

**RELIGION'S INFLUENCE ON ENVIRONMENTAL CONCERN:
U.S. EVANGELICALS' CONSTRUCTION OF
CLIMATE CHANGE PERCEPTIONS**

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ABSTRACT

Scholars identify an emerging religious social base to U.S. environmentalism and public concern about anthropogenic global climate change. Surveys also show religious and political conservatives express skepticism about this environmental problem and oppose environmental regulations addressing it. White conservative Protestants reflect this contrast by denying human activity causes it and opposing climate policy for mitigating anthropogenic effects on Earth's atmosphere, while concern and activism for climate protection simultaneously increases among other environmental evangelical Christians. Decades of quantitative investigations reveal religion's role in environmental concern remains murky. Little clarity exists about how biblical literalism, "end times" eschatology, and religious environmental stewardship or creation care inform their opposition to environmentalism and emerging climate activism. How religion may constrain human agency in response to changing large-scale biophysical conditions or facilitate adaptation to global ecological change is unclear. This dissertation examines how religious beliefs inform public concern about global environmental problems among U.S. conservative Protestants using a qualitative research strategy and case study. It explores predominately white, Republican, educated, middle to upper-income evangelical Christians' perceptions of climate change through individual, face-to-face unstructured interviews with 52 participants living in the Dayton, Ohio area. It describes how religion informs their climate change beliefs, perceptions it is a problem, and their responses from an applied sociology of knowledge perspective and within a constructionist approach to social problems. Participants differ in beliefs about anthropogenic climate change, but largely agree it is not a serious environmental problem. Six religious themes emerge: Creation beliefs, Sin beliefs, Anti-evolution, God's involvement in the world, End Times, and Christian stewardship. Individuals' religious mental schemas reflect literalist applications of Biblical texts to understand large-scale ecological conditions, a theology reducing human agency for addressing global environmental problems, and a perceived responsibility to engage in individual, pro-environmental actions in their everyday lives. This case study richly describes how religion informs public opinion, balances qualitative investigations of religious elites' perceptions, and contextualizes quantitative analyses of lay evangelical Christians' views. Implications arise from religion's intersection with

environmental policy, public environmental concern, and climate science communication to members of this highly religious segment of U.S. society.

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CHAPTER 1

THE RESEARCH PROBLEM

In modern societies based on industrial production, legislators avoid definitions of ecological conditions as environmental degradation to reduce public perception of them as problems and to dampen citizen interest in addressing them with public policy (Gould 1993). This evasion comes from the neoliberal assumption that such policies substantially counter the legislative priority of facilitating capital accumulation and economic growth (Schnaiberg and Gould 1994).

Consequently, environmental policies typically appear when policymakers feel pressured by public demands to increase environmental regulation or protection and deem it necessary to maintain legitimacy (Marshall and Goldstein 2006). Monitoring opinion polls for public sentiments about environmental issues is one means for determining this (Dunlap 1991; Dunlap, Gallup Jr., and Gallup 1993). These surveys and studies contain myriad empirical measures of public beliefs about ecological conditions, attitudes toward environmental problems, and public support for environmentalism (Dunlap and Jones 2002).

Environmental movement organizations form with the aim of broadening the support of environmentalism that is registered in public opinion polls (Dunlap and Mertig 1992; Mertig and Dunlap 1995). One important factor of movement support and participation comes from its capacity to define or frame social problems in ways congruent with public perceptions (Benford and Snow 2000). Movement activists engage in educational and communication activities to generate greater citizen support in their advocacy of environmental policies such as increased regulation of industrial activities disrupting ecosystems (Krogman 1996) or greater protection against harmful exposures in contaminated communities (Cable and Benson 1993).

A key assumption shared by policymakers and environmental activists alike is that people do not care about and will not support public policy to address ecological conditions they do not deem as problematic. This assumption leads to a significant question: How do individuals come to perceive an environmental condition as a crucial problem worth addressing and what factors influence the construction of these perceptions? The importance of both aspects of this question arises from their linkage to a perennial, more fundamental concern about human

behavior. What limits constrain human agency or individuals' actions with respect to the world(s) they exist in?

Sociologists respond to these questions broadly by asserting that people define reality through the prism of cultural meanings readily available to them in their everyday lives (Berger and Luckmann 1966; Mead 1934). Religion powerfully refracts these perceptions for those who accept and internalize its constructions or legitimations of reality (Berger 1967). Individuals' capacity for personal agency to construct meanings of reality and define ecological conditions as environmental problems arises partially from the cultural significance of their structural positions in society (Freudenburg 2005). Public understanding of perceived social problems and subsequent participation in social movements addressing them thus can represent forms of ideologically, and religiously, structured social action (Zald 2000).

