1991: 260).

A key part of Earth First!’s mythic structure, Taylor argues, is its apocalyptic eschatology, which he characterizes thus: “[a]fter great suffering, if enough of the genetic stock of the planet survives, evolution will resume its natural course. If human beings also survive, they will have the opportunity to re-establish tribal ways of living, such as bioregionalism, that are compatible with the evolutionary future” (1991: 261). Additionally, in contrast to bioregionalism,<sup>1</sup> which promotes this-worldly actions as a means of achieving ecological sustainability, many Earth Firsters! believe “bioregionalism will not flourish without the catalyst of a prior eco-collapse” (1991: 261). Earth First! was thus characterized by a deeply apocalyptic assessment of the planet’s ecological future. Eventually however, “small but significant differences in beliefs about human nature and eschatology” led to a schism.

In 1990, several influential members left Earth First!, causing a split throughout the movement as a whole. Taylor identifies two resulting subgroups, the “Wilders” and the “Holies.” The Wilders, lead by Dave Forman and Christopher Manes “fought to keep Earth First!’s focus exclusively on wilderness, and thereby, in their minds, on biodiversity and biocentrism” (1991: 263). This group tended to have a more pessimistic moral anthropology, believing that “ecocollapse is probably inevitable. . . . Ecocollapse may be the means Mother Earth will use in her self-defense—a way she can remove the human industrial cancer, and create the conditions people need to develop appropriate ways of living” (1991: 265). By contrast, the “Holies,” led by

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<sup>1</sup> Taylor defines bioregionalism as “an environmental movement and social philosophy that envisions a decentralized community self-rule within political boundaries redrawn to reflect the natural contours of differing ecosystem types” (2000a: 50).

Judi Bari, Mike Roselle and Darryl Cherney, argued that “one has to examine how threats to biodiversity are related to other social issues” (1991: 263). They tended to have a more optimistic moral anthropology, believing that “human beings can be converted to biocentrism and can change their lifestyles. . . . they have not despaired completely of the potential for *voluntary* reform by the human species” (1991: 264). As this portrayal suggests, Wilders are generally more apocalyptic than Holies. Yet, he also clarifies in a later article that apocalypticism is central to both factions:

Few even of these activists, including even those who fit well my original Holies type think that humans *actually will* avert catastrophe. Few Earth First!ers, of whatever faction, *expect* efforts to create massive consciousness change toward biocentric values and sustainable lifeways will occur; most believe there is insufficient time. (Taylor 1999: 380)

Although Taylor emphasizes Earth First!’s religious elements, he also notes that it incorporates “left-brain” thinking via its attention to ecological science and political analysis (1991: 261). Ecological science is particularly important in forming the basis of much of Earth First!’s apocalypticism. As Foreman warns, “[i]f you look at what the leading scientists are telling us, we could loose one third of all species in the next 40 . . . We’re in one of the greatest extinction episodes in three-and-a-half billion years of evolution” (Gabriel 1990: 58 in Taylor 1991: 262).

In a 1994 expansion of the 1991 article just cited, Taylor further distinguished Earth First!’s apocalypticism from other religious forms: “Earth First!’s more apocalyptic predictions are based not on intuitive revelation, but on the research of ecologists concluding that we are in the midst of an unprecedented extinction crisis” (1994: 196). Interestingly, he later refers to this as “scientific apocalypticism,” and predicts that it “will continue to fuse with the religious and political perceptions common in the radical environmental worldview” (2000b: 133). Thus scientific and religious apocalypticism are separate for Taylor, yet Earth First!’s eschatology mixes the two.

Taylor also notes two distinctive features of Earth First! apocalypticism in comparison to other religious forms. First, despite the perceived inevitability of disaster, it “is to be resisted with all of one’s passion” because it “represents a desecration of a sacred world” (1999: 382). Second, he argues that radical environmental apocalypticism is distinct from religious forms in that radical environmentalists “generally do not have a theistic spirituality providing them with a teleological expectation of earthly salvation” (1999: 384). Thus while their apocalypticism is characterized by deep pessimism about the prospects of the human and natural world and uses recognizably religious language, it is not couched in traditional religious terms. Additionally, in noting its discontinuities with prior religious forms, particularly through its emphasis on science, he implies that there is something new about radical environmental apocalypticism.

While Earth First! contains strongly catastrophic elements, he also notes that much of contemporary environmentalism is also apocalyptic (2000: 130). Thus it is not surprising that apocalypticism is pervasive in other environmental subcultures. For example, in an analysis of the phenomenon of bioregionalism, he finds that all three forms he identifies—lifestyle bioregionalism, revolutionary bioregionalism, and apocalyptic bioregionalism—can contain apocalyptic elements. Although lifestyle bioregionalists are generally less apocalyptic, because of the fluid boundaries among these subcultures, apocalyptic views can be found throughout (Taylor 2000: 55-6). Additionally, apocalypticism is pervasive regardless of whether one is a scientist or engaged in the animistic, pantheistic spirituality which characterizes bioregionalism: “Both scientific and overtly religious approaches to bioregionalism often assume an apocalyptic tone” (2000: 55).

Turning to environmentalism at large, Taylor continues to emphasize theme of the importance of science: “[a]s environmental scientists issue ever more catastrophic predictions,

the worldviews and ideologies of environmentalists are assuming an increasingly apocalyptic character. Thus is environmental science helping apocalyptic thinking to escape its typically religious milieu” (Taylor 2000: 140). Thus, environmental science is also fueling religious apocalypticism. Focusing mainly on secular environmental texts since the 1970s, Taylor points to familiar authors—Ehrlich, Donella Meadows, Garrett Hardin and Bill McKibben—while also including a broader sweep of writers, like environmental economist Herman Daly, independent scientist James Lovelock (originator of the Gaia hypothesis) and technology critic Jeremy Rifkin (2000c: 142-3). Such authors have contributed to the persistence of environmental since the 1970s, he implies, shaping the “evolving, green-apocalyptic myth” (2000c: 143). Taylor also attends to the role of media in constructing, disseminating, and giving credibility to apocalyptic visions by noting that scientific studies, popular nonfiction books, literature, and art all “intensified apocalyptic expectations among environmentalists and the wider public” (2000c: 140).

Significantly, in asserting that “environmental science has freed apocalypticism from its religious underpinnings and contributed dramatically to the secularization of apocalypticism” (2000c: 143), Taylor argues for a strong differentiation between traditional religious apocalypticism and environmental forms. However, taken together with his work on radical environmentalism and on nature religion at large (cf. Taylor 2001a, 2001b, 2006), it seems that he means less to imply that environmentalism’s apocalyptic worldview is entirely secular than to emphasize that its religiosity departs in significant ways from prior forms. Additionally, while there may be some antecedents to the apocalyptic themes found in environmentalism, for him environmental apocalypticism is distinctive in its pervasiveness in modern culture and reliance on sophisticated science.

A second (though significantly derivative) study of Earth First! which attends to its apocalyptic elements is Martha Lee's dissertation and subsequent book *Earth First! Environmental Apocalypse* (1995). Rather than discussing its apocalypticism at large, she analyzes Earth First! specifically as a contemporary millenarian movement. Drawing off of Cohn's (1970) definition of millenarian as movements, she accepts later modifications which have removed the element of supernatural agency in order to be able to apply the lens to political movements. Thus, despite her use of millenarian trope, Lee does not treat it as a religious group. Rather, she argues that such a distinction would be difficult and ultimately not worth making, since in practice religion and politics are difficult to separate, given they both provide systems of meaning and order (1995: 17). In Earth First!'s case, political and religious currents are difficult to separate because its "genesis, tactics, and goals were all rooted in the immediate material world, but its adherents at all times believed that a more transcendent and ultimate measure of worth existed" (1995: 17). Despite such references to religious meaning however, Lee pays little subsequent attention to the movement's religious elements, focusing for the most part on its political ideologies (for a brief reference to its religious aspects see Lee 1997).

Unlike Barkun and Bull's works, which seek to construct broad categories of apocalypticism, of which environmentalism is one form, Lee's goal is to discuss a particular form of environmentalism by situating it in the larger field of the study of apocalypticism. Her argument is thus less a contribution to apocalyptic theory than to the study of radical environmentalism, using apocalypticism studies as a guide.

She begins her work by observing, like Taylor, that "[i]n all its forms, environmentalism is—at least marginally—apocalyptic. It is the wellbeing of this planet that most fundamentally supports human life; threats to the health of the earth are therefore threats to human life itself. It

is the power of that connection that drives environmentalism” (1995: ix). Yet Earth First! presents a particularly useful case study, as it exhibits five characteristics typical of millenarian belief systems:

Its believers awaited an imminent apocalypse, in the form of industrial society’s self-destruction. Earth First!ers, who understood the importance of wilderness, would prepare the earth for the impending apocalypse by preserving what little wilderness remained. The fall of industrial civilization would usher in the ultimate, or final, stage of human history, a period wherein balanced species life would be restored, wilderness would reemerge, and where humans would live in harmony with their environment. (Lee 1997: 128).

This belief system was based primarily in the philosophy of deep ecology, which, “[w]ith its assertion of an impending crisis, its demand for action, and its vision of a new society” (1997: 18), provided fertile ground for a millenarian movement. Deep ecology’s biocentric focus was particularly significant basis of Earth First!’s unique form of apocalypticism. However, in her view its de-centering of humans from the apocalyptic narrative was ultimately divisive (1997: 128-9).

Like Taylor, Lee notes the importance of eschatology in driving what he called the Wilder/Holy schism. In her depiction, Earth First! started out as millenarian in the sense that it saw itself as having a role in bringing about the future it envisioned. Later, frustrated attempts in bringing that vision to fruition forced two factions to emerge, one of which was could be understood as apocalyptic and the other millenarian. The difference between these two terms is that apocalypticists are dramatically more pessimistic than millenarians about what could be accomplished through their efforts: “Apocalypticists are concerned only with the events and earthly conditions leading up to the apocalypse . . . They are not interested in a millennial future for a chosen race or people; indeed, they may not anticipate that human life will continue after the apocalyptic event” (1995: 18-19). They are instead focused on their role in the pre-apocalyptic world, without apparently concerning themselves with postapocalyptic life. Millenarians, by

contrast, are unabashedly optimistic about the role they may play in ushering in the future perfect society. Earth First! millenarians thus focused on “transforming human nature and activity in order that in the postmeltown world, those who remained would live just and ecologically-sensitive lives, thus creating the best possible political community” (1995: 145). Clearly, Lee’s account echoes Taylor’s in its emphasis on eschatology and moral anthropology as being central to the schism, yet it differs in arguing that apocalypticism was only important in one of the factions, rather than pervasive.<sup>2</sup>

In discussing the origins of the radical environmentalism’s apocalypticism, Lee considers several theories, and ultimately settles for a combination of factors. First, the group experienced a kind of “nonmaterial” deprivation when they perceived the foreclosure of their ability to bring about certain changes through conventional political channels. Additionally, they felt they had no effective way of voicing their political grievances or seeking redress through the current political system. Finally, many Earth First!ers felt alienated from mainstream society and found a second home in Earth First!, contributing to the movement’s coherence and durability. Thus while Taylor and Barkun highlighted the importance of scientific evidence as giving rise to environmental and secular apocalypticism, Lee ignores this potential source and opts for a more sociological account. This choice has the effect of emphasizing Earth First!’s continuities, rather than divergences from, traditional religious millenarian forms.

An additional point worth noting from Lee’s analysis of Earth First! is that unlike the scholars of apocalypticism who often lump environmental fears together with fears of nuclear catastrophe, Lee makes no such connection. Rather, according to Lee radical environmentalism

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<sup>2</sup> In a review of her book, Taylor argues that she underplays and fails to understand the pervasiveness of apocalypticism in the radical environmental worldview: “[t]he overwhelming majority of Earth First!ers . . . whether involved in the more holistic postschism movement, or those radical environmentalists who express disdain for those naively expending energy on social justice issues, all share an overwhelmingly pessimistic and apocalyptic worldview” (1999: 381).

arose out of the earlier wilderness conservation movement, and turned apocalyptic because of certain events experienced by the movements' leaders, rather than because either the wilderness movement or the broader Western tradition harbored latent apocalyptic fears. While Lee implies that radical environmentalism recapitulated millenarian themes present in the founding of America (1995: 2-5), she also presents it largely as an upwelling with direct causes only in recent history.

### **Apocalypticism Studies Accounts: The Umbrella of Secular Apocalypticism**

Support for Barkun's religious-secular distinction comes from Bull, who finds both ideological and sociological cleavages in apocalypticism, between religious and secular approaches and 'high' and 'low' culture. This schema results in four categories, high-religious, high-secular, popular-religious and popular-secular. Fears of 'ecological catastrophe' fall in the last category, along with nuclear holocaust, sexual decadence and social collapse (1995: 4). This tradition, which according to Bull is witnessed frequently in science fiction, rock music and film, differs from religious apocalypticism in that it "is not usually intended to effect personal spiritual transformation" (1995: 4); often seeks to influence public opinion or "simply to shock, alarm or enrage" (1995: 5) by its use of apocalyptic rhetoric; and in that it is nihilistic, seeing no redemptive or other meaning in the coming end. More explicitly than Barkun, however, Bull addresses the "secularization thesis" upon which the premise of a divided secular-religious apocalypse (in which one came before the other) is based.

The problem, according to Bull, hinges upon whether the ideology of progress was actually a result of the secularization of Christian eschatology, as influentially argued by Ernest Lee Tuveson in *Millennium and Utopia* (1964) and strongly countered by Hans Blumenberg in *The Legitimacy of the Modern Age* (1983). If it was, then the chronology which argues that religious apocalypticism gave rise to secular apocalypticism is tenable. If they are in fact distinct

phenomena with only superficial similarities, then including them both within the same framework of eschatological studies would be unjustified. While not definitively resolving the dilemma, Bull ultimately defends former position, thus justifying his inclusion of studies of both religious and secular apocalypticism in his volume. However, while Bull's religious-secular distinction appears superficially in concert with Barkun's conception, closer examination reveals much less compatibility. Most importantly, Bull's secular apocalypse began with the Enlightenment, whereas Barkun's is a late twentieth century phenomenon. This, perhaps, helps explain why Barkun thinks secular apocalypticism is new whereas Bull sees earlier precedents. Despite their different accounts of when secularization began however, ultimately the two converge on the point that "something" has changed in the history of apocalypticism as it departed from a primarily religious grounding.

In his 1997 study of American beliefs about "impending worldly cataclysm" (1997: 209) in the latter half of the twentieth century, Wocjik concludes that four forms are observable: unconditional apocalypticism, conditional apocalypticism, unredemptive apocalypticism and cataclysmic forewarning (1997: 209). *Unconditional apocalypticism* sees the end as inevitable; *conditional apocalypticism* believes the end is imminent but may be postponed by good behavior; *unredemptive apocalypticism* believes the apocalypse is inevitable, but does not frame this within a system of cosmic justice; *cataclysmic forewarning* speculates that the apocalypse is imminent, but believes it is avoidable through human effort (1997: 209-11). Environmental apocalypticism, which is briefly discussed in the chapter "Secular Apocalyptic Themes in the Nuclear Era," falls in the last category. Ultimately however, despite his desire to study "folk" or "popular" apocalypticism, and his acknowledgment that the word apocalypse is emically understood as referring to "the catastrophic destruction of world or current society, whether

attributed to supernatural forces, natural forces, or human actions” (1997: 12), Wocjik does not consider cataclysmic forewarning (and thus environmental apocalypticism) to be true apocalypticism because it lacks a sense of fatefulness. Whereas Barkun—who serves as the primary source for Wocjik’s discussion of environmental apocalypticism—considered the expectation of dramatic, catastrophic change to be a common feature between secular apocalypticism and religious apocalypticism, in Wocjik’s schema, this “secular apocalypticism” is divided into ‘unredemptive’ and ‘cataclysmic’ forms, only one of which is considered truly apocalyptic. Additionally, not only is environmental apocalypticism secular, but in Wocjik’s treatment existed mostly in the nuclear era.

Reflecting the common assumption (particularly prevalent among those unfamiliar with environmental circles and environmental studies) that environmentalism is a secular phenomenon, several scholars also discuss environmental apocalypticism as a secular form without specifically explicitly explaining this choice. Ted Daniels begins *A Doomsday Reader: Prophets, Predictors and Hucksters of Salvation* by recounting many of the best known examples of apocalyptic or millennial movements (e.g. the Ghost Dance, Cargo Cults) before turning “secular and political millenarianism,” in which he includes environmental apocalypticism. Despite dividing secular/political and religious apocalypticism into separate chapters however, he ultimately argues that the distinction between political and religious millenarianism should be abandoned.

Nestled curiously along with Hitler’s *Mein Kampf* and *The Communist Manifesto*, Daniels’ “Environmentalism, Politics, and Progress” chapter claims that “As early as 1934 environmentalism was distinctly apocalyptic, but the ultimate aim of all environmentalism is preservation” (1999: 80). Although his aim is not explicitly comparison with other forms, his

coordinating conjunction 'but' suggests that environmentalists' goal of preserving the world as it is contrasts to what is typically thought of as apocalypticism. He also notes that for environmentalism, economic activity is the primary driver of the apocalypse, and "a main purpose of environmentalism is to forestall such activity, and in extreme versions to reverse it" (1999: 80). Without saying so directly, his analysis thus suggests another difference between environmental and religious apocalypticism: environmentalists want to prevent the apocalypse.

According to Daniels, the radical environmental group Earth First! is paradigmatic, "[embodying] the convergence and class of these modern apocalyptic ideas" (1999: 81). Interestingly, Daniels also implies that environmentalists envision a more comprehensive apocalypse than do other apocalypticists. Having asserted in the introduction that for apocalypticists "It is never the world that will end, but the world order" (1999: 3), Daniels distinguishes environmentalists' even more catastrophic vision. Speaking about Earth First co-founder Dave Foreman, he wrote,

Foreman shared the common environmentalist perception that industrialism and unchecked "progress" of the capitalist system were leading the world into ruin. "World" meant not only the social world of humanity, but more importantly the geological and biological basis of all life, which environmentalists believed to be headed for an imminent and catastrophic collapse: *an apocalypse* for all life, not just 'our way of life.' (1999: 81)

In essence, then, because environmentalists include nonhuman beings on their moral compass, their apocalyptic vision is that much more comprehensive. However, in a surprising twist in light of many environmentalists' (particularly radical environmentalists) self-identification as biocentrists, he also argues that the fear that all biotic life is at risk is actually at root a typical millenarian concern for human life: environmentalists' fears of biotic catastrophe "is apocalyptic, since it implies a dramatic and irreversible change in the nature of life in general, and thus of human life. Millenarianism always has humanity at its core, whether the concern is with saving humanity or a remnant of it, or with saving a greater purpose from the interference of humanity"

(1999: 84). Despite environmentalism's distinctively broad apocalyptic vision, for Daniels it remains typical in other ways.