The ambiguous nature of some ecological conditions, especially large-scale ones, complicates public perceptions and understanding, making them susceptible to distracting diversions (Freudenburg 2006) or false argumentation strategies by those advocating contesting definitions (Freudenburg, Gramling, and Davidson 2008). Definitions of social conflict, natural resources, and environmental risk typically reflect policymakers' and others' organizational interests and values by virtue of their social location, access to resources, and cultural influence (Dietz, Stern, and Rycroft 1989). Public willingness to support and be involved in political or policy oriented activities of environmentalism depends on individuals' accepted definitions of environmental problems and their evaluations of perceived dangers (Cable and Cable 1994). When assessing social and environmental problems, highly religious people rely on salient cultural resources (Emerson, Smith, and Sikkink 1999), knowledge they deem relevant (Kempton, Boster, and Hartley 1996), and turn to similar others for cues on information seeking (Yang and Kahlor 2013).

I contend human perception of ecological phenomena is contingent proximally on the interaction of a person's understanding of biophysical conditions and the structural or cultural forces impinging on that understanding. From the sociological perspectives of social constructionism and other related theoretical frameworks, individuals act in the world based on the meanings emerging, relevant, and available to them from this interaction (Berger and Luckmann 1966; Schutz 1967). Other social actors, structural forces, and cultural influences shape this interaction from more distal positions (Williams 1998). An analytic view examining

public perceptions of environmental problems and their implications for addressing them either personally via private individual behaviors or collectively through public environmental policies should encompass this dynamic array of factors.

This research examines the role of religion in the societal milieu and cultural matrix with respect to public environmental concern. Its theoretical standpoint reflects an applied sociology of knowledge approach (Berger 1967; Berger and Luckmann 1966; Hirschman 1991; Mannheim 2002), rather than adhering to a sociology of religion tradition. My analytic approach draws on conceptualizations of individuals' cultural resources as mental schema to describe the knowledge people use to construct their perceptions of reality (Sewell Jr. 1992; Swidler 1986). The primary purpose of this dissertation is exploring the significance of religious beliefs in highly religious peoples' constructions of their perceptions of large-scale ecological conditions and presenting the thematic ways in which individuals apply and use them. The specific goal of this investigation is to better understand the structural constraints religion places on public support for policy addressing global environmental problems, specifically with respect to the interpretative nexus between human perception and agency.

Global climate change perhaps nowhere more clearly illustrates the inherent complexities of human perception and action with respect to ecological conditions. The magnitude and severity of threats posed by global climate change make mitigating policies imperative (N.R.C. 2012; Schneider, Semenov, Patwardhan, Burton, Magadza, Oppenheimer, Pittock, Rahman, Smith, Suarez, and Yamin 2007; Stern 2007). Policymakers are particularly reluctant to regulate the use of fossil fuels and other resources that contribute to climate change because they are crucial production substances that drive economic growth (Schnaiberg and Gould 1994). Environmental movements campaign to marshal public concern about climate change to pressure policymakers (350.org 2013; FossilFree 2013). Activists face challenges (Hoffman 2011; Norgaard 2006a) in broadening the social bases of their support within the general population (McCright 2009; McCright and Dunlap 2011b) and achieving substantive political progress through public policy (Moser 2007; Van Der Heijden 2006). Meanwhile, vocal skeptics and representatives of business interests contest the problematic nature of climate change (McCright and Dunlap 2000), doubt climate science (MacKay and Munro 2012), thwart policymakers efforts to address it (Austin 2002; Austin and Phoenix 2005; McCright and Dunlap

2003), and argue scientific certainty not precaution is the necessary criterion for any policy action (Freudenburg, Gramling, and Davidson 2008).

Given its scientific complexity, and public perceptions of a perceived debate or lack of consensus among experts (climate scientists) about the effects of human activities on the Earth's atmosphere, individuals likely rely on their own salient cultural resources to form perceptions of the nature of climate change. Highly religious people, for example, may draw on their religious doctrines to aid in their interpretations of a scientific ecological phenomenon.

Some observers consider religion a consequential force opposing environmental concern and regulation (Kaufman 2010; Sheppard 2010). This stance is exemplified decades earlier at the start of the U.S. environmental movement's contemporary period of re-emergence by Presbyterian historian Lynn White's charge that Christianity causes modern ecological crises (White 1967). Yet much current evidence contradicts this view. Christian believers' involvement in the U.S. environmental movement and Protestant environmental activism is increasing. "Environmental evangelicals" (E.E.N. 2011a) join other Christians and adherents of other religious traditions "to care for and steward Creation" (N.R.P.E. 2013), and interfaith coalitions unite with secular environmentalists to lobby policymakers for action on environmental problems (Sierra 2008).

Scholars' search to identify segments of U.S. society most supportive of environmentalism, or the social bases of public environmental concern, began in earnest after the first Earth Day in 1970. Most analysts explore a discrete set of social and demographic characteristics deemed consequential. A limited number move beyond markers of religious identity to examine religion's influence on expressions of environmental concern. Despite the increasing emergence of religious-based pro-environmental activism, current social scientific understanding of religion's role remains murky. The demographics and religious characteristics of environmentalism's social bases describe, but do not explain participation in environmental movements.

Research findings on the association between religious beliefs and expressions of environmentalism remain complex and appear contradictory. Although Christian beliefs generally correspond with greater environmental concern, conservative Protestants more frequently question scientific data about environmental problems, avoid advocacy for environmental protection, and oppose environmental policies. Several decades of slowly

increasing quantitative, survey-based inquiries do little to clarify. It remains unclear whether religious beliefs and values such as biblical literalism, “dominion”, and “stewardship” truly are consequential in people’s perceptions of environmental issues. Evidence suggests conservative Protestant “End Times” eschatology and “dispensationalist” theology may dampen environmentalism. However, they are inconclusive about whether only these religious aspects foster a lack of environmental concern among these highly religious people. Some find political and economic dimensions of a Christian fundamentalist orientation toward the world do so. Others even argue religion actually appears a spurious influence on peoples’ views about environmental problems and their willingness to support environmental policy.

Scholars, however, do find religion plays a role in public perceptions of social and environmental problems. For example, white conservative U.S. Protestants apply their theology to racial economic inequality. They perceive its causes in individualistic terms using their religious beliefs and oppose structural policy solutions while expressing religious attitudes and values (Emerson and Smith 2000). Public understandings of global environmental problems such as ozone depletion and climate change reflect citizens’ religious values, among both adherents and non-believers (Kempton, Boster, and Hartley 1996). Competing religious factors shape how conservative Protestants evaluate problematic ecological conditions and their decisions to address them. Religion simultaneously encourages expressions of individual environmental concern and appears associated with opposition to more public, political forms of environmentalism, including supporting environmental policy or regulation (Sherkat and Ellison 2007).

In the case of climate change, public opinion surveys show U.S. conservative Protestants and white evangelical Christians are the most likely to dispute human activity contributes to it and oppose public policies addressing it (Maibach, Roser-Renouf, and Leiserowitz 2009; Pew 2006; Pew 2009a). Although the dynamics of the association of this climate change (un-)concern with these demographic markers of religious identity is clear, the state of the social scientific understanding about the relationship between religion and general environmental concern among them is not. Conflicting findings describing it comes from analysts’ predominant reliance on quantitative approaches, lack of correspondence among theoretical concepts, and widely varying measures for variables. Scholarly understanding is thin about how lay believers in these religious segments of U.S. society construct their perceptions of ecological conditions, evaluate

them as problematic, and perceive the need to address them. Much more is known about how religious leaders and environmental activists in conservative Protestant denominations of the Judeo-Christian tradition utilize religious beliefs in their perceptions of environmental problems and climate change than the general public. Together these factors obscure the role of religion in this form of environmental concern and public support for environmentalism among this religious subgroup in U.S. society.

In this dissertation, I report on research exploring how conservative Christian religious beliefs inform concern for global environmental problems among U.S. conservative Protestants. It presents a case study of public perceptions about climate change based on individual, face-to-face, un-structured interviews with 52 evangelical Christians living in the greater Dayton, Ohio area. Using an analytic framework reflecting an applied sociology of knowledge perspective and a social constructionist approach to social problems, along with a qualitative research strategy, it describes participants' understandings of climate change and profiles how they rely on certain religious "mental schema" or cultural resources when constructing their perceptions of it. These include religious beliefs, attitudes, and values appearing in their "anthropogenic" explanations of climate change and their explanations of it as a "natural" phenomenon. It identifies how religion informs their evaluation of climate change as a problem worth addressing, their responses to it, and other aspects of climate change concern such as decisions they make about trusted sources of information about it.

The closest and most direct audience for this effort is scholars of environmental concern and religion, those who are interested in the religious dynamics influencing public support among conservative Protestants for environmental policy, and activists engaged in communicating or interacting with this highly religious segment of U.S. society about this global environmental problem. Its primary contribution is adding rich and extensive descriptions of the ways evangelical Christians perceive or make sense of anthropogenic global climate change to supplement the survey data identifying their views, qualitative investigations of elites' perspectives within evangelicalism on these topics, and analysts' quantitative analyses of lay believers' perceptions of climate change.

My purpose here is offering deeper insights on the religious dimensions of environmental concern among the public on for global environmental problems. The goal is clarifying further how religious beliefs shape conservative Protestants' views about large-scale

ecological conditions and environmental policies addressing them. This case study focuses on how religion informs peoples' views on scientific questions about the nature of anthropogenic climate change, and shapes their perceptions of self-efficacy or human agency to address it. It shows the extent evangelical Christians' transpose and rely on theological notions to consider non-religious matters and the consequences for addressing environmental problems with public policy. Both religiously grounded barriers limiting efforts to implement climate policy and religiously rooted possibilities for resolving environmental problems in the U.S. appear among participants. Achieving substantive social change in modern societies based on fossil-fueled industrial production requires better understanding these religious foundations of public support for environmental policies, especially among highly religious people.