Not only does environmental apocalypticism accept naturalistic worldviews, but it has gained a great deal of credibility by virtue of its scientific framing. In a nod to this perhaps, his selection from the literature is an excerpt from the Union of Concerned Scientists' 1992 "Warning to Humanity," which he describes as a "founding" document of environmental apocalypticism. In further divergence from standard accounts of environmentalism and its apocalypticism, he focuses almost entirely on Earth First! in his narrative, and *Silent Spring* and Aldo Leopold's *A Sand County Almanac* are the only other texts cited. Their apocalyptic dimensions are not discussed.

Returning to more familiar territory, historian of religion Richard Kyle opens his chapter "The End without God: The Secular Apocalypse" with reference to Paul Ehrlich's *The Population Bomb*, and a quotation from Carl Sagan warning that "we may have only a few decades until Doomsday" (1980: 328 in Kyle 1998: 165). However, like Barkun and Wocjik, Kyle includes a number of other fears—nuclear destruction, natural disasters, disease, pestilence, and asteroids—along with environmental destruction in the secular category. Additionally, in reviewing the literature on sacred and secular apocalypses, Kyle finds two principle differences. First, as Barkun and Wocjik argued, sacred apocalypses are redemptive and end in triumph, whereas secularists see no positive outcome from their apocalypse. And second, like Barkun he also notes the shift from divine to human agency as the apocalypse is secularized (1998: 184). However, in contrast to Barkun's observation of little connection between secular and religious apocalyptic literature, in Kyle's view the secular apocalypse grew out of the sacred, and "until the early twentieth century there existed considerable interaction between the two" (1998: 166).

## **Discourse Analysis: Apocalypse as Rhetorical Strategy**

Several scholars have analyzed environmental apocalypticism as a form of rhetoric. In analyzing environmental discourse, such scholars suggest that apocalyptic rhetoric is persistent not because of the realities it points to but because of its function in modern society. In concert with O’Leary (1994), they argue that apocalyptic rhetoric is well suited to inspiring people to make the changes environmentalists call for: “In depicting the end of the world as a result of the overweening desire to control nature, activists have discovered a rhetorical means of contesting their opponents’ claims for the idea of progress with its ascendant narratives of human victory over nature” (Killingsworth and Palmer 1996: 21). Moreover, this rhetorical choice is intentional: “these texts appear . . . as shock tactics to win the hearts and minds of the general public” (1996: 22). Killingsworth and Palmer further argue that environmentally apocalyptic and anti-apocalyptic rhetoricians (those opposing environmentalism on grounds of “orthodox progressivism” [1996: 22]) battle by turns, forming two extremes of a rhetorical battle to envision the future.

Additionally, while Killingsworth and Palmer recognize parallels with Christian millennial rhetoric—especially in that environmentally apocalyptic rhetoric also “[fosters] a totalizing vision of political transformation” (1996: 22) they do not argue that there is an actual historical connection between the two forms. Instead Killingsworth and Palmer find that environmental apocalyptic rhetoric functions in two ways. First, it exercises a kind of “rhetorical imperialism,” resurfacing whenever environmentalism needs to expand or revitalize its membership. Second, it becomes a kind of “political barometer,” increasing when called for changes are dramatic, and decreasing when they are milder. However, even this “expansive and offensive rhetorical strategy” (1996: 41) is not guaranteed success; whether such a work is successful or not also depends on timing, which cannot be predicted or controlled. Rather than comparing

environmental apocalyptic discourse to other kinds, or examining religious or secular elements in environmentalism, then, Killingsworth and Palmer's contribution is to highlight how such discourse functions.

Lawrence Buell's 1995 study of the environmental imagination also focuses on environmentally apocalyptic discourse, but for him rather than a pointed rhetorical strategy, it is a metaphor—and not just any metaphor, but “the single most powerful master metaphor,” (1995: 295)—with which people understand the environmental future. Apocalypticism is particularly important, he writes, because of the way it constructs risk: “Of no other dimension of contemporary environmentalism . . . can it be so unequivocally said that the role of the imagination is central to the project; for the rhetoric of apocalypticism implies that the fate of the world hinges on the arousal of the imagination to a sense of crisis” (1995: 285). While arguments for the social construction of risk often underplay the actuality of risk, Buell argues just the opposite. The risks are real, but environmentalists must also work actively to make people aware of them.

Like Lewis, Buell is attentive to the longer history of millennialism, particularly in America, but while he notes its continuing appeal, he neither draws a strong contrast between religious and secular forms nor argues that environmental apocalypticism is entirely new. Rather, for Buell environmentalism has had its own trajectory, which has both reflected and contributed to millennial themes in America. Overall, Buell finds that during the first two centuries of America's existence, environmental thought was (like that of America at large) millennial: “driven by the vision of wilderness as an inexhaustible resource waiting to be transformed into productive farms, towns, and cities, in the spirit of biblical promise that the desert shall blossom as the rose” (301). As the young country matured, the sense of “environmental endangerment”

gradually arose, gaining force particularly with the publication of *Man and Nature*. Later, but “only during the past two or three decades, and scarcely even then” (1995: 301) such fears became widespread and led to actual behavior changes. Like Taylor and Lee, then, Buell finds that the era since the 1960s has been pivotal for environmental apocalypticism.

Finally, in *From Apocalypse to Way of Life* (2003), Buell expands on this earlier exploration of environmental apocalypticism, arguing that environmental discourse has gradually shifted “from describing an environmental apocalypse ahead to exploring crisis as a place in which people presently dwell” (2003: 177). In doing so, he argues that environmental apocalyptic rhetoric has diminished, being replaced by literature that is mournful of loss, but also cognizant of crisis as a current reality rather than something in the future to be averted. Rather than using apocalyptic rhetoric to exhort change, then, environmental writing of the late 90s and early 00s (of which Buell examines both fictional and nonfictional sources) “asks that audiences realize just how deeply in the soup they themselves are” (2003: 322). Although not directed to the study of apocalypticism, Buell’s book is one of the few to describe trends in environmental discourse through the end of the twentieth century. Additionally, he suggests another difference between environment apocalypticism and other forms: rather than envisioning an end that is perpetually in the future, environmental apocalypticism has begun to accept that the “end” is (at least partly) already occurring in the present.

### **Risk Analysis: Apocalypticism as Perception of Risk**

Outside of the field of religious studies, the most relevant research to apocalypticism is in the field of risk analysis. Scholars in this field have done a number of revealing quantitative and qualitative studies on the character and development of the perception of risk related to the environment. In particular, a number of recent studies have focused on risk perception related to climate change (e.g. Dessai 2004; Kaspersen 1988; Leiserowitz 2005, 2006; Slovic 2000). Most

pertinently, a 2002-3 survey of Americans found that 11% were “alarmists”—respondents with “high risk-perception of climate change.” Such individuals tended to use apocalyptic imagery, describing climate change as the “death of the planet” or heat that would “kill the world” (Leiserowitz 2005: 1440). While this category is not necessarily identical with the phenomenon of environmental apocalypticism, it seems quite closely related, and the study’s findings are useful in giving a rough idea of the potential size of the phenomenon. Indeed, if the proportion of “alarmists” to the population as a whole is correct, then up to 33 million Americans may hold environmentally apocalyptic or quasi-apocalyptic views.<sup>3</sup> This research also suggests the important role of subcultures in mediating such views, finding that alarmists generally “held pro-egalitarian and anti-individualist and hierarchist worldviews, were politically liberal, strongly supported government policies to mitigate climate change (including raising taxes), and were significantly more likely to have taken personal action to reduce greenhouse gas emissions” (Leiserowitz 2005: 1440). Thus environmental apocalypticists potentially share a great deal of ideological—if not necessarily organizational—cohesiveness.

While useful in presenting a broad picture of the current distribution of beliefs about environmental risk among laypersons, such sociological accounts are less successful at capturing historical influences and changing beliefs over time. Additionally, and no such study so far has looked at how religious beliefs may be related to such views.<sup>4</sup>

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<sup>3</sup> Calculated using the United States Census Bureau’s current population estimate of 303.6 million (U.S. Census Bureau 2008).

<sup>4</sup> A partial exception to this is Mary Douglas and Aron Wildavsky’s *Risk and Culture* (1982), which builds off of Douglas’ earlier research on cultural and religious constructions of impurity, danger, pollution and taboo to develop an theory of why cultures pay attention to certain risks. However, the application of their theory to environmentalism was generally considered to be the book’s weakest aspects (Covello and Johnston 1987: x).

## **Religion: The Apocalyptic Eschatology of ‘Ecoreligion’**

In an interesting but obscure article from outside the field of religious studies, sociologists Salvador Giner and David Tábara examine the emerging phenomenon of what they call “ecoreligions,” or religions that combine scientific understandings of the world with the belief that nature is sacred. Although ecoreligions are “disorganized and diffuse,” they are nevertheless a coherent set of beliefs in which “the natural world (and humankind as an inseparable part of it) is a numinous entity, an object of pious care and chief bearer of charisma.” Rather than deriving their worldviews from religious cosmologies however, ecoreligions “base their world picture on their own interpretation of the hypotheses and the data (seen as ‘facts’) that botanists, biologists, cosmologists, astronomers, demographers and many other professionals steadily supply” (1999 : 63).

While not stating that all ecoreligion has an apocalyptic eschatology, Giner and Tábara nevertheless imply a connection by comparing ecoreligion to millenarian and chiliastic movements of the past. Similar to Barkun and Wocjik’s observations, Giner and Tábara note that this eco-influenced millenarianism differs from prior forms. Specifically, unlike Barkun’s inclusion of nuclear and environmental apocalypticism under the umbrella of secular apocalypticism, Giner and Tábara note that while such fears have similar characteristics—“Both the threat of a ‘nuclear holocaust’ . . . and the supposedly impending ecological cataclysm share one characteristic: they are seen as man-made, as perils that could be averted by humans, through action and policy, and not by incantation and prayers alone” (1999: 60-1)—there is a temporal distinction between the two: “As the nuclear warfare threat is felt to recede, environmental disaster tends to occupy its place” (1999: 61). This does not mean that nuclear fears are totally eclipsed, however. Rather, as environmental apocalypticism becomes more prominent it subsumes nuclear accidents within the category of environmental catastrophe. Giner and Tábara

thus agree with Barkun and Wocjik's contention that environmental apocalypticism emphasizes human agency, yet they also depart from Barkun and Wocjik's characterization by suggesting that ecoreligious and nuclear apocalypticism are temporally distinct.

In further contrast to Barkun, Giner and Tábara also argue that the apocalypse *does* have moral meaning for practitioners of ecoreligion. To begin with, they note that, like apocalyptic movements in the past that saw human sinfulness as the cause of the coming end, "a sense of guilt for sinful transgression of natural laws" (1999: 62) also characterizes ecoreligion. This contributes to what they term "cosmodicy," or "the assumption that in the long run nature will impose its own rules and that environmentally sound behaviour (including a ritually correct behaviour, sin-free or free of transgressions against nature) will be rewarded with some sort of cosmic justice" (1999: 68). Although they do not mention it, this idea is also reflected what has now become an adage in environmental circles, that "Nature (or Mother Nature) bats last."<sup>5</sup>

In contrast to traditional religious millennial movements, ecoreligious apocalypticism has widened apocalypticism's typical redemptive vision by understanding salvation as referring to the salvation of the whole natural world, rather than just to human individuals. Giner and Tábara also disagree with Wocjik's "unredemptive apocalypticism" and "cataclysmic forewarning" categories, neither of which, according to Wocjik, saw any larger meaning to the crisis at hand, by arguing that for practitioners of ecoreligion the apocalypse is indeed meaningful. Furthermore, by highlighting the ways in which lay people have begun to understand the ecological crisis in ways that parallel religious movements, Giner and Tábara portray ecoreligious apocalypticism as much closer to traditional religious forms than do Barkun and

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<sup>5</sup> Credit for this phrase should probably go to Paul and Anne Ehrlich, who wrote in *The Population Explosion* "To repeat the old saying, it's the top of the ninth and humanity has been hitting nature hard. But we must always remember that nature bats last!" (1990: 225).

Wocjik. Lastly, after criticizing the social construction of risk argument which would deny the reality of possible environmental apocalypse, Giner and Tábara turn apocalyptic themselves, concluding that ecoreligions may help encourage environmentally friendly behavior, an important step because earth's "fragile environment" must be preserved "if we wish to preserve the human race" (1999: 74).

### **Conclusion**

Taken together, all of these accounts contribute different (and sometimes conflicting) views about what environmental apocalypticism is, how it fits within the broader cultural ferment, and how it should be understood. Although some of them push the origins further back in history, all of them converge on the point that the period of 1960s and seventies witnessed a noticeable upwelling of fears about cataclysmic risk to humans and/or other species posed (broadly) by environmental degradation. While they provide an important foundation for further scholarship, they do have certain limitations, the most notable of which are the relative lack of attention paid to how apocalypticism has continued since the nineties, the conflation of environmental apocalypticism with secular or nuclear apocalypticism, and the anemic accounts of how religiosity mingles with environmentally apocalyptic worldviews. In the next chapter I will further examine these gaps.

### CHAPTER 3 SITUATING GREEN APOCALYPTICISM

While environmental apocalypticism has achieved a certain amount of notoriety in the public sphere, it has been less thoroughly treated by scholars. Indeed, no study has yet focused on understanding environmental apocalypticism in its own right as an apocalyptic movement which both mirrors and departs from previous forms of eschatological projection. The lack of attention by religion scholars may be a result of its apparently secular nature, yet recent scholarship has revealed a significant amount of religiosity related to environmental concern, often in combination with naturalistic worldviews (Albanese 1990, 2001; Crosby, 2007; Gatta 2004; Taylor 2008). Incorporating the implications of such findings into work on environmental apocalypticism is the logical next step.

Because of the relative paucity of larger studies of environmental apocalypticism, this study aims to be one of both synthesis and critique, putting disparate arguments in conversation with each other while also attempting to create a more comprehensive and sophisticated picture of environmental apocalypticism as a whole. At the broadest level, what I seek to answer is a very simple question: What is environmental apocalypticism? More specifically, how it should be situated both historically, in the study of a changing environmental consciousness, and theoretically, in the study of apocalypticism? Are fears of incipient ecosystem collapse a modern repetition of an ancient tune, or are they more properly considered a phenomenon unique to the present era? Is it secular, religious, or a mixture of both? Before turning my own findings in the next chapter, I will suggest what stones prior approaches may have left unturned, and briefly discuss what insights may arise from a carefully situated analysis of one of the most prominent—and prominently pessimistic—eschatologies of the late twentieth and early twenty-first centuries.

## **Beyond *Silent Spring*: Apocalypticism Since the Sixties**

If one were to pull together a canonical story of environmental apocalypticism's history from the depictions reviewed thus far, it would go something like this: the threat of nuclear war led to the birth of a phenomenon called secular apocalypticism. Capitalizing on these fears, Rachel Carson's *Silent Spring* became an instant best seller when it was published in 1962, and was pivotal in sparking the genre of environmental apocalypticism, which was but one facet of the era's pervasive pessimism regarding the human prospect. The environmental offshoot of this apocalypticism began to gain momentum with the publication of *The Population Bomb* in 1968 and *The Limits to Growth* in 1972 (and various others). The enormous amount of attention these books received, as well as increased media coverage of environmental topics, successfully caught both the public attention and, increasingly, that of political intelligentsia worldwide. Adding to the apocalyptic tenor of the era, an explosion of religious apocalypticism, driven in large part by Hal Lindsey's enormously popular *The Late Great Planet Earth* also worked alongside these secular fears, yet environmental apocalypticism was distinctive because of its scientific basis. This science-based apocalypticism lasted through the seventies, but came increasingly under fire in the eighties under the auspices of Ronald Reagan's conservative administration, which has often been portrayed as anti-environmental. Since that time, with the end of the Cold War, environmentally apocalyptic fears are supposed to have diminished, as environmental groups have become more institutionalized, and environmental fears seem less remarkable, less imminent, less plausible and therefore less worthy of deep concern.

The problem with this account is not that it is inaccurate (although I will critique some of its claims below) but that its attention has been overly focused on two decades (the sixties and seventies) within what is actually a larger history. The historical antecedents that Lewis explores are certainly an important part of the a broader picture, yet developments *since* the seventies,

particularly those occurring during the nineties and early years of the twenty-first century are also centrally important. These have received relatively scant attention, particularly among those who have attempted to theorize environmental apocalypticism. Additionally, even Lewis' account has some disadvantages. Primarily, in seeking to trace continuities in apocalyptic thinking, he downplayed some of the unique aspects of environmental apocalypticism that I will be highlighting. Most significantly, his approach deemphasized the role physical changes to the Earth's environment played in the development of environmentally apocalyptic warnings. Environmental apocalypticism, in my view, cannot be understood as a purely psychological, sociological, or intellectual phenomenon, whatever precedents may exist in the history of thoughts about nature. Instead, physical changes and fears about them go more or less hand in hand.

A few scholars have noted a resurgence of apocalyptic discourse arising due to growing concern about climate change, yet this resurgence has yet to be explored in detail. Most persistent in such attention has been theologian Catherine Keller, who has written a number of articles on environmental apocalypticism related to climate change. As she observes, "as the 1990s count down to the millennium, the rhetoric of 'the end of the world' stimulates anxious ecological associations for most white, middle-class North Americans, male or female. Apocalypse is being colored green" (1997: 84). However, she does not situate this green apocalypticism related to global warming within a broader history of environmental apocalypticism. Rather, her approach is to compare the apocalypticism found in the Apocalypse of John to that found in a book on global warming.<sup>1</sup> Like many environmental apocalypticists, Keller seeks a driver of the crisis. In her judgment, capitalism, overweening faith in progress,

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<sup>1</sup> Ross, Andrew. 1991. *Strange Weather: Culture, Science and Technology in the Age of Limits*. New York: Verso.

and Christian apocalypticism are the most important factors: “it is surely not accidentally the culture whose holy book happens to culminate in a vision of the imminent devastation of the earth, the culture that has developed the technologies and politics capable of Armageddon—nuclear or greenhouse” (1993: 46). Her work is significant in its eloquent and astute discussion the resurgence of apocalyptic discourse—and it is one of the few to focus on this area. Yet from the perspective of this study, her theological framing is less helpful when it comes to situating environmental apocalypticism theoretically.