In the following pages, I detail my effort to accomplish this purpose and contribute to a deeper understanding of the relationship between religion and environmental concern. *Chapter Two: Literature Review and Analytic Framework* explains the larger context of my specific research interest examined in this case study and presents the analytic stance I adopt for it. It outlines the theoretical emergence of a social constructionist approach within sociology I use to examine climate change as an example of an environmental problem. I also evaluate existing research on religion and environmental concern and discuss the predominant findings for their relationship. *Chapter Three: Research Strategy* outlines the research strategy I employ to conduct this case study on conservative Protestants' perceptions of climate change and the role of religion in them. *Chapter Four: Evangelicalism in U.S. Society* offers a sociological account of the social and historical context of evangelicalism as a social movement with an emphasis on its relationship to politics in U.S. society. It also introduces the fundamental concerns and public policy preferences of evangelical Christians about contemporary social and environmental problems.

Following this discussion of collective political action by these conservative Protestants and select structural characteristics of evangelicals' members, I present major findings from the case study in three subsequent chapters according to the primary stances (Believers, Deniers, and Uncertains) participants take toward anthropogenic climate change. Each chapter describes the predominant ways the Ohio evangelical Christians' I interviewed use their religious beliefs to understand anthropogenic climate change, evaluate it as an environmental problem, and assess the need to respond to it personally or address it with environmental policy. *Chapter*

Five: “I believe it’s real”: *Believers in Anthropogenic Global Climate Change* profiles the views of participants who believe human activity contributes to climate change in some degree or to a minimal extent. *Chapter Six: “I don’t buy that at all”*: *Denying Anthropogenic Global Climate Change* describe the ways participants express religious beliefs in their denials that anthropogenic causes exist for climate change. And *Chapter Seven: “What’s valid? What’s hyped? What’s true? What’s not?”*: *The Uncertains* portrays the views of those who do not know if anthropogenic climate change is happening or whether it is a natural phenomenon. Finally, *Chapter Eight: Discussion and Reflection* considers the significance of findings from this case study for the larger effort of clarifying the role of religion in environmental concern. It concludes with a discussion of several implications for environmental or climate policy, and by identifying several lines of additional research emerging from this project.

CHAPTER 2

LITERATURE REVIEW AND ANALYTIC FRAMEWORK

Introduction

Sympathy with environmental movement goals requires that citizens share movement grievances. But defining ecological conditions as a policy issue is not contingent entirely on their problematic nature. Contemporary environmental risks tend to be technologically complex and ambiguous – even invisible. Experts are thrust into positions as interpreters for policymakers, yet the intrinsic uncertainty of science allows for multiple expert interpretations. The public comes to mistrust science and view its credentialed experts with more skepticism (Beck 1992). Consequently, people form perceptions of environmental quality with less reliance on scientific knowledge– they socially construct meanings on their own. Global climate change is perhaps the most ambiguous ecological problem facing the planet. How do people socially construct their views of global climate change?

Large-scale ecological conditions especially are hidden from most people until their impacts disrupt individual's everyday routines and draw personal attention to them, or someone else informs them about what is occurring (Carolan 2004). This is particularly true of global climate change, where the 'objective' conditions of the Earth's atmosphere remain transparent to most everyone except professional scientists (Garvin 2001). Public perceptions of it include their pre-existing understandings of other, previously known, environmental problems (Kempton, Boster, and Hartley 1996). Mistrustful of scientists, people consult other non-scientific, cultural experts and elites, or turn to similar others for clues to interpret ambiguous situations based on normative cues from social contexts important to them (Yang and Kahlor 2013). Social interaction among group members of similar social groups is one means by which they can define environmental conditions as problems, or construct them as non-problematic (Spector and Kitsuse 1977). Highly religious people likely turn to religion and other recognized religious others in forming their perceptions of global climate change. Yet substantial research conducted over decades has failed to demonstrate clear or consistent results on the association between religion and environmental concern (Proctor and Berry 2005).

In this chapter, I first examine the literature on the social constructionist perspective with respect to theories of social problems and the social construction of meaning. I then review

the literature on the association between religion and environmental concern to identify possible deficiencies leading to unclear results. Finally I present the analytic framework adopted for my study of U.S. evangelical Christians' perceptions of global climate change.

Social Construction

Contemporary Emergence and Emphasis

Social constructionism is a theoretical approach focusing on social influences on the meanings people impose in their everyday lives. A social constructionist approach emphasizes the dynamic, iterative processes by which individuals perceive, define, and then subsequently act toward their reality. The approach itself is used by scholars with varying meanings (Hacking 1999). Some observers emphasize human agency in examining people's construction of meanings about the world. Others stress social structure, studying the restraints of social institutions, and cultural processes.