Another set of authors who have discussed apocalyptic rhetoric at least until the mid-nineties are Killingsworth and Palmer. They argue that what they call “millennial ecology” peaked in the sixties, but by the late seventies was on the decline:

With the passage of the National Environmental Policy Act in 1969, with some evidence of a declining birthrate in the United States, and with the popularity of Earth Day in 1970, environmentalists may have felt that they could afford to restrain their rhetoric. They could adopt the ethos of the cautious scientist and advance their agenda with the rhetorical tools of peacemaking and consensus, leaving aside for the moment the warlike, oppositional rhetoric of the apocalypse. (Killingsworth and Palmer 1996: 35)

Indeed, environmental apocalypticism had been so successful that “it was the anti-environmentalists who were on the defensive” (ibid.) in this era. As they note, the eighties were witness to intense and highly polarized environmental battles, between environmentalists and their biblically apocalyptic counterparts in office: Reagan and Secretary of the Interior James Watt’s professed interest in biblical prophecies of the end times may have underlaid their lack of concern about environmental deterioration. Yet despite Reagan’s efforts, in Killingsworth and Palmer’s view environmentalism’s apocalyptic rhetoric decreased as it gained increasingly broad support and became more institutionalized.

Thus, when the exceptionally hot summer of 1988 led to a surge of media interest in global warming, the time was ripe for “a revival of millennial ecology . . . This time around, however,”

Killingsworth and Palmer continue, “weaker versions of the apocalypse seem to have prevailed over the strong” (1996: 37). That is, instead of playing up the inevitability of destruction as was the strategy in the sixties and seventies, global warming discourse attempted to soften its apocalyptic claims, giving more space for uncertainty and scientific detail. Such accounts were more concerned with bolstering their credibility with readers than with shocking them into action as earlier accounts had been: “caution encourages a literal reading of the apocalyptic narrative, a reading that assumes a commitment to accurate prediction on the part of the narrator” (1996: 40). Not only were global warming writers less apocalyptic, but even those who had been apocalyptic earlier in their careers, like Ehrlich and Barry Commoner “stepped back from the radicalism of the 1960s” (1996: 40). Thus unlike the many scholars of environmental apocalypticism who discuss only a few of its more strident texts from the sixties, Killingsworth and Palmer describe how it has continued since that time: declining in the seventies and eighties, only to resurge in the nineties (in more qualified form) with global warming.

Killingsworth and Palmer’s depiction was astute, yet apocalyptic discourse related to global warming was only just beginning at the time their article was published. Additionally, the “weaker versions of the apocalypse” that they observed seem not to have been a continuing trend. It is true that much of the scientific literature on climate change is couched in probabilistic rather than deterministic terms, but there is also a growing body of literature preaching catastrophe. Independent scientist and Gaia hypothesis co-originator James Lovelock, for example, asserts in *The Revenge of Gaia* that “We are in a fool’s climate, accidentally kept cool by smoke, and before this century is over, billions of us will die and the few breeding pairs of people that survive will be in the arctic region where the climate remains tolerable” (2006: xiv).

Contrary to their expectations, then, the prospect of climate change seems to be encouraging apocalyptic speculation with much in common with sixties era environmental apocalypticism.

Like Killingsworth and Palmer, Buell also discusses changes in apocalyptic discourse in environmentalism, yet as we have seen, he argues that environmental discourse shifted from crisis to dwelling place—in other words, that crisis discourse diminished as it became normalized. In his depiction, this is largely due to the persistent effort of “a strong and enormously successful anti-environmental disinformation industry” (2003: 3), as well as habituation to risky circumstances beyond the individual’s control:

People have entered a world in which the robust (and even, at times, cautious) exercise of their power to modify nature has made their past actions increasingly into their present fate—or, better, not just their present fate, but the fate of all life-forms on the planet. Having lived for several generations with environmental crisis, human and nonhuman creatures now dwell in a world into which it is woven, intimately and everywhere (2003: 110).

For Buell this means that the apocalypse itself has melted into the fabric of the present. Rather than the end occurring in some predicted future, we are already witnessing ends—of species, forests, ecosystems, clean natural resources and predictable weather patterns. So unlike Killingsworth and Palmer’s “rise and decline” theory, Buell describes (to simplify greatly) a temporal displacement of risk from the future to the present. Coincident with this change, he argues that traditional apocalyptic discourse itself has become outmoded: “Dwelling in contemporary Love Canals . . . leaves little space for the stern prophecy, apocalypticism, irony, or contemplative melancholy of Victorian and modern reflections on the fall of civilizations and the end of societies” (2003: 79). Additionally, while the apocalypse has shifted its temporal location, it has also changed its *velocity*: “In the United States in particular . . . [people] live not with sudden apocalypse immediately ahead but in a slow apocalypse, in a slow process of

increasing ecological and ecosocial immiseration and the rising ecological and ecosocial risk already embarked upon” (2003: 202).

Certainly, Buell’s account of the shift “from apocalypse to way of life” is accurate and compelling. Yet it seems that dwelling in crisis does not prevent the development of new crises, and new apocalyptic speculation. For example, rising concern about tipping points began a return to suggestions of an imminent, catastrophic change, which would also be rapid, rather than slow. As scientist and author Fred Pearce writes in his book on tipping points related to climate change:

Nature is strong and packs a serious counterpunch. Its revenge for man-made global warming will very probably unleash unstoppable planetary forces. And they will not be gradual. . . . We humans have spent 400 generations building our current civilization in an era of climatic stability . . . But this tranquility looks like the exception rather than the rule in nature. And if its end is inevitable one day, we seem to be triggering its imminent and violent collapse. Our world may be blown away in the process. (2007: xxiv)

What this suggests is not that Buell was incorrect in his depiction of the process, but that apocalypticism can resurge, even in a world where crisis is mundane. This resurgence and what it suggests about environmental apocalypticism will be the topic of the following chapters.

### **Reconsidering Secular Apocalypticism: the Nuclear-Environmental Connection**

From the perspective of this study, the greatest weakness of much of the scholarship on environmentalism within studies of apocalypticism is that it too often subsumes environmentalism into the broader category of secular or nuclear apocalypticism. Barkun, Bull, Wocjik and Daniels all exemplify this approach. Given the importance of nuclear fears in fanning the flames (if not in many ways sparking the fire) of secular apocalypticism, and the rise of the environmental movement during much of the same period when nuclear fears were running high, it is not surprising that the two should be seen as aspects of the same general phenomenon. My point is not to deny that environmental and nuclear fears have mingled in the

environmental imagination, but rather to point out that that since the end of the Cold War, environmental apocalypticism has begun to forge its own path, acquiring its own styles and characteristics. Given the Cold War era in which Barkun wrote, seeing the two as linked makes sense. However, such conflation seems increasingly inaccurate as Cold War-era fears have diminished, and environmental concerns have gained their own momentum.

Because nuclear apocalypticism left a mark on environmental apocalypticism, it is important to look more closely at the relationship between the two. To begin with, nuclear apocalypticism was undeniably significant in making an apocalyptic end credible. After the rise of Copernican and Newtonian mechanics, religious predictions of an imminent, retributive cataclysm ending history began to seem increasingly implausible (Miller 1956: 217-40). It was not until the invention of the atomic bomb that such an end came again to seem plausible. Thus, “[t]he image of nuclear holocaust helped reactivate apocalyptic thinking precisely by providing a more convincing secular frame of reference for the apocalyptic paradigm than had been available since the so-called Enlightenment started to undermine the credibility of Christian sacred history” (Buell 1995: 299). As Buell here signals, Cold War fears spurred both religious apocalypticism deriving from biblical interpretation, and Barkun’s “secular” fears, which were not explicitly associated with a religious tradition. Both of these forms led to a pervasive apocalypticism during the era, at just around the time when the environmental movement was born.<sup>2</sup> Thus it seems undeniable that environmental apocalypticism was influenced by nuclear fears.

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<sup>2</sup> Nuclear era fears apocalypticism also included fears of a nuclear winter, which would supposedly be caused by the enormous clouds of particulate matter put into the atmosphere by the explosion of bombs in the event of nuclear warfare (Shabecoff 2003: 112).

Indeed, even a cursory review of the literature reveals that nuclear and environmental fears are commonly mixed. For example, it is surely no coincidence that the text that sparked the movement makes a strong link between the two. Although *Silent Spring* ostensibly discusses toxic chemicals, Carson links the two, suggesting that both environmental and radiation pollution are part of the same general problem: “In this now universal contamination of the environment, chemicals are the sinister and little-recognized partners of radiation in changing the very nature of the world—the very nature of life itself” (2002 [1962] : 6). Moreover, Carson made this association throughout the book, arguing that they were linked because of the apocalypse each made possible: “Along with the possibility of the extinction of mankind by nuclear war, the central problem of our age has . . . become the contamination of man’s total environment with . . . substances of incredible potential for harm” (2002 [1962]: 8).

According to Killingsworth and Palmer, this association may have played a role in the book’s success: “Carson’s rhetoric appealed to the temper of the times in a special way” by “[tapping] into . . . the public’s growing uneasiness over science and the military in the Cold War Era, when threat of Armageddon seemed ever more real” (Killingsworth and Palmer 1996: 27). In any case, it is clear that Carson’s reference to nuclear fears played an important role in the book’s reception and success. Additionally, because it gained so much media attention, going into three printings within the first year, such a connection would have been spread—even as it resonated—among the thousands of readers across the country. Carson “cleverly [used] the public’s knowledge of atomic fallout as a reference point” (Lear 2002: xv), and it was a connection that clearly made a lasting impression.

As the era continued, fears about nuclear and environmental threats continued be expressed together. One of the texts often cited as an early example of secular apocalypticism, Robert

Heilbroner's *An Inquiry into the Human Prospect* (1980), lays concern about population growth (citing Ehrlich) and environmental deterioration alongside fears over the prospect of nuclear arms proliferation. Both were potentially cataclysmic threats, but surprisingly, he argued the former had greater apocalyptic potential: "Nuclear attacks may be indefinitely avoided; population growth may be stabilized; but ultimately there is an absolute limit to the ability of the earth to support or tolerate the process of industrial activity, and there is reason to believe we are now moving toward that limit very rapidly" (1980: 47). Heilbroner's book was particularly important in both attempting to come to terms with the pervasive sense of pessimism of the era and in documenting it. As he notes, although he had many critics, his opening question of "Is there hope for man?" struck a chord: "Whatever the reactions to the way in which I addressed myself to it, no one thought the query itself was merely rhetorical or foolish" (1980: 8). If cultural critics can be said to reflect and refract the popular mentality, then it seems clear that two fears had merged, each contributing to the reality of the other. The Cold War presented the possibility of real destruction, and the specter of cataclysmic environmental degradation kept close and (equally disturbing) company.

Writing during the late seventies, historian Donald Worster is also clearly affected by the mood of the era, even as he analyzed it. In *Nature's Economy: A History of Ecological Ideas* (1977) he argues that the dawn of the Age of Ecology,<sup>3</sup> had everything to do with the nuclear era:

The Age of Ecology began on the desert outside Alamogordo, New Mexico on July 16, 1945, with a dazzling fireball of light and a swelling mushroom cloud of radioactive gases.

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<sup>3</sup> Worster defines the Age of Ecology as the era marked by "the appearance of a wide consciousness of ecological concepts in popular environmental thought" (1977: 306).

. . . For the first time in some two million years of human history, there existed a force capable of destroying the entire fabric of life on the planet (1977: 339)<sup>4</sup>

Not only was the Age of Ecology characterized by possibility of apocalypse, but for Worster the nuclear concerns that inaugurated it were what actually sparked the environmental movement: “One kind of fallout from the atomic bomb was the beginnings of widespread, popular ecological concern around the globe” (1977: 340). This concern increased dramatically in 1958 when the Committee for Nuclear Information organized to warn of the dangers of nuclear testing. Significantly, Barry Commoner, a well-known and notably apocalyptic environmental writer, was on this committee.

In Worster’s telling, the subsequent shift from nuclear concerns to environmental concerns is seamless: “Other scientists began to join the [Committee’s] campaign of information and protest, and more and more they were from biological disciplines. It also became clear, with the publication of Rachel Carson’s *Silent Spring*, that the atomic bomb was only the most obvious threat to the sanctity of life” (1977: 340). Dropping the atomic subject entirely, he next notes the publication of Paul Ehrlich’s *Population Bomb* in 1968, after which the number of concerns mushroomed: “[b]y the 1970s the list of environmental threats had further expanded to include automobile emissions, solid waste, toxic metals, oil spills, even heat” (ibid). Returning to the nuclear trope (but no longer referencing the actual possibility), he calls the environmental situation “a runaway arms race” against which ecology was battling for “détente, disarmament, no more war” (1977: 341). Thus nuclear war shifts from a real threat inaugurating the Age of Ecology to a metaphor invoked to suggest the continuing possibility of apocalypse. On the

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<sup>4</sup> Interestingly, the apocalyptic tenor of this passage was substantially mitigated in the book’s second edition, published in 1994: “For the first time, there existed a technological force that *seemed* capable of destroying *much* of the life on the planet” (Worster, 1994 [1977]: 342, emphasis added). Note also the deletion of the phrase “in some two million years of human history.”

whole, Worster's analysis one of the clearest examples of just how important nuclear and environmental fears were to each other.

However, nuclear fears were not the only factors contributing to the apocalyptic tenor of the era. According to Heilbroner, such anxiety arose from three sources. First, there were *topical* sources, which were "confidence-shaking events" (1980: 12) of the period, like the Vietnam war, assassinations, race riots, drug culture and rebellious, convention-defying youth. These increased the sense of instability and disquiet of the era. Second, *attitudinal* changes included the demise of faith in progress, particularly in light of World War I, the Great Depression and persistent world poverty.<sup>5</sup> Most importantly, such events destroyed earlier confidence that social improvement would gradually be brought about by persistent, scientifically informed effort. Thirdly, he suggests a growing *civilizational* malaise, "the inability of a civilization directed to material improvement . . . to satisfy the human spirit" (1980: 19). All of these worked together with perceived threats of nuclear and environmental degradation to create an apocalyptic picture.

Like Heilbroner, social scientist Francis Sandbach has also found a similarly broad suite of cultural factors at work in the rise of environmental apocalypticism. According to him, the environmental movement's apocalyptic concerns became important in the broader public imagination for a variety of reasons. This included the rise of 'new' environmental problems (he cites *Silent Spring* and the 'death of Lake Erie'). Additionally however, external factors were at work, including momentum from the Civil Rights movement and anti-Vietnam protests, the public's shifting attention as concern over racial tension decreased, and the realization by middle and upper class Americans that many environmental problems could not be avoided by

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<sup>5</sup> Although Heilbroner does not use the term millennialism here, the attitudinal shift that he identifies corresponds with the demise of the Wessinger's "progressive millennialism" (Wessinger 2000: 17).

affluence. Finally, he cites a desire to stabilize international politics by attempting to control third world population growth (1978: 495-511)<sup>6</sup>.

Heilbroner's and Sandbach's accounts are particularly important because they reflect the ways in which the events were understood at the time. As such, both provide convincing evidence that while environmental apocalypticism was influenced by nuclear fears, a variety of other factors also shaped them. At the same time however, nuclear fears seem to have left a particularly enduring mark. Traveling around the world in search of the truth about humankind's prospects in light of the environmental crisis, for example, journalist Mark Hertsgaard quotes French cosmologist and best-selling author Hubert Reeves, declaring that "[t]he main piece of bad news at the end of the twentieth century is that we humans can now destroy ourselves, in either of two ways. We can destroy ourselves quickly, through nuclear weapons, or slowly, through environmental degradation" (Hertsgaard 1998: 8).

Additionally, Giner and Tábara argue that "[a]s the nuclear warfare threat is felt to recede, environmental disaster tends to occupy its place" (1999: 62). In a slightly more strident tone, environmental critic Ronald Bailey argued in his book *Ecoscram: The False Prophets of the Ecological Apocalypse* that "[m]odern ecological millenarians, impatient with waiting for the flash of thermonuclear doom, now claim there is a 'global environmental crisis' threatening not just humanity, but all life on earth" (Bailey 1993: 3 cited in Buell 2003: 4). While I will attempt in chapter 4 to nuance the implications of the preceding two quotations that environmentalism merely came, by default, to inhabit the edifice of fear that nuclear apocalypticism had constructed, what it is important to note here is that both apocalyptic insiders and outsiders saw

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<sup>6</sup> In an interesting though erroneous (as it turned out) conclusion, Sandbach argues that the popularity and prominence of early pessimistic perspectives such as *The Limits to Growth* "owe more to the rise of the 'environmental movement' in general than to their scientific validity" (1978: 496), and projects the movement's imminent demise.

nuclear and environmental apocalypticism as related, and that there is a significant relationship between the two, particularly at during their time of origin.

Given the ubiquitous connections between environmental and nuclear apocalyptic expressions, it is clear that the connection that Barkun, Bull, Wocjik and Daniels drew between them has merit. Yet, with the end of the Cold War, nuclear apocalypticism has largely declined, making it no longer accurate to depict environmental apocalypticism as a subform of it. What is needed, then, rather than a rejection of Cold War-era accounts like Barkun's, is an update to reflect changing historical circumstances. Indeed, environmental apocalypticism has increasingly gained its own momentum, such that, if anything, it is now the umbrella under which other crises crowd. Rather than a treating environmental and nuclear apocalypticism together as one aspect of "secular apocalypticism," environmental apocalypticism now needs to be considered in its own right.

### **Suggestive Beginnings: The Religion Variable in Environmental Apocalypticism**

Few scholars who have looked at the religious aspects of environmentalism have examined its eschatology. Those who do attend to its religious elements, like Giner and Tábara and Taylor, lay important theoretical groundwork for further study of the ways in which religiosity is related to environmental apocalypticism. By examining radical environmentalism, environmentalism at large and ecoreligions, these accounts suggest but do not exhaust the ways in which its eschatology is connected to its religiosity.

To begin with, we have already seen Killingsworth and Palmer's assertion that "to employ apocalyptic rhetoric is to imply the need for radical change (1996: 41). For them this radical change is political. However, as Lewis has noted, radical change can also be couched in religious terms: "apocalyptic scientists . . . have looked to religion and mythology for metaphors to describe their growing fear that the modern world is racing out of control" (1992: 327). Indeed, it

is not just metaphors that these individuals are employing, as Lewis recognizes, but an attempted “synthesis between modern scientific understanding and the essence of religious or esoteric traditions” (Ornstein 1989: 264 in Lewis 1992: 237). Since, in his view, “ecological apocalypticism” always incorporated mythical elements, the suggestion that its eschatology is similar to (or even a form of) religious eschatology is not a radical leap. Yet, his analysis of the ways in which religiosity is becoming recombined with science and what this has to do with the possible development of an ecological eschatology is a brief paragraph in his larger article and clearly merits further exploration.

Taylor argued his “Environmentalism” contribution to the *Encyclopedia of Millennialism and Millennial Movements* that environmental apocalypticism was secular because of its scientific basis. However, in his work on radical environmentalism he is more explicit about the connection between environmentally-related religiosity and its eschatology. He begins by suggesting that “today’s environmental controversies substantially reflect a battle between conflicting *religious* worldviews,” (Taylor 1994: 185) and suggests that in order to understand Earth First!, one must understand the importance of its spiritual underpinnings. Second, he creates a typology of religion, arguing that eschatology, along with cosmogony, cosmology and moral anthropology are all essential characteristics (1991: 259; 1994: 185). As the article progresses, his approach is to argue that radical environmentalism is religious by demonstrating the presence of each of these religious elements, as well as identifying the utility of the religious studies lens in analyzing the movement’s components.

Turning to eschatology in particular, he cites Southwestern novelist Edward Abbey’s fantasies of post-collapse utopia as “a typical example of Earth First! eschatology” (194). The quotation itself is explicitly religious. In it, Abbey excitedly anticipates a future characterized by

“scattered human populations modest in number that live by fishing, hunting, food-gathering, small-scale farming and ranching, that assemble once a year in the ruins of abandoned cities for great festivals of moral, spiritual, artistic and intellectual renewal” (Abbey 1978: 28 in Taylor 1994: 194-5). Clearly, although the word “spiritual” is undefined, it is an important feature of the future vision, and Abbey’s usage further bolsters Taylor’s general argument that religiosity is important to Earth First!ers. Additionally, as Taylor notes, Earth First!’s eschatology is much like that of a religious form: “apocalyptic eschatology generally holds out hope for the future, even in the face of great tribulations and against great odds. Earth First!’s eschatology is no different” (1994: 195). Thus, in broad strokes, Taylor argues that religiosity is central and ubiquitous to Earth First!; that one of the aspects of its religiosity is its eschatology; and that its eschatology mirrors other forms of religious apocalypticism. Additionally, his portrayal of radical environmental apocalypticism as essentially a new form of eschatology that combines both religious and secular (scientific) elements is one my study seeks to explore further.

Finally, analyze the movement at large rather than its radical environmental subset, Giner and Tábara also focus on religious aspects of the environmental movement. For them, likewise, cognizance of an “impending end” has had an important effect on religiosity. Also, like Taylor, they recognize the importance of science to this religiosity. But they make a strong distinction between scientific understandings and *scientism*: “Immersion in scientific information does not mean that such religions are scientific. Only science is scientific. Ecoreligions are often, instead, scientific, and, more often than not, only express themselves in a language reminiscent of science or pretending to be scientific” (1999: 63). In their depiction then, ecoreligions pay close attention to scientific information, but are most interested in infusing it into religion, including

“Pantheism, organicism, ecological ‘interrelationism’ and human identification with the natural world” (1999: 63).

Giner and Tábara also argue that ecoreligious eschatology is distinctive in two ways. First, ecoreligions have a different understanding of *apocalypse*: they “[recognize] that life on earth will not end with the extinction of the human species” (1999: 68). The goal for ecoreligions then, unlike biblical apocalyptic movements, is not to seek out or glory in signs of the end but to do the reverse, to act to “save the planet” (1999: 68) from such a fate. Second, they argue that ecoreligions also have a distinctive understanding of *redemption*: “in the long run nature will impose its own rules and . . . environmentally sound behaviour . . . will be rewarded with some sort of cosmic justice” (1999: 68). Ecoreligious apocalypticism is thus based partially, but not completely, on science, while its moral framework de-centers humans and seeks a broader, ecocentric redemption.

Giner and Tábara’s approach is important in painting a broad picture of the religiosity which is developing in response to signs of environmental decline, as well as in highlighting some of the distinctive features of its eschatology. While their explanation is powerful, combining all environment-related religiosity into one category overlooks some of the diversity found within this religiosity. For example, where do Neopagans, green-influenced strands of New Age religions, and green religions (world religions which have, since the 1960s and 70s, increasingly nurtured environmental concerns) fit within a schema that addresses the diversity of the environmental movement? Do some incorporate science to greater or lesser degrees? And how, if at all, are the eschatologies of these groups distinct from each other? Building on the theoretical work of Giner and Tábara, Taylor, and others, I aim to delve further into some of these questions in the chapters to come.

### **Assessing This Study's Contributions**

As the first decade of the twenty-first century draws to a close, modern environmental apocalypticism—as inaugurated by the publication of *Silent Spring*—approaches its fiftieth anniversary. Contrary to the expectations of some, it is now more clear than ever that it was not merely a fad destined to wither as public attention shifted elsewhere. Instead, it has persisted, continuing to evolve in new and interesting ways that have important implications for both the study of religion, environmentalism, and apocalypticism. Additionally, the resurgence of apocalypticism accompanying the increasing international attention to climate beginning in the early 1990s and intensifying during first decade of the twenty-first century suggests that in the modern “risk society” (Beck 1992) such apocalypticism will continue long term.

Clearly, the time is ripe for a larger study focusing specifically on the phenomenon of environmental apocalypticism. What are its characteristics, how do they compare and contrast with prior forms of apocalypticism? What role does religion play in this new, science-informed eschatology? Such a study of environmental apocalypticism will contribute, I hope, not only to broadening the conversation in the study of apocalypticism, but to the field of religion also, which is increasingly interested in the ways in which scientific evidence is being incorporated into religious worldviews.

## CHAPTER 4 CHARACTERISTICS OF SECULAR ENVIRONMENTAL APOCALYPTICISM

This chapter will examine what characterizes environmental apocalypticism and makes it distinctive. In doing so, I tread over territory that others have covered (especially Barkun, Giner and Tábara and Taylor), yet I also attempt to provide a more systematic account than has yet been offered. Accordingly, I will here explore six unique characteristics: its physical basis; its unique views on epistemology, agency, determinacy, its mainstream acceptance; and its attitude toward the apocalypse. Finally, I examine what I have called the *ecocentric* and *anthropocentric* apocalypses. All of these types of apocalypticism should be taken as support for my argument that environmental apocalypticism is a distinct and prominent strand in modern end-time thinking which deserves careful consideration in its own right.

This chapter draws heavily from textual sources. Of the many available, I have generally attempted to select those that are well known as they have most impacted the development and dissemination of environmentally apocalyptic views throughout American culture. However, it is important to emphasize the ubiquity of environmentally apocalyptic claims in environmental discourse. As the full body of literature reviewed in this study suggests, it is not just a function of a particular period of time or a few authors.

### **The Physical Basis**

Choosing a source for information about environmental changes is difficult, since environmental claims are frequently contested, particularly in light of their political implications. Additionally, much remains unknown, especially about complex, global process, and thus datasets are often subject to varying interpretations. Thus while it would be impossible to find a value-neutral study (in this field as in others), I have chosen to rely mainly on the *Millennium Ecosystem Assessment*, a report published in 2005 and conducted under the auspices of the

United Nations. Its more than two thousand authors and reviewers provide a wider scope than a study with less international support could hope to achieve, and it also demonstrates “consensus” understandings of the environmental situation. However, like *Our Common Future*, which was published by the World Commission on Environment and Development (also under the auspices of the United Nations) in 1987, it clearly has certain presuppositions. Indeed, that the study was conducted in part “to establish the scientific basis for actions needed to enhance the conservation and sustainable use of ecosystems” (2005: v) suggests that a conservation agenda underlay the study from the outset.

In terms of demonstrating the physical basis for environmental apocalypticism, the principle finding of the assessment works nicely: “[t]he structure of the world’s ecosystems changed more rapidly in the second half of the twentieth century than at any time in recorded human history, and virtually all of Earth’s ecosystems have now been significantly transformed through human actions” (2005: 26). Additionally, it found that these changes have been accelerating: “More land was converted to cropland in the 30 years after 1950 than in the 150 years between 1700 and 1850” (2005: 26), and “[e]cosystem processes, including water, nitrogen, carbon, and phosphorus cycling, changed more rapidly in the second half of the twentieth century than at any time in recorded human history” (2005: 33). Changes to earth’s atmospheric concentration have also accelerated: “Since 1750, the atmospheric concentration of carbon dioxide has increased by about 32% . . . primarily due to the combustion of fossil fuels and land use changes. Approximately 60% of that increase . . . has taken place since 1959” (2005: 4). Thus, while earlier periods had also witnessed ecosystem degradation, the rate of change has accelerated since the industrial era (2005: 26). Additionally, in terms of biotic life, “[h]umans are fundamentally, and to a significant extent irreversibly, changing the diversity of

life on Earth, and most of these changes represent a loss of biodiversity” (2005: 4). Finally, these changes have now become so severe that they threaten to be catastrophic:

there is *established but incomplete* evidence that changes being made in ecosystems are increasing the likelihood of nonlinear changes in ecosystems (including accelerating abrupt, and potentially irreversible changes) that have important consequences for human well-being. Examples of such changes include disease emergence, abrupt alterations in water quality, the creation of “dead zones” in coastal waters, the collapse of fisheries, and shifts in regional climate. (2005: 1, emphasis in original)

As for causes of environmental degradation, the study identifies indirect and direct drivers. The former includes population change, change in economic activity, sociopolitical factors, cultural factors, and technological change (2005: 64). Direct drivers are habitat change, overexploitation, invasive alien species, pollution, and climate change (2005: 67).

While hardly an exhaustive review of human wrought changes to the earth’s physical environment, the results summarized here suggest that, indeed, whatever ideological precedents may have occurred in the sixteenth and seventeenth centuries, there is a physical basis for the growth of environmentally apocalyptic concerns in recent decades. Additionally, it is particularly striking that many of the changes have increased since the industrial revolution, and the rate of increase has accelerated even more during the past fifty years, coinciding roughly with the rise of environmental apocalypticism. Thus while not proving that environmentally apocalyptic concerns are accurate or commensurate with the actual degree of threat posed, it does suggest that such concern is not merely a psychological or sociological phenomenon. This real physical basis is, in my view, the foremost distinction between environmental apocalypticism and other forms of apocalypticism in the history of religion.

### **Epistemology**

As the previous section has suggested, science is the principle means by which evidence of ecosystem degradation has been gathered. The specific methodologies used vary greatly

depending on the subfield and on which system is being studied: Ecology, statistics, climate science, marine science, oceanography, conservation biology, atmospheric chemistry and a host of other disciplines all contribute to producing information related to the health of the environment. Ideally, such studies objectively capture physical processes using methodologies that are repeatable and falsifiable.

In addition to data collection and analysis, models are an important scientific tool. In principle, they calculate the probabilities of future events based on a certain set of assumptions, using (at the simplest level) on a set of initial values and rates of change for each variable. They can be used to understand the function and predict the future trajectory of a wide variety of natural and human processes at virtually any scale. This methodology has played a particularly important role in environmental apocalypticism because apocalypticism is future oriented, and models are one of the ways scientists predict the future. For example, one of the books most often cited as an early environmentally apocalyptic text, *The Limits to Growth*, relied on global modeling for its dire (and controversial) predictions of the future.

This methodology contrasts strongly with religious epistemologies. In order to assess the future, biblical religious apocalypticism typically relies on such sources as personal revelation, intuition, the interpretation of textual and oral prophecies and the interpretation of portents, including anomalous natural events and human events such as wars (Boyer, 1992; Barkun, 1983). This does not mean that Bible-based apocalypticism ignores environmental evidence, however. Indeed, as Boyer noted in his comprehensive study of Biblical apocalypticism in America, “[t]he surge of concern about nuclear accidents, oil spills, global warming, the greenhouse effect, vanishing rain forests, and a host of other environmental issues strikes many prophecy writers as highly suggestive in view of the environmental motifs in biblical

apocalyptic” (1992: 331). Yet, such evidence is interpreted differently by prophecy writers. As Barkun notes, “terrestrial events . . . can carry information about when the [divine] intervention is to take place but do not *of themselves* make the intervention more likely” (1983: 271). Thus, for biblical apocalypticists it is not that environmental deterioration in itself is bringing on the end, but that such signs are seen to represent the fulfillment of prophecies about what events will happen when the end of sacred history is near.

Nevertheless, there is an important distinction between the scientific evidence which is the basis of environmental apocalypticism and the ways in which it is disseminated into the popular consciousness through a variety of media. In many cases, environmentally apocalyptic texts are penned by scientists, as in the case of Rachel Carson, who held a master’s degree in zoology. Likewise, Barry Commoner, author of *The Closing Circle: Nature, Man and Technology* (1971) was a cellular biologist, and James Lovelock, originator of the Gaia Hypothesis and author of *The Revenge of Gaia: Earth’s Climate Crisis and the Fate of Humanity*, 2006 is an independent scientist. However, just as often it is nonscientists—sociologists, political scientists, politicians, and most frequently, journalists—who interpret and synthesize scientific information into compelling narratives.<sup>1</sup>

In both cases, establishing the author’s scientific credentials is clearly important. The opening page of *The Population Bomb*, for example, assures readers that Ehrlich is “a qualified scientist.” The subtitle of journalist Fred Pearce’s book on climate change—why *scientists* fear tipping points in climate change—signals much the same intent. Furthermore, Bill McKibben’s

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<sup>1</sup> Prominent examples include sociologist William Catton (*Overshoot: The Ecological Basis of Revolutionary Change*, 1982), the journalists Bill McKibben (*The End of Nature*, 1989), Mark Hertsgaard (*Earth Odyssey*, 1998), Elizabeth Kolbert (*Field Notes from a Catastrophe: Man, Nature and Climate Change*, 2006), and Fred Pearce (*With Speed and Violence: Why Scientists Fear Tipping Points in Climate Change*, 2007), the politician Al Gore (*Earth in the Balance*, 1992 and in *An Inconvenient Truth* [film], 2006), and the cultural critic James Howard Kunstler (*The Long Emergency*, 2006).

*The End of Nature* opens with the following acknowledgment: “I owe a large debt—all of us owe a large debt—to the scientists who have brought the world’s attention to the greenhouse effect and the other environmental cataclysms described in this book” (1989: vii). His main sources, he adds, include government reports and summaries from the National Research Council and the National Academy of Sciences, as well as a number of scientists and policy analysts who “helped me understand the implications of their work” (vii). Although he is a journalist, it is thus clear that understanding science is an important aspect of his work. The jacket of *The Revenge of Gaia* likewise emphasizes Lovelocks’ “two hundred scientific papers” and “links with universities” maintained even though he has been a “wholly independent scientist” since 1961.

On the whole, then, regardless of whether environmental apocalypticists are scientists themselves, they take science and scientific epistemologies seriously. For secular apocalypticists, such sources stand largely on their own. Additionally, as I shall explore in chapter 5, these scientific epistemologies can often be combined with religious epistemologies as nonscientific laypeople seek additional information and assurance about the health and stability of global systems.

### **Agency**

As Cohn suggested by defining millennial movements as those which expect imminent, ultimate, collective, this-worldly, *miraculous* salvation (1970: 15), divine agency is an important aspect of traditional religious apocalypticism.<sup>2</sup> In such cosmologies, a supernatural agent is expected to wipe away the present sinful world, replacing it with a new harmonious world for elect believers. Secular environmental apocalypticists, by contrast, shift agency entirely to humans. Additionally, the flip side of this environmental apocalyptic assumption that human

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<sup>2</sup> Talmon (1968) also notes “the majority of millenarian movements are messianic. . . Salvation is brought about by a redeemer, who is a mediator between the human and the divine” (Talmon 1968: 351).

actions are bringing on the apocalypse is that they also see humans as the only beings capable of stopping it. Thus, humans are responsible for both causing, and (if they so chose), attempting to solve the environmental crisis.

Of course, whether or not humans will succeed in averting disaster is debated. Many radical environmentalists believe or have believed that a collapse is inevitable (Taylor 1994: 195-6). However, few environmentalists publicly express such sentiments, since they could work at cross-purposes with activist efforts which require the enthusiasm and participation of society at large.

As a result of their emphasis on human agency, rather than preparing for the end by praying or storing supplies, most environmentalists advocate a range of behavioral changes at the individual and societal level which they hope will prevent or forestall the impending collapse. Even radical environmentalists, probably the most apocalyptic major subgroup of environmentalists, chose to focus on preserving wilderness rather than to withdraw and await the end. Additionally, many who are not politically involved engage in “lifestyle activism,” which includes a range of pro-environmental behaviors performed the level of the individual. Activism is a central component of environmentalism, as well as in the apocalyptic discourse associated with it.

Throughout the history of environmental writing, even books that are apocalyptic have affirmed human agency through calls to action. Ehrlich’s *The Population Bomb* starts out with the infamously fatalistic words “The battle to feed all of humanity is over. In the 1970’s the world will undergo famines—hundreds of millions of people are going to starve to death in spite of any crash programs embarked upon now” (1968: xi). To all appearances, this is a typical apocalyptic view: nothing can be done to prevent the coming disaster. Yet he goes on, two

paragraphs later, to argue that “Our position requires that we take immediate action at home and promote effective action worldwide” (1968: xi). Specifically, “[t]he birthrate must be brought into balance with the death rate or mankind will breed itself into oblivion” (1968: xi).

As these quotations make clear, in order for the apocalypse—which he implies will entail the end of humanity—to be avoided, certain actions must be taken. Of course, there is no question that this must come about through human efforts, whether on the part of governments or individuals. One chapter in the book is devoted to exploring the problem (neatly summarized by the chapter subtitles: “Too Many People,” “Too Little Food,” and “A Dying Planet”), but the remainder of the book is devoted to describing how human actions can address the problem: “What Is Being Done,” “What Needs to Be Done,” and “What Can You Do?” (chapters 3 through 5). Thus, despite a great deal of controversy over the book’s apocalyptic predictions, the majority of it is actually devoted to suggesting ways that the “end” can be avoided.

Strategies like Ehrlich’s, which begin by documenting the crisis and proceed by describing how humans can solve it, are common in environmental literature. Indeed, the affirmation of human agency is so pervasive that I hardly need belabor it here; it will continue to be evident throughout the following sections. Additionally, it is a central characteristic not only of secular but also of much religious environmental apocalypticism, as chapter 5 will demonstrate.

### **Indeterminacy**

Scholarly definitions of apocalypticism have emphasized a sense of fatalism (Wocjik 1997) or inevitability (Bromley 1997) as pervading apocalyptic thinking. However, Barkun has rightly noted the importance of indeterminacy in environmental apocalypticism. As he notes, “by opening the possibility that The End might be averted by timely action, the change introduces a measure of indeterminacy [*sic*], as opposed to the fundamentalist emphasis on inevitability” (1983: 271). As he suggests, the main distinction between the two ways of looking at the future

is that biblical apocalypticists believe the apocalyptic end is coming because it has been foretold, while environmental apocalypticists believe that such an end is highly likely in light of current events and trajectories.