Especially in recent decades, interest among sociologists has grown about how, when, and why people see some conditions as problems and not others. Calls for a subjectivist view toward social problems by Herbert Blumer precipitated its contemporary emergence. He argued "social problems have their being in a process of collective definition. This process determines whether social problems will arise, whether they become legitimated, how they are shaped in discussion, how they come to be addressed in official policy, and how they are reconstituted in putting planned action into effect" (Blumer 1971). As a symbolic interactionist, Blumer opposed previous conceptions of social problems as "objective conditions and social arrangements" merely awaiting discovery by sociologists and other social scientists. His declaration was soon followed by several articles and a book manuscript that "exercised a profound and productive influence on contemporary social constructionism and social problems theory" (Weinberg 2009).

Following Blumer, Spector and Kitsuse initiated a more systematic approach for examining interpretations of social reality with the provocative claim, "there is no adequate definition of social problems within sociology, and there is not and never has been a sociology of social problems" (Spector and Kitsuse 1977). Their treatise expounded on the pithier, but limited, notion that problematic conditions arise in society when "a significant number of people or a number of significant people" see them as such (Julian 1973). Kitsuse and Spector aimed to

explain this phenomenon by focusing on both the social process and people's actions in their everyday lives (Kitsuse and Spector 1973; Spector and Kitsuse 1973).

They proposed that "social problems be conceived and defined as an activity by which groups identify 'problems' which they claim to be harmful, undesirable, unjust and in need of corrective attention. By this definition, every condition claimed to be a problem by whatever group on whatever grounds qualifies as subject matter for the study of social problems. In this view of meaning construction, a social problem is not seen as an 'objective condition but rather as the *process* of interaction between claimants that is organized by what they claim to be 'a problem'" (Spector and Kitsuse 1977).

Spector and Kitsuse outline the process and activities involved in defining conditions as problematic by conceptualizing it as a "heuristic, four-stage natural history model" (Schneider 1985). Stage one includes "collective attempts to remedy a condition that some group perceives and judges offensive and undesirable...Initial social problems activities consist of attempts to transform private troubles into public issues" (Spector and Kitsuse 1973). Stage two occurs when "governmental agencies or other official and influential institutions" acknowledge these claims (Spector and Kitsuse 1973). Whether stage three comes next is contingent on first, official agencies or institutions accepting these claims and then responding, and secondly, this response becoming seen itself as problematic. If this occurs, stage four commences when advocates (claimants, claimsmakers) of problematic conditions declare "that it is no longer possible to 'work within the system'..." and they set out to craft alternative institutions (Spector and Kitsuse 1973).

After this seminal text detailing the social construction approach to social problems appeared, others extended Blumer's original notion (Lopata 1984). Although arising from and still compatible with other theoretical traditions in sociology, proponents argued its distinction came from its presumption, "that social problems are the definitional activities of people around conditions and conduct they find troublesome, including others' definitional activities" (Schneider 1985). This analytic stance shifts the focus and changes analysts' relationship to the object of study (social problems). On the basis of their professional research and personal activism, analysts become their own subjects. "Sociologists who act as experts on problematic conditions are social problems participants. They become part of the problems rather than an analysis of it" (Schneider 1985). Advocates of the social constructionist approach to the study of

social problems make unequivocal, value-based assertions about the purpose of their work. “Sociologists of social problems should not concern themselves with the validity of participants’ (their colleagues included) claims about conditions, but with how such claims and definitions are created, documented, pressed, and kept alive. Documenting claims or definitions about conditions constitutes participation. The point is to account for the viability of these claims, not judge whether they are true” (Schneider 1985).

Analysts adopting a social construction approach to social problems in this era of the theory form two camps, “strict” and “contextual” constructionists. Strict constructionists contend that analysts must confine themselves to focusing only on claims-making activities and their “symbol and language bound character” since “the strict constructionist never leaves language” (Ibarra and Kitsuse 1993). In this formulation, analysts must remember that “it is ‘they’ (as members of the settings we are studying) and not ‘us’ (as analysts) who do the work of realizing the characteristics of the worlds in which they live” (Weinberg 2009).

Contextual constructionists counter that “the language of claims does not exist independently of the social world; it is a product of—and influence on—that world” (Best 1993). They argue that strict constructionism ignores the pragmatic realities of the “social problems work” that both researchers and actors perform. Contextual constructionists advocate a more ethnomethodologically sensitive approach that reflects concern for “the interpretative practices by which everyday realities are locally accomplished, managed, and sustained” (Holstein and Miller 1993). They recommend a broadened focus to constructionism that includes “practices that link public interpretative structures to aspects of everyday realities” (Holstein and Miller 1993). Miller and Fox (1999) grant strict constructionism value as a theoretical ideal, but declare it untenable in practical research and applied applications.