In the religious view, then, the future is predetermined, while in the environmentally apocalyptic view anything could happen, although certain scenarios are more likely. Barkun calls this a difference between inductive and deductive reasoning: “The religious argument tends to be deductive, correlating data with an accepted theory, while the secular argument is more often inductive, accumulating data in the hope that the data will disclose patterns which will provide hints for the construction of a theory” (1983: 271). The environmentally apocalyptic viewpoint is thus quite different from the religious. Summing up its belief in an indeterminate future, *The Limits to Growth* lead author Donella Meadows writes, “If you don’t change direction, you will end up where you are headed” (1999/2000: 111).

Despite the prevalence of belief in an indeterminate future, two arguments are made for the inevitability of apocalypse. The first is that the momentum of past actions is so great that it would be impossible at this late date to reverse the downward spiral toward collapse. For example, William Catton argued in his 1982 book *Overshoot: The Ecological Basis of Revolutionary Change* that the human population had *already* exceeded earth’s carrying capacity: “We are already living on an overloaded world. Our future will be a product of that fact; that fact is a product of our past” (1982: 17).

This argument has been common, particularly in radical environmental circles. However, even Catton left room for the possibility of avoiding disaster. Given difficulties of determining what earth’s carrying capacity is and where human populations stand in light of it, “Our best bet is to act as if we believed we have [*sic*] already overshoot. . . . If a crash should prove to be

avoidable after all, a global strategy of trying to moderate expected crash is the strategy most likely to avert it” (1982: 266). Thus, even an author who thought essential thresholds had already been surpassed acknowledged that such a future might be avoidable.

The second argument for the inevitability of apocalypse rests on a pessimistic moral anthropology. Such apocalypticists believe that humans *could* avert disaster, but that they will not do so because they lack the motivation to thwart future suffering or because certain humans see it as against their own interests. Thus, humans are physically capable of averting disaster but morally *incapable* of it. According to radical environmentalist James Barnes,

In a world of perfect social justice, we would see to it that food reserves were distributed equally. We’d place limitations on cultivation and foraging to protect ecosystems and species diversity. . . . We’d take care to ensure that people in currently less powerful parts of the globe minority populations and women didn’t suffer disproportionately. . . . We’d do everything we could to apportion suffering fairly. . . .

In reality, elites are demanding ever more brutal repression so they can maintain the current economic and political system. . . .

As usual, we can expect greed and chaos to turn a bad situation into sheer hell. . . . There are those who think that human-population collapse cannot happen. That’s wishful thinking. (1997: 3, 13)

For Barnes, collapse is inevitable not just because natural laws will regulate population, but because humans are so greedy and power hungry by nature that they will not act in time to avert it.

As the previous example suggests, understanding the writer’s moral anthropology often provides a key to their views on inevitability. In the reverse case, Meadows’ more sanguine views of human nature correlated with a stronger emphasis on an indeterminate future:

I’m not willing to believe that we can’t reclaim our democracy from the moneyed special interests. What’s to stop us, other than our own timidity? We don’t have to bring fourteen billion people into the world unless we choose to. . . . we could return half the planet to nature and create good, sufficient, joyful lives for ourselves from the other half. Why not? Really, why not? What a huge difference it makes in world view, in empowerment, in responsibility, in self-identity, in the qualities of imagination and courage we draw forth

from ourselves, if we think of the future as something not to be predicted, but to be chosen!” (1999/2000: 111)

Meadows’ more optimistic take on human nature does not mean that she thinks everything will be fine. Like Barnes and other environmental apocalypticists, Meadows acknowledges the imminent threat of apocalypse: “I happen to believe my computer program when it says that the End-Of-The-World-As-We-Know-It is not only a possibility, but a high probability. . . . I think we are headed for disaster” (1999/2000: 111). However, she argues repeatedly against perpetuating self-fulfilling prophecies that presume the impossibility of motivating humans to pursue a more sustainable future. Underlying this argument is a much more positive assumption about human nature: humans *can* change their course. If so inspired, they may *choose* to create a harmonious, healthful future.

Contrasting views of human nature are thus related to the perception of inevitability. However, it is important to note that an *inevitable* future is not the same as one that has been *predetermined* by someone or something. Secular environmental apocalypticists do not see a divine plan in history. Thus, the future they envision may look very bleak, but averting disaster remains a possibility. Together with its affirmation of human rather than divine agency, these beliefs work hand in hand to create a movement whose rhetoric and dynamics differ markedly from other movements in the history of apocalypticism, while also clearly containing many overlapping themes.

### **Mainstream Acceptance**

The majority of apocalyptic movements in history have been opposed to or dismissed by the dominant powers of the social systems in which they have been embedded. For example, the apocalyptic beliefs of Millerites, Ghost dancers, Jehovah’s Witnesses, or Seventh Day Adventists have not spread to mainstream audiences, although they have gained an enduring foothold

among each movement's adherents. Often, of course, this is because such movements see the dominant powers of the era as evil, and actively work against them, or withdraw, attempting to limit their intrusion as much as possible (cf. Wessinger 2000). However, it is not just the beliefs themselves that have failed to achieve widespread acceptance, but the entire belief systems, from their specific claims to the physics or metaphysics and epistemologies upon which they are based, which have failed to gain mainstream acceptance. By contrast, environmental apocalypticism has been received quite differently, although its history has not been straightforward.

When environmentally apocalyptic claims first gained the public's attention during the sixties and seventies, a great deal of debate ensued. Significantly, a common strategy of undermining or denying such claims, besides debating the facts themselves, was to argue that environmental apocalypticism was merely a form of misguided religious prophecy. In his article "Why Do We Hear Prophecies of Doom from Every Side," for example, cornucopian economist Julian Simon draws a lengthy comparison between environmental predictions and religious prophecy, both of which "differ from worldly thinking in their imperviousness to counterevidence" (1995: 20). Both exhorted behavior changes, lacked "cool thinking," thought that people should "suffer" for their sins, and saw the present age as a break with all history. Throughout the article, he emphasizes that environmentalists are not scientists, but "prophets," and that they are not issuing reasonable warnings, but "preaching." Rather than pointing to real threats, in Simon's depiction environmentalism was a form of psychopathology that was no more likely to be correct in its "prophecies" than been the many (failed) prophetic movements of the past.

Although Simon was a prominent critic of environmentalism, this strategy was not unique to him. Indeed, as Buell observes “by the end of the 1970s, environmentalists were regularly and extravagantly vilified as pathological crisis-mongers, Chicken Littles, apocalypse abusers, false prophets, joyless, puritanical doomsters, chic-apocalyptic primitives, sufferers from an Armageddon complex, and toxic terrorists” (2003: 34).

Clearly, associating environmentalists with religious apocalypticism was a move intended to undermine the credibility of their claims. Yet, alongside such claims, a number of events, conventions, and international documents were demonstrating a growing worldwide consensus on the seriousness and severity of environmental problems. In the United States, the celebration of the first Earth Day in 1970 and the formation of the Environmental Protection Agency in the same year confirmed environmentalism’s popularity as a social movement, as well as marked its increasing institutionalization (although much environmental work continues outside the realm of government). Internationally, the publication of *Our Common Future* in 1982 by the World Commission on Environment and Development, the United Nations Conference on Environment and Development in 1992, the World Summit on Sustainable Development in 2002, the formation of the Intergovernmental Panel on Climate change in 1988, and its assessment reports (published in 1990, 1995, 2001 and 2007) brought together thousands of governments, citizens and organizations to discuss environmental issues. Additionally, in 2007, climate change activist Al Gore and the Intergovernmental Panel on Climate Change (IPCC) were awarded the internationally-known Nobel Peace prize.

Though the apocalypticism in consensus driven documents can be muted, such is not always the case. For example, while *Our Common Future* promises that it is “not a prediction of ever increasing environmental decay, poverty, and hardship” (1987: 1), it does warn that “[t]here

are . . . environmental trends that threaten to radically alter the planet, that threaten the lives of many species upon it, including the human species” (1987: 2). Furthermore, the IPCC’s Fourth Assessment Report warns of increased morbidity and mortality, and the exposure of hundreds of millions of people to increased water stress, among other potential threats, if the global mean annual temperature increases five degrees (2007: 16).

Despite the efforts of Simon and others, in the last half century, mounting scientific evidence, dedicated activism, and sustained media attention have gradually led to increased acceptance at the popular level, such that approximately half to three quarters of United States citizens consider themselves environmentalists (Kempton 1995: ix). Additionally, by 2006, one study showed that up to 35% of Americans thought climate change would pose a threat *in their lifetimes*. That over a third saw climate change as an *imminent* threat—and imminence is a primary feature of apocalypticism—further suggests the mainstreaming of environmentally apocalyptic themes (Nisbet 2007: 456).

That apocalyptic beliefs are increasingly pervasive among the United States citizenry, and that apocalyptic, or near apocalyptic, claims can be found in internationally approved documents, demonstrates environmental apocalypticism’s increasingly mainstream acceptance. It thus contrasts sharply to the majority of apocalyptic movements in the history of religion, which have found themselves marginalized, ignored, or even persecuted by the mainstream.

### **On Averting Disaster**

Environmental apocalypticism’s focus on averting disaster is closely connected with its emphasis on human agency and indeterminacy, yet it also signals something more. For many religious apocalyptic groups, the end is something to anticipate happily, as it will be the time at which the faithful are rewarded and the evil are punished. Millennialism thus typically entails the very positive “belief in an imminent transition to a collective condition consisting of total well-

being (salvation)” (Wessinger 2000: 5). The case is quite the opposite among most environmental apocalypticists (although radical environmentalists provide an interesting “exception” to be explored below). In general, for environmental apocalypticists, the apocalypse is to be avoided at all costs. Because it is taken to be axiomatic, this presumption is rarely directly referenced. Yet, occasionally examples do pop up. For example, as an *Adbusters*<sup>3</sup> columnist advised, “if you’re one of those people who are resigned to the prospect of a climate-change apocalypse, here’s what you should do. 1. Shut up. 2. Get out of the way. As for the rest of you, you can join those people all over the world who have decided that we actually can and will steer this ship of Earth well clear of the shoals ahead” (Glavin 2006). This is a particularly vehement example of an assumption that typically goes without saying.

That the apocalypse is something to be averted is also evident in the way environmental problems are usually described as disrupting the balance of nature and detrimental to the health of humans and other species. Such perspectives are so ubiquitous that, already in 1971, Commoner reported that “horror stories of environmental destruction are familiar, even tiresome” (1971: 13). Additionally, it seems evident that the oft-repeated warning that the survival of the human species or all life is at stake implies that the apocalypse is something to be feared and avoided. This is the case particularly because the apocalypse itself is not seen to be redemptive. Indeed, for most environmental apocalypticists the apocalypse would be *evidence* of moral failure. By contrast, in most religious apocalyptic worldviews the apocalypse is *punishment* for it.

As this suggests, the concept of justice is different in the environmental apocalypse. While in the religious vision, the apocalypse will punish the wicked, the environmental apocalypse

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<sup>3</sup> *Adbusters* is a Vancouver, Canada based anti-consumerist magazine whose perspective is rooted in environmental concerns (“Adbusters” 2008).

stands to unjustly punish victim and perpetrator alike—or, even more unjustly, to punish victims even more severely than perpetrators (Barkun 1983: 272-3). As Barnes argues, “As always it is the weak—the truly poor, teeming in squalid shantytowns—who will suffer the most. The rich can afford to feed their children” (1997: 13). In partial corroboration, the *Millennium Ecosystem Assessment* finds that “the harmful effects of the degradation of ecosystem services . . . are being borne disproportionately by the poor, are contributing to growing inequities and disparities across groups of people, and are sometimes the principal factor causing poverty and social conflict” (2005: 2). The unjustness of the environmental apocalypse is an additional reason environmental apocalypticists averting disaster as a moral obligation. Those who believe are called upon to act, rather than to await divine action. As Giner and Tábara have noted, and as I shall explore further in chapter 5, such moralistic language is often combined with invocations to religious commitment.

Radical environmentalists are a partial, yet revealing, exception to this pattern. In contrast to most environmentalists, many of them looked forward to the collapse.<sup>4</sup> There are two reasons for this exceptional attitude toward the apocalypse, both of which are linked to the idea of “ecocentric apocalypse” to be explored below. First, for those radical environmentalists whose primary concern is biodiversity and wilderness, a collapse that brought an end to the human species or drastically reduced its numbers would be a positive event, because it would give wild nature a chance to recover and thrive without human population pressures or intervention. Beginning from the apocalyptic premise that “[w]e are in the final crisis of the unhappy human adventure,” Earth First! co-founder Dave Foreman suggests that the human species is a disease,

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<sup>4</sup> Quotations from Earth First!ers and other radical environmentalists are drawn from primary sources made available in Bron Taylor’s “Radical Environmentalism (Spring 2007)” course syllabus, available at [www.religionandnature.com/bron/courses.htm](http://www.religionandnature.com/bron/courses.htm) (accessed 15 March 2008). These sources and most of his articles, which are cited in this article, will appear at [www.brontaylor.com](http://www.brontaylor.com) by mid 2008.

which is ravaging the planet. Foreman sheds no tears over the realization that this disease “is just about to burn itself out,” because “Hopefully our collapse will spare most of the rest of the biosphere and the living planet will recover from its dreadful bout with humanpox with a minimal number of pockmarks to show for it” (1982: 17). Ultimately, the important point is not that humans survive, but that life continues. Articulating a self-consciously this-wordly cosmology, he concludes, “I’m not trying to win a place in heaven. I’m already there. I’m just trying to stop the humanpox which is destroying it. I’m going to die. That’s immaterial. But life, hopefully, will live on” (1982: 17).

This perspective was controversially supported by Earth First!er Christopher Manes, who argued that the AIDS epidemic could further radical environmental goals by reducing human populations and therefore preventing further ecological devastation. In his view, apocalypse without such a disease is dangerous: “a decline is inevitable. Through nuclear war or mass starvation due to desertification or some other environmental cataclysm, human overpopulation *will* succumb to ecological limits. But in such cases we would inherit a barren, ravaged world” (1987: 32). Thus, from the perspective of biodiversity preservation, a disease which drastically reduced human population would be a preferable apocalypse, and should therefore “be looked at not as a problem, but a necessary solution” (1987: 32). The argument provoked vehement public disapproval, but Manes did clarify that “None of this is intended to disregard or discount the suffering of AIDS victims” (1987: 32). His point was that, given that collapse was inevitable and that if it happened sooner more biodiversity would be left, from a biocentric perspective a disease like AIDS could be seen as having a positive side.

Second, some radical environmentalists look at the fundamental alteration of the world “as we know it” as positive because it would pave the way (if the metaphor can be excused) for more

authentic, harmonious, nature-friendly life-ways, as suggested by the Edward Abbey quotation in chapter 3. Disaster would thus be cataclysmic but beneficial in the long run. Thus, as Taylor notes, for many radical environmentalists, especially in what he calls the “Wilder” faction, “Ecocollapse may be the means Mother Earth will use in her self-defense—a way she can remove the human industrial cancer, and create the conditions people need to develop appropriate ways of living” (1991: 265).

What this points to, however, is not that some environmentalists want to avert disaster and others do not. Rather, it suggests that disaster can be defined in one of two ways, either ecocentrically or anthropocentrically. If mass human death and suffering is taken to constitute the apocalypse, then *that* is the crisis to be averted. If the irretrievable loss of species diversity and the “thwarting” of evolutionary processes constitute the disaster, then *that* is the crisis to be averted. Neither the anthropocentric nor the ecocentric viewpoint understands its version of disaster as something to anticipate gladly, but what would be disaster for one could be salvation for the other. It is this interesting divergence, unique to environmental apocalypticism, to which I will now turn.

### **Two Apocalypses: the Ecocentric-Anthropocentric Divide**

On the apocalyptic studies side, prior work on environmental apocalypticism has tended to assume that what constitutes the apocalypse for environmentalists has to do with fears about human survival, as it does with other forms of apocalypticism. However, as Taylor’s account of radical environmentalism and a broader review of the literature both suggest, there are really two apocalypses for environmentalists, which I label anthropocentric and ecocentric.<sup>5</sup> Briefly,

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<sup>5</sup> My divide somewhat parallels Taylor’s distinction between the post-schism Wilders and Holies factions of Earth First!, yet it is not identical. As he notes, the Wilders were primarily concerned about loss of biodiversity, which fits with my ecocentric apocalypse. Yet while Holies perceived the crisis to be related more broadly to (human) social issues, biodiversity was still central for them: “one has to examine how threats to biodiversity are related to other

*anthropocentrism* refers to human-centered value systems, while *ecocentrism* places ecological systems at the center of value (Katz 2000: xiii). Following this convention, ecocentric apocalypticism is apocalypticism which considers the catastrophic reduction of species diversity to be an apocalypse, while anthropocentric environmental apocalypticism is more concerned about the effects of ecosystem degradation and other environmental problems on *human* health, wellbeing and survival.

The majority of ethical systems in Western philosophy are anthropocentric. Ecocentrism,<sup>6</sup> by contrast, is a relatively new intellectual development. Although he did not use the word himself, it is often traced to Aldo Leopold's "land ethic," described in his 1949 book *A Sand County Almanac*. In it, he distinguished the view that humans, as the rightful masters of nature, are the only species whose welfare matters ethically, from the idea that nature has intrinsic worth and right to its own integrity, apart from human valuation. His ecocentric "land ethic," therefore "changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members and also respect for the community as such" (1949: 204).

An enduring point of contention in the environmental movement has been along this ecocentric-anthropocentric axis. Whereas much of the conservation-oriented stream of environmentalism has been ecocentric, focusing on preservation of species and wilderness, *Silent Spring* inaugurated an era of increased concern about the threat to human welfare presented by environmental problems. As James Lovelock notes, "not surprisingly, Rachel Carson's message was soon translated, at the dinner tables of the affluent suburbs and universities, from a threat to

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social issues" (Taylor 1991: 263). Ultimately, as he notes, both groups were "animated by a deeply spiritual biocentrism" (1991: 265). Yet by anthropocentric apocalypse I mean something which is more concerned with human welfare and survival, without predicating this concern on its importance for wilderness.

<sup>6</sup> *Ecocentrism* considers to ecosystems, including their non-living components, as the proper locus of moral concern. A close cousin is *biocentrism*, which considers life to be the central moral concern.

birds into a threat to people” (2006: 111-12). Of course, Carson herself maintained a deep appreciation and reverence for nature (McCay 2005: 154), yet her focus on the dangers to human health was arguably one of the reasons her book gained so much attention. Indeed, “Carson’s concept of the ecology of the human body was a major departure in our thinking about the relationship between humans and the natural environment. It had enormous consequences for our understanding of human health as well as our attitudes toward environmental risk. *Silent Spring* proved that our bodies are not boundaries” (Lear 2002: xvi). Rather than solely evoking a moral, ethical or utilitarian argument for nature preservation, Carson thus found a more compelling reason to respect it: if its delicate balance were upset, it could have a disastrous, or even catastrophic, effect on human well-being and survival. Thus, the first widely read environmental apocalyptic text framed the apocalypse in largely anthropocentric terms.

Since that time the two strategies have existed in tension. Clearly hoping to distinguish himself from the Romantic tradition of wilderness preservation, Ehrlich claims to have “shed no tears here for the passenger pigeons, now extinct, or the California condors, soon to join them. . . . I haven’t written about them, or of the pleasantness, beauty, indeed glory of many natural areas. Instead I have concentrated on things that seem to bear most directly on man” (1968: 65). However, his demonstrated lack of concern is part of a conscious strategy, adopted for two reasons: “The first, of course, is that nothing ‘undeveloped’ can stand long in the face of the population explosion. The second is that most Americans clearly don’t give a damn” (1968: 66)<sup>7</sup>. Thus despite his obvious affinity with an ecocentric perspective, Ehrlich intentionally employs anthropocentric rhetoric because he perceives it to be more effective. Ehrlich also demonstrates

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<sup>7</sup> Ehrlich’s deep ecocentrism is further demonstrated later in the passage, as he laments that “Our population consists of two groups; a comparatively small one dedicated to the preservation of beauty and wildlife, and a vastly larger one dedicated to the destruction of both (or at least apathetic toward it). I am assuming that the first group is with me and that the second cannot be moved to action by an appeal to beauty, or a plea for mercy for what may well be our only living companions in a vast universe” (1968: 66).

how the two apocalypses can be neatly joined. For him, the only way to avert the ecocentric apocalypse is to alert people to the anthropocentric apocalypse that will likely coincide with it.

For many radical environmentalists, however, one cannot be so easily substituted for the other. For those like Foreman, Manes, and Barnes, the preservation of wilderness and species diversity trumps human health or social justice concerns. As Foreman writes, his view “leans far more toward monkeywrenching<sup>8</sup> in the dark [in order to preserve wilderness] than to the noble Gandhian direct action or political lobbying” (1983: 17). For Manes, “Part of the problem is our insufficient definition of the term ‘overpopulation.’ Demographic definitions are hopelessly anthropocentric, usually suggesting a disfunction [*sic*] in the ability of humans to use resources for higher living standards. We need a biocentric definition. I’ll venture one now by saying that any human population is overpopulated when it disrupts the cycles of nature so as to threaten to permanently reduce global diversity” (1986: 18). And Barnes adds “[t]o biocentrists, the effects of the human boom and bust on other species are of equal concern. As humans explore and vacuum every corner of the globe for sustenance, the land and sea grow less able to support other creatures that share similar needs to our own” (1997: 13).

Fears regarding the ecocentric apocalypse can also be found in circles beyond radical environmentalism, however. For example, renowned scientist Edward O. Wilson has argued repeatedly about the extent and severity of the biodiversity crisis. Surveying its causes, he notes that “From prehistory to the present time, the mindless horsemen of the environmental apocalypse have been overkill, habitat destruction, introduction of animals . . . and diseases carried by these exotic animals” (1992: 253). In light of the importance of this biodiversity crisis,

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<sup>8</sup> Monkeywrenching is a term popularized by Edward Abbey’s novel *The Monkeywrench Gang*, and refers in this context to sabotage for the purposes of defending ecosystems. See also Foreman’s *Ecodefense: A Field Guide to Monkeywrenching* (Abzug 1993).

he argues that environmental problems should be reclassified into just two categories, ecosystem degradation and the loss of biological diversity (1992: 281). Additionally, he argues that the latter actually constitutes more of an apocalypse than the former, because while “the physical environment can be guided back and held rock-steady in a state close to optimum for human welfare,” the loss of biodiversity “cannot be redeemed” (1992: 282).

Despite his deep concern over the threat of an ecocentric apocalypse, Wilson most frequently employs anthropocentric justifications for the preservation of biodiversity based on its economic, esthetic and utilitarian value.<sup>9</sup> Additionally, elsewhere he has suggested that an ecocentric apocalypse could precipitate an anthropocentric apocalypse: “Unless humanity can move determinedly in that direction [toward the goal of preserving biodiversity], all of the efforts now going into in situ conservation will eventually lead nowhere, and *our descendants’ future* will be at risk” (Ehrlich and Wilson 1991: 761, emphasis mine).

This rhetorical conflation of ecocentric and anthropocentric apocalypses should not be taken to suggest that Wilson sees the two as identical. Rather, the bulk of Wilson’s work suggests that biodiversity, and thus the ecocentric apocalypse, is his primary concern. However, like Ehrlich, he seems to recognize the effectiveness of using anthropocentric apocalyptic rhetoric in order to further substantiate the importance of averting the ecocentric apocalypse.

On the anthropocentric side, fears regarding the threat to *human* survival are ubiquitous in environmentally apocalyptic discourse, even though it is not always clear exactly in what way or to what extent this extinction would occur. In a typical example, Barbara Ward and René Dubos argue that despite many uncertainties in the environmental situation, “[w]hat *is* certain is that our sudden, vast accelerations . . . have set technological man on a course which could alter

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<sup>9</sup> He also argues that humans have a moral obligation to preserve biodiversity (Ehrlich 1991: 760; Wilson, 1984: 119).

dangerously and perhaps irreversibly, the natural systems of his planet upon which his biological survival depends” (1972 : 11). In *It’s a Matter of Survival*, Anita Gordon and David Suzuki refer to “ecological disasters that could affect our ability to survive” (1991: 1). And Fred Pearce opens his book *With Speed and Violence: Why Scientists Fear Tipping Points in Climate Change* with the apocalyptic warning that “we are interfering with the fundamental processes that make Earth habitable. It is our own survival that is now at stake, not that of a cuddly animal or a natural habitat” (2007: xxiii). Like religious forms of apocalypticism, then, anthropocentric environmental apocalypticism is concerned principally with the fate of human beings.

While it is clear that some scientists and radical environmentalists are strongly influenced by science are deeply concerned about an ecocentric apocalypse, for most people the two apocalypses are blurred. This happens for two reasons: first, most environmentalists perceive risks to human and natural systems to be interrelated, and most writers also portray them this way. Second, as I have shown above, even ecocentric apocalypticists mix the two in their rhetoric. Thus especially among lay environmental apocalypticists, the ecocentric and anthropocentric apocalypses tend to be seen as dual aspects of one catastrophic picture.<sup>10</sup>

### **Conclusion**

In this chapter I have discussed what I take to be the central features of environmental apocalypticism: its physical basis, its epistemological basis, and its views on agency, determinacy, averting disaster and mainstream acceptance. Additionally, I have discussed two

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<sup>10</sup> For example, Leiserowitz reports that climate change alarmists “provided extreme images of catastrophic climate change, such as: “Bad ... bad ... bad ... like after nuclear war ... no vegetation,” “Heat waves, it’s gonna kill the world,” “Death of the planet” (2005: 1440). Interestingly, while the idea that human survival is at risk is commonly referred to, the mechanism by which this would occur is rarely mentioned. One possibility, alluded to in Leiserowitz’s quotation above, is that originally the idea of human extinction came from the threat of nuclear apocalypse, and since the two apocalypticisms arose around the same time people started associating the risks of the one with the other. Over time this association stuck with environmental risks, even though it didn’t really fit, and eventually became a catchphrase that people repeat without evaluating.

apocalypses, an ecocentric and an anthropocentric one, which intermingle and sometimes conflict as environmental apocalypticists assess the crisis and what should be done in light of it. None of these features is unique in its own right, yet taken together the combination constitutes a radically new form of apocalypticism, one that has continuities with past forms, yet that also has marked divergences. Most prominently, perhaps, by suggesting that the moral universe does not center on humans, it turns the very idea of apocalypticism on its head. In an ecocentric worldview, not only would the end of humans not be the end of the world, but the end of them might constitute an apocalypse averted.

Thus, while environmental apocalypticism clearly reprises themes common to other apocalyptic forms in its expectation of imminent collapse; is also unique in having a much different attitude toward the apocalypse and the moral universe that it evokes. It is for this reason, as well as its growing urgency, international prominence, and captivation of the popular imagination, that I argue that environmental apocalypticism must be examined in its own right.

Finally, what its distinctive character suggests is not only that environmental apocalypticism has loosed itself from the moorings of nuclear apocalypticism as it has continued to develop into the twenty-first century, but also that it has been and will continue to be a persistent and innovative source of apocalyptic production. Already well into its fifth decade of existence, it has witnessed ebbs and flows, myriad solutions, exhortations, and expressions of despair, yet the basic theme persists: human and more-than-human survival are gravely threatened by human actions. How can the planet be saved?

## CHAPTER 5 ENVIRONMENTAL APOCALYPTICISM AND RELIGION: CONTRIBUTIONS AND COMPLICATIONS

Scientific evidence of various forms of environmental deterioration forms the core of environmental apocalypticism. Such evidence has fed a broad stream of secular environmental apocalypticism, in which individuals, pundits, politicians, scientists and non-scientists discuss, debate, and assess its claims. However, in addition to spurring secular responses, environmental apocalypticism has also spurred religious responses. In general, these responses have taken two forms. First, awareness of the severity of the environmental crisis has led many to argue that a “spiritual” or “religious” transformation is the only means of averting it. What they mean by this transformation varies, yet the use of such language is an important and persistent feature of the environmentally apocalyptic landscape. Second, awareness of the crisis has also been incorporated into the eschatologies of a number of nature-oriented religions. It would not be new, of course, to argue that an increasing number of religions and new religious movements are responding to the environmental crisis. Rather, having explored secular environmental apocalypticism in chapter 4, what I am interested in here is to explore what is *different* about the way people are responding to it when invoking religious terminologies, epistemologies and beliefs. How do they both contribute to and complicate the typology of secular environmental apocalypticism developed in the last chapter? Are such forms of religious apocalypticism more similar to traditional forms of apocalypticism, or have they been sufficiently influenced by environmental concerns to be considered a distinctive stream in the larger current of environmental apocalypticism?

It is important to note at the outset that religious environmental apocalypticism is not in practice always distinct from the secular forms reviewed in the prior section. Many environmentalists have been influenced by religious perspectives, especially the “non-

traditional” nature friendly forms that became increasingly of interest during the sixties and seventies. Such influences may or may not be clearly evident in their writings. Additionally, some forms of nature-related spirituality (such as Taylor’s post-supernaturalistic spiritualities of interconnection to be described below) resemble secular forms closely, and could easily fit in the secular typology were it not for a characteristics such as the belief in nature as sacred and deserving of awe and reverence. Such beliefs may likewise be more ubiquitous than public writings suggest. By separating secular and religious forms I do not mean to imply that a vast chasm lies between the two, as there is certainly a great deal of cross-over, much of it probably behind the scenes. Rather, I chose to review the two forms separately because it is important to note environmental apocalypticism’s firm base of secular characteristics (unlike other religious forms), before exploring the unique ways in which religion continues to play a role.

### **Environmentalism and Religions**

In order to explore the apocalyptic eschatology of nature religiosity and how it reacts to and interprets environmental decline, it will first be necessary to review more broadly the ways in which environmentalism has spurred religious production. A number of scholars have explored this area, but most useful for the purposes of this study is Taylor’s (2004) identification of three forms of nature-related religious production: green religions (type 1), nature-as-sacred religions (type 2), and post-supernaturalistic “spiritualities of connection” (type 3). *Green religions* are world religions which have, since the 1960s and 70s, increasingly nurtured environmental concerns (2004: 992). They typically work from within an existing set of religious doctrines and/or institutional structures, though their eco-inspired interpretations are clearly innovative. *Nature-as-sacred* religions “share a belief that nature is sacred (in some way); and this conviction appears to be tethered to ethical concern about the environmental decline” (2004: 995). This type includes paganism, many indigenous religions, some New Religious movements,

some New Age religion, and various environmental thinkers and groups (2004: 996). *Post-supernaturalistic “spiritualities of connection”* “express awe and reverence toward the ‘miracle’ of life or wider universe, while disavowing supernaturalism of any kind” (2004: 1001).

The lines between these three religious types are blurry, but all three, he argues, have been driven by two critical factors—environmental degradation and evolutionary science—and thus contain apocalyptic themes. As he explains it:

Environmental degradation has become increasingly obvious and alarming, and this is increasingly grafted into existing religions (green religion type 1), and mixed in with revitalized and new forms of nature-as-sacred religions (green religion type 2). This represents a significant innovation in the history of religions, where apocalyptic expectation arises not from the fear of angry divinities or incomprehensible natural disasters but from environmental science. This environmental science is, of course, built upon a Darwinian foundation which, on the one hand, provides a way to understand the loss that comes with anthropogenic extinctions, while on the other hand, this science erodes the supernaturalistic beliefs that are the ground of most religions (including green religion type 1), and most nature-as-sacred religions (green religion type 2), which often retain some supernaturalism.

Because environmental science “*makes less plausible* the metaphysical foundations of the first two types” (2004: 1001), Taylor speculates that supernaturalistic religions will probably persist, but “it may be that the third type, now only nascent . . . will inherit much of the religious future” (2004: 1002).

Like environmentalism at large, then, Taylor points out that the majority of these environmentally influenced religions hold apocalyptic or near-apocalyptic views in their awareness and concern of the environmental crisis. Yet, as I aim to suggest, many also view the potential for collapse as an opportunity for spiritual development, so it is common to find more optimistic pronouncements alongside apocalyptic ones. As philosopher and scholar of the religious dimensions of the environmental crisis Roger Gottlieb writes, “If the perils of our time are unprecedented, so are our opportunities. The messages of compassion and love, humility and the pursuit of justice, which animate world religion are needed now as never before. If we do not

heed those calls, things will go from bad to much, much worse” (2003: 20). As Gottlieb’s quotation suggests, ideals of spiritual progress and potential benefits of averting the crisis can often be found in close juxtaposition with catastrophic fears. Thus, while some religious environmental apocalypticists see an apocalypse as inevitable, many also view it as indeterminate. In such a view, humans and their spiritual development could and should play a pivotal role in averting the apocalypse.

### **Environmental Apocalypse as a Driver of Religious Discourse**

A number of respondents to the environmental crisis have argued that the environmental crisis is so severe that it calls for a systematic change akin to a religious conversion. In this view, the adoption of a more nature-friendly attitude is seen as a potentially mitigating force against the destructive practices which have characterized Western civilization (and religions) throughout their history. It is often thus tied to historian Lynn White’s well-known argument that religion is a decisive factor in environmental behavior.<sup>1</sup> Re-learning to sacralize nature, these authors argue, will cause a profound behavioral shift which will usher humans into a more ecologically sustainable era. Indeed, it is perhaps only through such a profound conversion that humans will be able to make the changes necessary to avert disaster. Rather than invoking a specific set of practices, type of community structure, or doctrine however, many of these authors speak of a religious or spiritual conversion as a deep, affective shift in worldview, which may or may not accompany specific metaphysical beliefs and/or religious practices. It thus appears less important that a particular religion provide a certain cosmology than that it encourage earth-friendly behavior.

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<sup>1</sup> In his well known “Historical Roots of Our Ecologic Crisis” (1967), Lynn White argued provocatively that the ideas about humans and nature entailed in Christianity were largely to blame for the nature-exploiting attitude which underlay the environmental crisis.

Drawing heavily on the *Limits to Growth*, William Ophuls argues in *Ecology and the Politics of Scarcity* that liberal democracy and scientific objectivity are both anathema to ecological sustainability. To begin with, ecological collapse is imminent. According to him, “time is short. . . . failure to act soon and effectively could lead us into the apocalyptic collapse—wars, plague, and famine—predicted by . . . Thomas Malthus” (1977: 2). Democracy cannot be relied on to solve these problems because “[u]nder conditions of ecological scarcity the individual, possessing an inalienable right to pursue happiness as he defines it and exercising his liberty in a basically laissez-faire system, will inevitably produce the ruin of the commons” (1977: 152). Instead, his solution is a system of states characterized by communalism (in contrast to individualism), authority (in contrast to liberty), and aristocratic rule by those with the most wisdom and competence. Interestingly, however, he also argues that religion will be of fundamental importance in this new steady state society:

the crisis of ecological scarcity can be viewed as primarily a moral crisis in which the ugliness and destruction outside us in our environment simply mirror the spiritual wasteland within; the sickness of the earth reflects the sickness in the soul of modern industrial man. . . . Thus the steady-state society, like virtually all other human civilizations except modern industrialism, will almost certainly have a religious basis—whether it is Aristotelean political and civil excellence, Christian virtue, Confucian rectitude, Buddhist compassion, Amerindian love for the land, or something similar, old or new. (1977: 232)

As this quotation makes clear, for Ophuls it matters less which religion one selects than that the religion one selects heals “the spiritual wasteland within.” The outer crisis is fundamentally a manifestation of an inner crisis; thus it is spiritual healing that is needed to get at the root of the problem.

However, Ophuls’ use of the word “religion,” is more complicated than it appears, and is at the same time revealing of the ways in which “religion” is often used in environmentally apocalyptic discourse by individuals who otherwise appear to uphold secular worldviews. Ultimately what he means by a return to religion is a return to a set of *values*. First, he argues

that in modern times there has been a strong aversion to “ultimate values,” perpetrated both by the scientific quest for objectivity and modern liberal democracy’s claim that values should be a matter of personal choice. Second, however, he notes that such apparent objectivity is actually deceptive, because while claiming to be value-free themselves, they are actually value laden: “‘science’ and ‘democracy’ are themselves high-level values. . . . we have had a value-based civic religion all along. We have simply never acknowledged it as such” (1977: 237). Third, the implicit values of science and democracy have actually encouraged and perpetuated ecologically destructive behavior. Thus, fourth, in order to solve this problem, society must return to an explicit embrace of values: “however difficult and controversial the task, we have no choice but to search for some ultimate values by which to construct a post-modern civilization” (237). Finally, the specific content of these values must derive directly from the prospect of environmental apocalypse: “the point has been reached where such a vicious circle can no longer continue without serious consequences for humankind. The earth is teaching us a moral lesson: the individual virtues that have always been necessary for ethical and spiritual reasons have now become imperative for practical ones” (1977: 238).

Thus, when Ophuls argues that humans must return to religion, he specifically means values that are ecologically beneficent. Religion thus becomes emptied of specific metaphysical content, functioning rather as a container of ultimate values which will guide behavior in specific directions. Ophuls was not the first to make such an argument, yet his argument is worth examining because it is representative of a major strand in the discourse on religion and the environmental apocalypse.<sup>2</sup>

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<sup>2</sup> Of course, many (e.g. Gary Snyder, David Abram, Thomas Berry) have argued that *specific* religious beliefs, content or practices are necessary in light of the crisis. While important, I have chosen not to review the entire spectrum of such accounts here. While not exhaustive, the next section will look more closely at more explicitly apocalyptic religious beliefs associated with specific religion.