Conceptually compatible theoretical models developed simultaneously with Spector and Kitsuse’s development of their social construction approach to social problems. Hilgartner and Bosk (1988) apply a ‘public arenas’ metaphor to emphasize the social contest between claims-makers and the process through which definitions of environmental and social conditions are ascribed their status as ‘problems’ in public discourse. Other analysts focus on variation over time in public attention to and concern about problematic conditions. Downs (1972) describes waves of resurgent, then dissipating, interest in ecological issues as the inevitable result of the public’s “issue attention cycle.” Dunlap (1992) views the cycle as a consequence of their “natural

decline.” Others emphasize the role of organized, sustained, collective action such as social movements in constructions of meaning of problematic conditions (Mauss 1975). Best notes that, despite some compatibility, this social movement approach substantially differs from the social construction approach: “Constructionist analyses have obvious parallels with studies of social movements but, constructionists remain the only sociologists committed to the cause of developing a theory of social problems” (Best 2002).

Today’s proponents of the social construction approach to social problems continue urging analysts to follow a “middle road” (Weinberg 2009) between its principled, narrow version (Ibarra and Kitsuse 1993) and other sociological traditions in which the objective conditions of social problems are assumed (Spector and Kitsuse 1977). They acknowledge a pragmatic and paradoxical challenge facing the social constructionist perspective is everyone’s inevitable embeddedness in the mundane social world. “Neither we as researchers nor those we study can ever intelligibly leave the domain of embodied, invested, and fully purposeful practical action” (Weinberg 2009). However, they contest the strict constructionist argument to ignore this (Ibarra and Kitsuse 1993). “Agnosticism regarding the structural contexts of human action comes at the cost of rendering that action normatively unaccountable or, in other words, unintelligible. General social problems theory cannot succeed if it is confined to the comparative analysis of social problems discourse in vacuo” (Weinberg 2009). Calling for a contextual social constructionist approach to social problems reflects the value proponents place on holding onto this analytical tension and balance. It comes from the belief that this perspective offers sociologists a clearer, wider vision on how some conditions, but not others, become defined as problems and why people’s views about them vary.

Social constructionists adopt the interpretive approach “as a counter to survey research, which...fails to understand the meanings people attach to their lives and actions.” In contrast to quantifying individuals’ discrete attitudes, hearing individuals’ own stories facilitates study of the interaction of structure and agency in meaning construction. Agger advocates the approach because individuals’ stories “can be read to reveal both the ways in which they have been socialized to accept ‘reality’ as defined for them by dominant ideologies and institutions, and the ways in which they creatively resist and transform these definitions” (Agger 2006).

One application of this approach is investigating how peoples’ social contexts inform their perceptions of ecological conditions and subsequent judgments about their problematic,

or non-problematic, nature. Closely examining how religion shapes highly religious adherents' constructions of global environmental problems is one example.

Environmental Concern

After the first Earth Day in 1970, U.S. sociologists began intensively exploring which constituencies of the population were amenable to and supportive of the environmental movement's goals (Buttel 1977; Heberlein and Black 1976; Van Liere and Dunlap 1981). This exploration included describing the strength of public concern about ecological conditions (Dunlap 1992), gauging support for environmental policies (Buttel and Flinn 1976), and associating this support with social and demographic characteristics (Dunlap and Van Liere 1984). Analysts explored individuals' perceptions about ecological conditions through original research surveys (Dunlap, Van Liere, Mertig, and Jones 2000) and by using secondary data from opinion polling (Dunlap and Scarce 1991). Professional acceptance of environmental sociology as a sub-discipline accelerated studies of environmental concern (Catton and Dunlap 1980). More than a thousand assessments have been conducted since then, most relying on quantitative methodologies (Dunlap and Jones 2002). Analysts take these views about environmental problems and the variability of expressed environmental concern to reflect the environmental movement's "social bases" of public support (Dietz, Stern, and Guagnano 1998; Dunlap and Mertig 1992; Jones and Dunlap 1992; Van Liere and Dunlap 1980). They reveal who is concerned about the biophysical world or practices pro-environmental behaviors.

Analysts describe the social bases of U.S. environmentalism by identifying structural characteristics associated with different expressions of environmental concern about myriad environmental issues (Dunlap and Jones 2002). As sociologists systematically began exploring them (Van Liere and Dunlap 1980), they found environmental concern's social bases relatively stable (Klineberg, McKeever, and Rothenbach 1998). For almost two decades, "younger adults, the well-educated, political liberals, Democrats, those raised and currently living in urban areas...were found consistently more supportive of environmental protection than were their respective counterparts" (Jones and Dunlap 1992). Women are more concerned about risks associated with technology (Davidson and Freudenburg 1996), local pollution and toxic waste problems (Brown and Ferguson 1995; Krauss 1993), and "when significant gender differences emerge, women are found to be more environmentally concerned" (Jones and Dunlap 1992).

After nearly four decades, the faces of greater environmental concern in U.S. society still look much the same. It is their numbers that vary over time. “Although the degree of concern Americans show for environmental issues has fluctuated significantly over the past three to four decades, generally majorities of the public have expressed concern about the quality of the environment and support for environmental protection efforts. What has varied is the size of the ‘pro-environment’ majority” (Gallup 2003). The cornerstones of U.S. environmentalism’s social bases remain younger people, females, and the more educated and politically liberal (Nooney, Woodrum, Hoban, and Clifford 2003).

Scholars critique this research on conceptual, theoretical, and methodological grounds (Dunlap 2006; Dunlap and Jones 2002; Klineberg, McKeever, and Rothenbach 1998; Van Liere and Dunlap 1981). Occasionally analysts redraw its boundaries. Presumptions about the color (“race”) of environmentalism combined with biased survey measures suggested blacks were less concerned about environmental quality and protection than were whites (Taylor 1989). Subsequent research corrected this, demonstrating that even during periods of economic downturn, blacks’ environmental concern weakened less than whites’ (Jones 1998; Jones 2002; Jones and Carter 1994). A similar reversal occurred when some early studies argued the poor, like non-whites, cared less. Analysts saw greater wealth corresponding with stronger concern for the environment, despite only “very weak support for the assertion that social class is positively associated with environmental concern” (Catton and Dunlap 1980). Others countered those with less economic means cared as, or even more, strongly. The fault lay with investigators not focusing on the environmental problems that most concerned the poor and blacks (Buttel and Flinn 1978).

Despite considerable success in *describing who* is environmentally concerned, the research focusing on identifying people’s social and demographic characteristics does not well *explain why* people are concerned about ecological conditions. The association of these factors with various measures of environmentalism among the general populace is usually weak (Dietz, Stern, and Guagnano 1998) and will “typically explain only 10 to 15 percent of the variance” (Van Liere and Dunlap 1980). Stronger critiques charge that, after thirty years of research, “little consensus has emerged on which demographic variables in particular are reliably associated” beyond the sparse trio of age, education, and political ideology (Klineberg, McKeever, and Rothenbach 1998). When analysts’ focus on possible social-psychological influences, few

consider the contextual fabric from which these attitudinal, belief, or value factors arise. Nor do they examine the social process by which individuals form and adopt the views they express to others about environmental matters. This relative disparity of analysts' attention leaves the dynamics of culture and human agency in environmentalism more opaque than necessary (Dietz and Burns 1992).

Klineberg, McKeever, and Rothenbach attribute this condition to quantitative methodology. When people respond to closed-ended questions on surveys, their "attitudes toward environmental issues are necessarily measured, explicitly or implicitly, in relation to other concerns" (Klineberg, McKeever, and Rothenbach 1998). This diagnosis is more valid when people consider possible government actions toward the environment having both personal and societal economic implications. In these instances, their perspective likely is enmeshed within a matrix of political, economic, and possibly religious-based ideals, not just their perceptions of an environmental problem. Van Liere and Dunlap identify a trinitarian remedy: (1) focus investigations on specific issues or policies, rather than people's generalized concern for "the environment"; (2) remain aware of and give attention to the interactive effects of individuals' environmental *and* economic commitments; and (3) calibrate analytical frameworks or design research strategies for capturing the influence of multiple cultural influences on people's willingness to support environmental protection (Van Liere and Dunlap 1980).

As seen in scholars' changing understanding of the color of environmental concern, the relevance of environmental problems to different kinds of people and social groups varies (Freudenburg 1991). Although explorations of environmentalism's social bases offer both cross-sectional snapshots and longitudinal panoramas, they cannot closely examine social processes through which ecological conditions are defined as problematic. This includes exploring how cultural factors such as religious beliefs shape peoples' perceptions of environmental problems. This makes the social constructionist approach on social problems advantageous in this case.

Although most contour lines of environmental concern are relatively well mapped, some still receive less attention. One area lagging behind others is the association of religion with expressions of environmental concern. Hints of its role appear in early investigations of environmentalism's social bases (Hand and Van Liere 1984), and some briefly note it (Kanagy, Humphrey, and Firebaugh 1994). Efforts are growing to better understand aspects of

environmentalism's religious social base, especially with increasing faith-based activism among believers on environmental issues and climate change.