Environmental apocalypticism and discourse about religion also converge in Al Gore's *Earth in the Balance: Ecology and the Human Spirit*. He begins by arguing that the apocalypse is nigh: "complacency has allowed many kinds of difficult problems to breed and grow, but now, facing a rapidly deteriorating global environment, it threatens absolute disaster" (1992: 14). Like Ophuls, he then devotes a significant portion of the book to substantiating the existence of the crisis and examining its causes. Also like Ophuls, he turns to religion when seeking for solutions:

I have . . . come to believe that the world's ecological balance depends on more than just our ability to restore a balance between civilization's ravenous appetite for resources and the fragile equilibrium of the earth's environment; it depends on more, even, than our ability to restore a balance between ourselves as individuals and the civilization we aspire to create and sustain. . . . The more deeply I search for the roots of the global environmental crisis, the more I am convinced that it is an outer manifestation of an inner crisis that is, for lack of a better word, spiritual. . . . what other word describes the collection of values and assumptions that determine our basic understanding of how we fit into the universe? (1992: 12)

He then devotes a full chapter to "environmentalism of the spirit," which includes a detailed look at the relationship between religions and environmental behavior, arguing that "in order to change, we have to address some fundamental questions about our purpose in life, our capacity to direct the powerful inner forces that have created this crisis, and who we are. . . . these questions are not for the mind or the body but the spirit" (1992: 238-9). His own view is shaped by his Baptist upbringing, yet he argues that a variety of religious responses, even those based in scientific worldviews can help avert the crisis: "if we understand our own connection to the earth—all the earth—we might recognize the danger of destroying so many living species and disrupting the climate balance" (1992: 264). Gore's definition of "spiritual" is revealing: it does not entail specific metaphysical content, but rather "values," "purpose" and an "understanding of how we fit into the universe." It seems then that, as for Ophuls, for Gore the perception of impending apocalypse impels the adoption of religion conceived primarily for its ecological

function in redressing the crisis. Religion and apocalypse unite, but again it is apocalypse which seems to take precedence.

More recently, Lovelock has taken a strongly apocalyptic turn in his book *The Revenge of Gaia: Earth's Climate Crisis and the Fate of Humanity*. Lovelock is perhaps best known for his and Lynn Margulis' Gaia Hypothesis, which views the Earth as a self-regulating system whose goal is to maintain surface conditions favorable for life (2006: 162). While many have interpreted this theory as suggesting Gaia is a sentient deity, Lovelock himself has been careful to maintain distance from such a view: "You will notice that I am continuing to use the metaphor of 'the living Earth' for Gaia; but do not assume that I am thinking of the Earth as alive in a sentient way" (2006: 16). Rather, Lovelock views Gaia as a metaphor with heuristic value.

When examining his conception more closely, however, it seems that he may also see it as one with religious (or equivalent to religious) value: "I am a scientist and think in terms of probabilities not certainties and so I am an agnostic. But there is a deep need in all of us for trust in something larger than ourselves, and I put my trust in Gaia" (2006: 148). For him, such belief is not "religious," yet he frequently makes comparisons between the role that religion has played in the past and what is needed now, in light of the crisis:

We have to use the crude tool of metaphor to translate conscious ideas into unconscious understanding. Just as the metaphor, a living Earth, used to explain Gaia, was wrongly rejected by reductionist scientists, so it may be wrong of them also to reject the metaphors and fables of the sacred texts. Crude they may be, but they serve to ignite an intuitive understanding of God and creation that cannot be falsified by rational argument. (2006: 139)

While going by different names, then, metaphor and religious belief seem to occupy an overlapping space and have similarly essential functions. Additionally, like Ophuls' claim that a shift to religion has become practically imperative, for Lovelock the crisis may indeed force a religious shift: "I suspect the changes soon to come will force the pace, and just as civilization

ultimately benefited in the earlier dark ages from the example of those with faith in God, so we might benefit from those brave deep ecologists with trust in Gaia” (2006: 154). Thus, while he advocates this-worldly solutions such as a turn toward nuclear energy, like Ophuls and Gore he also emphasizes the importance of a religious (or quasi-religious “trust in something larger than ourselves” plays) shift in light of the crisis.

As these examples reveal, it is not just that environmentalism has inspired religions to turn green and individuals to seek nature-friendly religions, but that it is the prospect of apocalypse which is driving much of this religious discourse and innovation. For the authors reviewed here, the threat of apocalypse impels, for survival's sake, a return to a worldview which in some way approaches or approximates a religious or spiritual understanding. This discourse on religion, moreover, appears to be shaped more strongly by concern over “ecological realities” (however these are conceived) than by concern over deities, metaphysical or ontological truths, or specific ritual practices. Regardless of what theological moves these authors may be making in framing the return to values and meaning as “religious” is not of concern here; rather, the important point is that from the insider’s perspective the prospect of environmental apocalypse requires “religion,” or something like religion. Thus, while seemingly scientific in its origins and secular in its elaboration, environmental apocalypticism is actually a major driver of religious discourse.

### **Complicating Environmental Apocalypticism: Religious Responses**

In the cases examined above, the authors have accepted (to all appearances) cosmogonies and cosmologies which are compatible with—if not necessarily identical to—what Taylor described as “post-supernaturalistic” explanations for the form and function of the universe and natural processes. While perhaps believing in a divinity, for example, none appeared to believe in divine intervention. Indeed, thus far I have argued that such a perspective is in fact central to environmental apocalypticism. Specifically, affirmation of human agency would be complicated

by any expectation of divine intervention (either retributive or salvific), reliance on prophecy would complicate its emphasis on an indeterminate future, and the claim that environmental apocalypticism is unique in its reliance on scientific epistemologies could be weakened by the acceptance of non-compatible epistemologies. Yet, there is evidence that people who are as deeply and apocalyptically concerned about the environmental crisis as secular environmental apocalypticists are innovating along just such lines. How then does such religious apocalypticism both contribute to and complicate the picture of environmental apocalypticism portrayed thus far? In exploring these innovations I aim to further suggest some of the ways in which the prospect of environmental apocalypse has been elaborated in United States culture, as well as to reflect on the implication of such responses for environmental apocalypticism at large.

Although evidence of environmental decline has caught the attention of a variety of apocalypticists,<sup>3</sup> the examples I have selected here all come from the category identified above as nature-as-sacred religions, including Neopagan, Wiccan and New Age sources.<sup>4</sup> I have done so because such religions have been deeply affected by environmental concerns and because they demonstrate apocalyptic themes. Graham Harvey notes, for example, that “Many Pagans believe that if Earth were understood to be humanity’s permanent home . . . and embodiment our eternal state [*sic*], this should provide a solid foundation for a more respectful and humble participation in the processes of being than is currently typical of humanity” (2005: 1249). Additionally,

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<sup>3</sup> As noted in chapter 4, Boyer notes that the biblical apocalypticists he studied paid attention to evidence of environmental decline (1992: 331). Additionally, at a seminar I attended on “Bible Prophecy Made Simple,” held at a Seventh-Day Adventist church, the speaker quoted from the *Millennium Ecosystem Assessment* to support his case that the prophesied end-times were near. (Bill Waters, “Our Day in the Light of Bible Prophecy,” Bible Prophecy Made Simple, Seventh-Day Adventist Church, Gainesville, Florida, 6 October 2007). More information can be found at the speaker’s website, <http://www.bibleprophecymadesimple.com/home.php> (accessed 7 March 2008).

<sup>4</sup> Green religions have certainly been influenced by environmentally apocalyptic themes, but the literature is so broad and diverse that I chose not to focus on them here. In the green Christian sources I reviewed it appeared that in some cases extant theological doctrines were actually mitigating apocalyptic beliefs (for example, by providing comfort). However, such impressions are mixed. This is an area deserving of future exploration.

according to scholar of American religions Catharine Albanese, “the New Age social ethic has been an environmental ethic” (1999: 364 in Pike 2004: 157). New Age and Neopaganism scholar Sarah Pike adds, “In their own homes as well as at festivals, many New Agers and Neopagans put in practice their environmentalist vision of the future. In a broad sense the goal is ‘planetary consciousness’ shared by a community in harmony with the natural world” (2004: 155). In centering their concern around the environment, additionally, Neopagans and New Agers “turn outward as well as inward; they care for the well-being of their local communities and families as well as the health of the planet” (Pike 2004: 157). Thus activism for these groups may include spiritual practices as well as this-worldly actions.

While not all Wiccans, Neopagans and New Agers are apocalyptic, apocalypticism has been an important stream in all three religions. During field research among Wiccans in the southeastern United States, Shawn Arthur reports meeting “dozens of Wiccans who professed their apocalyptic millenarian beliefs to anyone who expressed interest, yet many others only quietly agreed with them without any further elaboration” (2008). Such apocalypticism, additionally, is closely related to their environmental concerns: “The most fundamental aspect of Wiccan apocalypticism, as it was explained to me . . . was the widespread belief that the Earth’s life-supporting capabilities are in critical condition due to human mistreatment of the Earth and its ecosystems” (2008). Additionally, Pike adds that “[m]any Neopagans also believe that the [ecologically and socially] utopian society they envision will only be possible after a cataclysm” (Pike 2004: 148).

Apocalyptic currents have been widely noted in New Age religion (Clements 2004 ; Lucas 1997; Melton 2000; Pike 2004; Sitler 2006; Wessinger 2000: 332). While it has other tributaries, Clements notes, for example, the importance of environmental disaster: “[a]mong twentieth-

century occurrences that many [New Age adherents] believe to be indicators of the imminence of the Hopi apocalypse are . . . an array of ecological problems created by technology and human carelessness” (2004: 646). Environmental decline and the desire to shift to more ecologically healthy life-ways also play a significant role in some New Age visions of the future: “[i]f the apocalypse is necessary, and many New Agers believe it is, then humans should prepare to live differently. . . . [According to New Age prophet Sun Bear] People will learn new ways of existing more harmoniously on the planet” (Pike 2004: 148). Finally, Pike concludes, “[w]hatever [New Agers and Neopagans] think about the apocalypse, both religions advocate new ways of living on the planet and think they have the best models for a viable future” (Pike 2004: 149). Thus concern over the environment and the prospective of apocalypse are important streams in Wicca, Neopaganism and New Age.

Hints about the importance of apocalypticism to these nature-as-sacred religions are ample, but fieldwork-based research on the subject is sparse. In light of this lacuna, I have chosen to work more closely with and draw inferences from several primary sources, as well as from the scholarly sources available. Additionally, rather than analyzing the apocalypticism found in each of these religions in its own right, my point here is to examine the ways in which this apocalypticism both converges with and departs from the typology of secular environmental apocalypticism developed in the last chapter. Accordingly, I have identified three principle points of divergence: the use of ritual and non-material practices as a means of attempting to avert the disaster, the incorporation of a number of non-scientific epistemologies, and the belief in divine agency.

Finally, Pike has described New Age religions and Neopaganism as “fluid networks of individuals, organizations, books, and Web sites” (2004: ix). Furthermore, she notes that these

networks “have been difficult to study . . . because they do not have founding texts or leaders but rather are highly decentralized, antiauthoritarian, and personalized” (ibid). In recognition of this difficulty, my portrayal does not claim or attempt to represent the full diversity of viewpoints. Rather, I seek to examine how the salient features of this religious environmental apocalypticism contrast to secular environmental apocalypticism.

### **Spiritual Activism: Ritual, Consciousness, Visualization**

In addition to more this-worldly forms of activism, New Agers, Neopagans, Wiccans and other practitioners of nature-as-sacred religions also advocate a number of spiritual practices as a means of averting disaster. I call such practices “spiritual activism,” because practitioners believe it to have real, practical effects in changing the world for the better. Indeed, while not working on the material level, it is often considered equally if not more efficacious than this-worldly efforts. The ubiquity of ritual, visualization and prayer directed toward environmental healing and restitution demonstrates the centrality of environmental concerns to these religions, as well as their strong commitment to averting catastrophe.

Many with Neopagans affinities affirm the importance of ritual in both correcting the human relationship with the environment and realizing real-world changes. For example, a group of radical environmentalists known as the Donga Tribe used a number of ritual and ceremonial practices as part of a “political paganism” which connected a belief in the earth as sacred to the protest of a motorway through an ecologically significant area of Britain. In their protests, which lasted nearly a year, “[m]agic reality, myth-weaving and sympathetic magic melded into direct action” (Plows 2005: 505). Additionally, the British Neopagan group known as the Dragon Environmental Network united both spiritual and regular activism in their efforts to preserve a local forest. As a practitioner recounts, “Dragon’s practical work began with woodland conservation, but within months we became involved in the campaign to save Oxleas Wood. . . .

Dragon initially kept our magical work secret, but allowed it to become public knowledge once our practical worth was proved” (Harris 2005: 506). Part of the group’s aim, additionally, was to “[d]evelop the principles and practice of magical and Spiritual action for the environment” (Harris 2005: 506) which would function alongside and in concert with this-worldly forms of activism.

Pike also describes a ritual conducted by a group of Neopagans and environmentalists in Northern California fighting a timber harvest plan (2004: 159). Such ritual practices are seen as complementary to rather than replacements for this-worldly efforts. Additionally, Arthur finds that many Wiccans engage in ritual specifically in order to mitigate the environmental crisis: “many Wiccans also claimed that an ecologically minded lifestyle in conjunction with Gaian-oriented religious practices could actually mitigate or forestall the impending destruction of the natural world by alleviating some of the most pressing problems” (2008). While apocalyptic fears of ecological collapse also often led to actions such as garbage collecting, recycling, and composting, “rituals and ecomagical practices” were

the most important type of environmental action since they affected the Earth on a subtler, yet more profound, energetic level than did picking up litter and recycling. This emphasis on healing and purification was a major reason why political activism was not a priority for these practitioners – because it was penultimate to spiritual resources. (Arthur 2008)

As these quotations suggest, rather than the desire to avert the catastrophe being unimportant to Neopagans, it redirected into alternative spiritual practices, which are considered to be equally—if not more—efficacious.

A second nature-as-sacred religious group which demonstrates the importance of ritual activism are “The Grandmothers,” a council of thirteen indigenous elders from around the world. First uniting in 2004, they warn that

[w]e are disconnected from the planet that nurtures us, body and soul. . . . Our waters, the blood of our Mother Earth, are often too polluted to drink, the air in some places too

polluted to breath . . . we have lost the fundamental teaching that all life is sacred, that all life is One. The Grandmothers way we must wake up from our trance before the Earth begins shaking. (Schaefer 2006: 7-8)

Like Neopagans, the Grandmothers highlight the importance of ritual, ceremony and prayer in assisting humans in the quest to heal the planet: “Ritual and ceremony are sophisticated social and spiritual technologies . . . to celebrate and nurture the world order of a particular place” (2006: 167). Additionally, rituals not only help encourage the necessary shift in consciousness, but are understood to be practically efficacious: “Ritual and ceremony not only create respect for our interdependence with the natural environment but open worlds so that we can actually find ourselves within nature, an essential key to creating sustainable culture and restoring nature’s balance” (2006: 167).

Part of this re-balancing entails assessing the human place in nature: though ritual “[w]e learn to know just how much we can take from a place before the natural balance is thrown off” (2006: 167). As in the case of Neopagans, for the Grandmothers the perception of impending environmental apocalypse impels a set of religious practices which are directed specifically toward healing the problem, which they conceive of as spiritual at root. The spirituality is rooted in indigenous traditions from around the world, yet they also have clearly been shaped by the awareness of environmental crisis. For them, such spiritual activism is one of the most essential means by which the necessary real world changes will occur.

Consciousness change is another important means by which both New Agers and Neopagans envision the transition to more environmentally friendly life styles occurring. Neopagans Oberon and Morning Glory Zell, for example, argued that “The only thing that can save us is a total and electrifying change in consciousness. Nothing short of a worldwide realization of our planetary awareness will bring home the desperation of our plight” (Zell 1978 [1990] in Pike 2004: 149). Additionally, the New Age gardening community Findhorn, located

in Scotland, also understood itself to be “preparing to live in a new consciousness and [learning] . . . the power of man to create his own world” (Caddy 1975: 9). Findhorn is better known for its millennial visions of human progress, yet it was also clearly influenced by environmentally apocalyptic concerns. According to New Age author David Spangler, who lived and worked at Findhorn for three years,

[t]he theme of the Findhorn garden. . . has great significance in reorienting our consciousness toward the more holistic and transmaterial outlook *which planetary survival would seem to require of us*. The importance of the garden . . . lies in demonstrating the processes of the organic nature of consciousness attuned to the center and oneness of all life. Such an attunement can invoke and use in balance the formative, creative energies of the universe for the transformation of matter and the *rebuilding of the Earth*. (1975: 178, emphasis mine)

Clearly, change in consciousness is an important means by which both Neopagans and New Agers envisioned earth friendly changes occurring. Additionally, as Spangler suggests, consciousness change can entail more than merely looking at the world differently. By becoming attuned to the true nature of reality, one becomes able to engage with and change the world in new ways. Because it gets at the spiritual root of the problem, developing one’s spiritual practices in order to achieve this higher consciousness is thus an important form of activism.

A third important form of spiritual activism is visualization. In her book *Behaving as if the God in All Life Mattered: A New Age Ecology*, Machaelle Small Wright advocates energy cleansing, which in her view is a vital means by which individuals can do their part to mitigate the environmental crisis: “[w]e need to recognize the fact that we are capable of affecting the environment adversely as we go through our growth and changes, and develop techniques for cleaning up and taking care of our pollution” (1983: 194). While ostensibly retaining the same goal of environmental healing which is central to environmental discourse, the crisis thus shifts from the material to immaterial level.

Visualizing also helps one develop the capacity to perceive and work with nature spirits called “devas.” As one deva explained it (by communicating to Small Wright while she was in a receptive, meditative state), “Man can no longer afford to look at what exists outside himself as nothing more than form—in most cases, lifeless form. . . . This meditation is but one tool designed to aid you humans in expanding your awareness. The time is now. The shift is crucial” (1986: 149). Through visualization, the deva implies, humans would be able to expand their consciousness and work in tune with nature, ultimately allowing them to behave in more ecologically beneficent ways. While also advocating this-worldly behavior changes, such visualization is also an important means of averting environmental crisis.

Through ritual, consciousness change and visualization, spiritual activism is thus a means by which these religious environmental apocalypticists both continue and complicate the secular environmental drive to avert catastrophe. Having internalized the claim that the crisis is spiritual, the response to it also becomes, logically, spiritual in nature. Yet, such spiritual activism is expected to have practical, this-worldly effects, just as is regular environmental activism.

### **Epistemology: Intuition, Portents, Prophecies and Spirits**

A second way in which religious environmental apocalypticism differs from secular forms is in its acceptance of non-scientific epistemologies. For Neopagans and Wiccans, while also aware of scientifically-grounded signs of environmental decline, intuition, portents and prophecy all also play a complementary role in understanding and interpreting the environmental crisis. According to Neopagan writer and activist Starhawk, for example:

Pagans have no trouble believing what all reputable scientists are telling us: Human activity has altered the carbon balance of the atmosphere, and unless we make major changes very soon . . . we will suffer unimaginable losses. We already see changes in our local weather, and the messages we receive in meditation, in prayer, and in dreams are telling us the same thing. (“Climate” 2007)

In this case, personal experience and scientific evidence corroborate the knowledge gained through meditation, prayer and dreams, and all are important sources of information in assessing the environmental future. Additionally, for Starhawk scientific and religious epistemologies are not incompatible, but rather mutually reinforcing. Perhaps, then, the turn to non-scientific epistemologies arises not so much from a reluctance to accept science, but from a desire to make the crisis both more personally meaningful and (in light of the controversial nature of scientific claims about complex processes like global warming) more certain.

According to Arthur, Wiccans also pay attention to a wide variety of news sources, internet postings, television programs and articles written by environmentalists in order to assess the crisis. Yet he reports an even greater reliance on non-scientific epistemologies among the Wiccans he interviewed: “Wiccans indeed have many sources to support their apocalyptic interests. The most important source, however, was personal intuition about the energies of the Earth” (2008). Thus, for Wiccans, as for Neopagans, meditation and intuition play a central role in becoming aware of and understanding the environmental crisis. Indeed, science may at times even be subsidiary. Ultimately however the point is that Wiccans and Neopagans are using such sources not in order to contest environmentally apocalyptic claims, but to assess and evaluate them. The use of non-scientific epistemologies thus appears to be in support of rather than competition with scientific claims.

Portents are a second important non-scientific epistemology embraced by nature-friendly religions. As Barkun explained, in Biblical apocalypticism portents are political events such as wars or anomalous natural occurrences, such as earthquakes or comets, which are thought to function as historical markers, signaling how far the present moment is from the end (1983: 267). The New Age and Neopagan conception is similar, but not identical. On the one hand, it does

interpret natural events as signaling something about the future. In particular, natural events such as tsunamis, earthquakes and volcanic eruptions may all be taken to signal that some kind of imminent collapse is near, that “the Earth Goddess was . . . taking umbrage at the rampant destruction that was continually being caused by humanity” (2008). Yet rather than trying to locate the present moment in a predetermined sacred history, Neopagans seek more general knowledge of what the future holds. As Arthur reports, “many ecologically conscious Wiccans agreed that ‘something’ was on the verge of changing but were not certain of any details, especially the ‘what’s and ‘whens’” (2008). For Neopagans, portents are thus a means of assessing the future, rather than determining where the present moment was in sacred time.

While the study of portents is not scientific, many scientists would agree that natural disasters are indeed indicators of environmental decline. Thus the Neopagan and New Age attention to portents is usually compatible with scientific findings. For example, Laurie Cabot, “Official Witch of Salem,” warns that “The great Titans of the earth are waking up to take part in this cleansing: fires, earthquakes, volcanoes, storms, droughts, floods.” (1989: 291-293 in Arthur 2008). Additionally, Ojibwa-descended New Age leader Sun Bear argues that “the earth is a living being now in the midst of a deep cleansing” (Albanese 1990: 159), evident because of “the volcanoes, the earthquakes, the changes in weather patterns” (1990: 159). While there is no scientific evidence that volcanoes or earthquakes are related to environmental decline, changes in weather patterns are indeed related to climate change (“Ecosystems” 2005). Thus, in the case of portents as in the case of intuition, this alternative epistemology is supplementary, helping to make the future seem more certain, rather than attempting to supplant scientific evidence.

The third important non-scientific epistemology employed by the environment oriented religions explored here is prophecy. Like intuition and portents, prophecy is an important means

by which the environmental future is assessed. However, it can also function to situate the present crisis within a larger, spiritually meaningful narrative.<sup>5</sup>

One of the most well-known prophecies in both New Age and Neopagan circles is the Mayan calendar's end in 2012. As Arthur notes, it was important for Wiccan apocalyptic beliefs, as it was commonly used to "to support theories of the immanent destruction of the current state of life on Earth . . . [December 2012] was believed to represent either a cyclical epoch change or an eschatological moment" (2008). Such prophecies are also well-known in New Age circles. According to Pike, both New Agers and Neopagans are strongly influenced by Hopi and Mayan prophecies (2004: 146). Further suggesting the importance of prophecy to environmental circles, the Grandmothers, who drew heavily from prophecies from a number of indigenous tribes, presented at the 2007 Bioneers conference, which attracts some 3,000 individuals yearly and has been covered by a number of prominent/progressive media sources including PBS, the Discovery Channel, The Nation and the radio program Democracy Now! ("Press" 2008).

The Grandmothers' use of prophecy is revealing of the ways in which it appears and functions among those who combine environmental concern with religiosity. To begin with, Hopi prophecies have foretold the environmental crisis:

[t]he Hopi . . . call our times the Purification Times, and prophecies speak about the cleansing of the Earth. Some of the worldwide environmental changes that have been foretold in native prophecy have already come to pass: the greenhouse effect, changes in

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<sup>5</sup> Although not the primary focus of this study, it should be noted that prophecy is an example of cultural borrowing, and such borrowing has been contested in some circles (see Deloria 1973, Krech 1999 and Taylor 1997). In the cases reviewed here it seems that such borrowing is encouraged on both sides, and may be interpreted positively by insiders as a means by which Westerners can learn from Native wisdom to the benefit of both. Yet it also could be seen as problematically drawing on Romantic or idealized notions that Native peoples are more mystically aware of or in tune with spiritual realities and nature than white Americans. In either case, it is evident that appreciation of Native Americans is an important theme in environmental subcultures, and attention to prophecy is one reflection of this. Yet the ways in which prophecies are viewed by both sides is an area that is clearly in need of further ethnographic research. Sullivan's (1988) study of eschatology among native South American tribes is an excellent example of taking prophecy seriously, a strategy which could be usefully extended to studies of environmental subcultures.

the seasons and in the weather, famine, disease, the disappearance of wildlife, and the hole in the ozone layer. (2006: 119)

Hopi prophecies also explain and heighten the significance of the Grandmother's meeting: "[t]he Hopi prophecy states that not until all four races of humanity come together will there be true peace. . . The Grandmothers helped to fulfill the Hopi prophecy, as all four races with their unique teachings came together for the first time in all of history to find a way to create a better world" (Schaefer 2006: 11). Third, the prophecies also specify the root cause of crisis (excessive materialism [2006: 120]), and how it can be solved. Either "Earth's changes will bring about an awakening of spiritual consciousness of the people" or "humanity will continue in a fragmented and dangerous direction, and there will be no hope for turning our troubles around" (2006: 121). Through these prophecies, the environmental crisis gains cosmic meaning, becoming a moral crucible on which humanity's fate hangs. The turn toward correct, reverent, humble earth-honoring spiritualities is the only way humans will avoid catastrophe.

As for Mayan prophecies, the Grandmothers also refer to 2012 as the end of the world as we know it, yet they are not completely fatalistic in this case, either. Instead, they emphasize choice, arguing that the world itself will not be destroyed, but rather transformed: "at this pivotal point in time, the Mayans say we still have choices. . . . during this short period of time we are entering a photon belt . . . and that always ushers in a new age" (2006: 119). Their interpretation illustrates the flexibility of environmental prophecy, which can serve both to foretell doom and to spur action. More than predicting future events, it gives meaning to the current sense of tumultuous change in light of environmental decline.

Prophecy also contributes to the understanding of the crisis as moral by putting environmental decline into a larger narrative of meaning. In a world of strictly naturalistic

causality, the “ought” cannot be derived from the “is.”<sup>6</sup> But in a world infused with spiritual purpose and meaning, “ought” can be implied by “is,” as long as one knows how to interpret the signs correctly. Prophecy thus functions as a means of gathering information about the future, as well as of understanding its larger meaning. Rather than positing a pre-determined future, which would conflict with secular environmental apocalypticism, prophecy can encourage a similarly urgent focus on changing behavior to avert catastrophe, while also adding an element above and beyond the secular goal of survival (of humans or other species, as in the ecocentric apocalypse).<sup>7</sup>

Communication with nature spirits is a final means by which knowledge of the environmental situation and how to ameliorate it is gathered. Small Wright reports discovering “an extraordinary intelligence inherent in all forms of nature . . . that contained . . . the answers to any questions we could possibly have about nature—its specific rhythms, its true ecological balance . . . the deeper role nature plays on Earth, its various relationships with mankind” (1983: xii). Applying this revelatory epistemology, she discovers both the apocalyptic present and the solution. According to one deva, “[i]f humans continue their reluctance to join us in the partnership we are suggesting, then surely out of human ignorance and arrogance, we will all continue to experience difficult challenges to our survival and, eventually, we will be faced with the full separation of spirit from matter” (1983: xv). Partnering with nature is the only way crisis will be averted, and it will be achieved through the adoption of a radically non-scientific epistemology which understands nature as inspirited and able to communicate with humans.

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<sup>6</sup> I.e. because of the “naturalistic fallacy.”

<sup>7</sup> An additional example of the importance of prophecy in environmental circles comes from the group Greenpeace, whose flagship vessel was christened the “Rainbow Warrior” in reference to a Native American prophecy (Wapner 2005: 728).

Here again a non-scientific epistemology corroborates rather than conflicts with science-based claims of crisis.

### **Agency: Divinity and Retribution**

While secular environmental apocalypticists affirm human over divine agency, Neopagans and Wiccans complicate this scenario. For Wiccans (and also for many Neopagans), “the Earth, Gaia, is conceptualized as a conscious, cognizant entity that exercises agency and some form of sovereignty over life on Earth, while also representing a divine life-force with which living things are imbued” (Arthur: 2008). Additionally, this deity could wreak vengeance on humanity for its earth-destroying ways. Many of Arthur’s informants, for example, believed “the Earth Goddess was upset with human disrespect for Her, and She was preparing to retaliate by disrupting human society” (Arthur: 2008). As one practitioner asserted, “if She [Gaia] is not respected, in the end, She will rise up and overwhelm us” (Crowley 1994: 34 in Arthur 2008). Yet, as we have seen, Neopagans and Wiccans also both affirm human agency through their spiritual activism.

The solution to this seeming paradox is that in the Neopagan cosmology the deity may intervene by avenging her destruction, yet she has not predetermined her course of actions, so human attempts to avert disaster are worthwhile and important. Still, the belief in a supernatural agent who may intervene in world affairs significantly alters the lay of the land in terms of assessing the future. The earth’s processes are (in principle) somewhat predictable, yet an angry divinity may act quickly and furiously. If there is more room for appeasement, through ritual and ceremonial action, there is also potentially less room for error. At a practical level, however, such violent change corresponds strikingly with Pearce’s secular explanation of tipping points. Thus the idea of a retributive divinity is not necessarily in conflict with secular interpretations, although the understanding of causality differs.

New Agers are less likely than Neopagans to envision a personal god, yet the belief in nature spirits can also trigger similar fears of retribution. Sir George Trevelyan, for example, a Findhorn supporter, argued that

[t]he world of nature spirits is sick of the way man is treating the life forces. The devas and elementals [two kinds of nature spirits] are working with God's law in plant growth. Man is continually violating it. There is real likelihood that they may even turn their back on man whom they sometimes consider to be a parasite on Earth. This could mean a withdrawal of life force from the plant forms, with obviously devastating results. (Caddy: 22)

As in the case of Gaia, the concept of a divine person elicits fears of punishment for humankind's destruction of nature. Similarly, fears of retribution are also followed by exhortations toward more environmentally friendly behavior. Much in the same spirit of secular environmental calls to avert disaster, then, divine agency here functions to support the idea that humans should change their behavior (in either a spiritual or this-worldly sense) in order to avert catastrophe. Overall, the religious cosmologies posited by the environmentally-concerned Neopagans, Wiccans and New Agers examined here seem largely to support secular environmental goals, even if the means by which those goals will be achieved is conceived differently.<sup>8</sup>

### **Conclusion**

The New Age, Neopagan and Wiccan sources reviewed here suggest that spiritual activism, non-scientific epistemologies and divine agency are all important concepts in religious environmental apocalypticism. However, while religious environmental apocalypticism complicates the secular environmental apocalyptic model, it also reveals important continuities. That is, like the secular environmental apocalypticists explored in chapter 4, and unlike biblical

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<sup>8</sup> In drawing such a "functional" parallel I do not mean to imply that these religious beliefs and practices have meaning or value only in a functional sense. Rather, I mean to point out points of agreement where secular and religious worldviews would otherwise appear to conflict.

apocalypticists, the majority of the nature-as-sacred religions explored here want to avert the environmental apocalypse. Even those who believe that collapse is unavoidable envision it as ushering in more ecologically sustainable life-ways. In either case, concern over environmental decline together with the desire for more ecologically healthy society reveal that the apocalyptic visions of these religions have much in common with secular environmental apocalypticism.

Additionally, the prevalence of apocalyptic eschatologies associated with these nature religions suggests that perhaps apocalypticism itself may be driving the surge of interest in such practices. As Arthur notes, “During three years of research with a Wiccan coven in Tennessee, I regularly witnessed the group leaders espousing environmentalist and apocalyptic rhetoric as key reasons for practicing the religion” (2008). The ubiquitous coincidence of apocalyptic language with calls for spiritual practices and awareness further suggests the importance of the prospect of apocalypse to these religions. Thus, even as these religious environmental apocalypticists complicate and diverge from the methods by which mainstream secular society has established the existence of the environmental apocalypse, they also contribute greatly to the endurance and diversity of the broad stream of environment-centered apocalypticism. This apocalypticism, it seems, has not only dramatically shifted secular society, but has also deeply influenced the elaboration of religion, particularly nature religions, in the United States since the 1960s.

## CHAPTER 6 CONCLUSION

This study has examined the distinctive characteristics of secular environmental apocalypticism both as a phenomenon in its own right and in comparison to biblical apocalypticism. Beyond creating a typology, my argument has been twofold: first, I argue that apocalypticism is no longer just a sub-form of secular apocalypticism. Rather, its half-century of persistence speaks to the necessity of studying it in its own right. Additionally, it is neither commensurable with other forms nor completely novel: it continues trends of pessimistic eschatological speculation which have existed from time immemorial, while also developing distinctive set of characteristics relative to the risks and rewards of life in modern industrial culture. I have thus attempted to update and systematize earlier work analyzing environmental apocalypticism.

Second, I have also sought to elaborate on the ways in which religious discourse and practice are increasingly taking note of, appropriating, generating, and responding to environmentally apocalyptic claims. In examining at these trends, I have highlighted two important ways in which religion and environmental apocalypticism interact. First, the prospect of environmental apocalypse has spurred the call for a return to religion by individuals who otherwise embrace naturalistic explanations for the origin and function of the universe. Second, the environmental apocalypse has also been imagined in religious terms, incorporated into religious ideas and practice, and informed a variety of religious responses among several nature-as-sacred religions. Through examining such interactions, I have suggested that apocalyptic beliefs may be significantly shaping religious discourse and practice. I have thus attempted to broaden and, in some places, refine prior accounts of the relationship between environmentalism, environmental apocalypse, and religion.

Taking a step back, I have attempted to demonstrate that environmental apocalypticism includes both secular and religious streams, which can, moreover, overlap. Environmental apocalypticism is thus best conceived as an umbrella covering a wide spectrum both religious and secular forms which manifest in United States culture in literature, film, nonfiction books, on websites, on television programs, news stories, and, perhaps most importantly, in the minds of individuals. Understanding environmental apocalypticism in this broad manner helps situate it both in the study of apocalypticism as a form which includes both secular and religious elements, as well as in the field of religious studies, as an important eschatological component of some forms of environment-related religiosity.

These findings suggest a number of areas for future research. First, there is a need for sociological studies focusing specifically on the pervasiveness and character of apocalyptic beliefs among non-scientific laypeople. Where are these beliefs concentrated? Which subcultures find them most credible, why, and what behavioral changes (if any) do they inspire? Second, there is a need for further ethnographic research exploring the character of environmentally apocalyptic beliefs on the ground in both secular and religious settings. Additionally, such ethnographic research could explore how religious beliefs and religious communities may function to attenuate or amplify of the perception of risk. Pursuing such avenues could make important contributions to the fields of the study of apocalypticism, environmentalism, and religion.

Third, some scholars have suggested that apocalypticism can lead to apathy or withdrawal from the world (Wocjik 1997: 214; Wessinger 2000). Is this the case for any environmentally apocalyptic groups, or is it securely wedded to the desire to avert (or at least advocate averting) disaster? To what extent are “lifestyle bioregionalists” (Taylor 2000a: 52), homesteaders, and

back-to-the-landers influenced by apocalyptic beliefs? Fourth, do movies, science fiction, and other expressions from popular culture expressing apocalyptic themes contribute to the growth of the phenomenon? Further analysis of the role of media in spreading and driving apocalypticism would help illuminate this important question. Finally, is environmental apocalypticism developing in other cultures and contexts? If so, how is it similar or different, and what does this reflect about the ways in which culture, religion, and environment affect such ideas? What role does prophecy play as a point of connection or contention between native peoples and environmentally concerned Westerners? Both quantitative and qualitative approaches would be valuable in answering such questions.

If current drivers of environmental degradation persist, and communication technologies continue to improve, it is likely that environmental apocalypticism will continue to spread and deepen. Understanding and examining its many forms will thus be of increasing importance to a variety of disciplines in the foreseeable future. Indeed, such responses may even be significant in the ongoing struggle to anticipate and mitigate the effects of environmental decline. Whether humans are in for a “wild ride,” or “merely” a steady continuation of current downward trends, environmental apocalypticists will doubtless continue to warn of catastrophe and work to avert disaster, ever seeking to diminish the likelihood of their apocalyptic predictions, even as they continue in steadfast pursuit of a this-worldly salvation that is both deeply sacred and tragically, mundanely, necessary.

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## BIOGRAPHICAL SKETCH

Robin Globus was born in Laguna Beach, California, and spent many hours of her youth exploring the chaparral and sandstone cliffs of the area, as well as the woods of Mendocino County. After graduating high school she attended Dartmouth College and majored in Environmental Studies, where she first became interested in studying the interconnections between spirituality and environmental concern. She plans to continue her studies in religion and nature at the University of Florida.