Role of Religion

As scholarly interest in environmental concern grew through the years, public opinion surveys sometimes showed expressions of environmental concern and policy support corresponding with religion or religious characteristics (Gallup 2003). A few analysts began exploring the latent influence of religious values on peoples' environmental orientations or dominant social paradigm in the late 1970s (Catton and Dunlap 1978; Dunlap and Van Liere 1978). It gradually increased, focusing on the ways in which religious adherents expressed environmental concern (Dietz, Stern, and Guagnano 1998; Eckberg and Blocker 1989; Hand and Van Liere 1984). Analysts examine variations in the environmentalism associated with major religious traditions (Shaiko 1987; Wolkomir, Woodrum, Futreal, and Hoban 1997). Sometimes believers are compared with the non-religious (Kanagy and Nelsen 1995; Wolkomir, Futreal, Woodrum, and Hoban 1997; Woodrum and Wolkomir 1997). Many focus on Protestant Christians, making inter-denominational comparisons (Boyd 1999; Djupe and Olson 2010; Feldman and Moseley 2003; Kearns 1997) or focusing entirely on more conservative Protestants (Holland and Carter 2005; Smith and Johnson 2010; Tarakeshwar, Swank, Pargament, and Mahoney 2001). Or scholars assess its prevalence in other historical religious groups such as Mormons (Brehm and Eisenhauer 2006; Foltz 2000; Hunter and Toney 2005; Peterson and Liu 2008) or people that self-identify as spiritual, but not religious (Bartkowski and Swearingen 1997; Bloch 1998). **Appendix 2.1** summarizes the samples, quantitative or qualitative methodology, and primary measures of religion and environmental concern for most known past research.

The role of religion in environmental concern remains murky despite the growing attention of the last few decades (Proctor and Berry 2005). The literature gives a contradictory and complex picture. Findings offer few conclusive signs on whether religion is good, bad, or otherwise inconsequential with respect to how people express their environmentalism through their beliefs, attitudes, intentions to engage personally in behaviors with reduced ecological impacts, or their willingness to support environmental policy. **Table 2.1, 2.2, and 2.3** below summarize work where major findings show religion having an overall positive or mixed

Table 2.1: Positive or Mixed Association of Religion with Environmental Concern

Study	Summary of Major Findings	Religious Groups
(Biel and Nilsson 2005)	"...religious values affect the judgment of environmental threats from genetically modified foods, but not pollution"	Judeo-Christian & Non-Judeo Chris.
(Black 1997)	"Biblical literalist are less likely to engage in environmentally protective behavior... On the other hand, persons who frequently attend religious services are more likely... than are persons who seldom or never attend"	Judeo-Christian & Non-Judeo-Christian
(Deemer and Lobao 2011)	"Frequent church attendance is related to less concern with animal welfare. However, we also find that religious beliefs can be a source of support for animal welfare."	Judeo-Christian & Non-Judeo-Christian
(Dietz, Stern, and Guagnano 1998)	"Men, whites, the less educated, political conservatives, and those who are stronger adherents to their denomination are more likely to believe nature is sacred because it is created by God were more likely to willing to sacrifice...and pro-environmental consumer behavior was reported more frequently", "only one consistent relationship--a weak negative one between environmentalism and membership in fundamentalist sects."	Protestant (Fundamentalist, Moderate, Liberal) & Catholic
(Djupe and Gwiasda 2010)	"more evangelical clergy are addressing environmental issues... our results also suggest that there is a portion of the evangelical community that may be resistant to these efforts—those who deny the importance of environmental problems and those who only receive a sound bite from evangelical leaders on the issue, not to mention those who receive messages directly antagonistic to a pro-environmental message."	Protestant Evangelicals & Non-Evangelicals
(Djupe and Olson 2010)	"standout findings are that Protestant adherents essentially do not support more political advocacy efforts in their state, but also that there is considerable variation among Protestants. Those who prefer more state-level activity generally want more activity on the environment, although the correlation is not as strong as one might expect"	Protestant (Evangelical & Mainline) & Catholic
(Eckberg and Blocker 1996)	"We do find evidence of a 'pro-environmental' effect of religious participation," while "the negative effect of Christian 'theology' seems to be largely an effect of fundamentalism or sectarianism."	Judeo-Christian & Non-Judeo-Christian
(Feldman and Moseley 2003)	"faith-based initiatives in Appalachia seek to advance environmental reform by promoting a transformation of personal values, attitudes, and conduct in support of an environmental ethic of care."	Protestant Christian
(Foltz 2000)	"LDS-affiliated elected officials being among the most visible and audible proponents of anti-environmental views... Yet the words and actions of ecologically-minded Mormons increasingly demonstrate that such an ethic does exist"	Mormon & Non-Mormon
(Holland and Carter 2005)	"...minister's knowledge of [environmental] doctrinal statements alone does not increase the likelihood of a congregation being environmentally active, but, when ministers put their words into practice, congregations are more likely to be active."	Protestant: Presbyterian Church (PCUSA)
(Hunter and Toney 2005)	"substantial differences between Mormons and the national sample; While Mormons tended to express greater levels of environmental concern, they were less likely to have undertaken specific behaviors reflective of concern"	Mormon & Non-Mormon

Table 2.1: continued

Study	Summary of Major Findings	Religious Groups
(Kanagy and Willits 1993)	"Church attendance was negatively related to environmental attitudes. When controlled, however, there was a net positive relationship between church attendance and environmental behaviors."	Judeo-Christian & Non-Judeo-Christian
(Kearns 1997)	"evident that there is a growing range of eco-theological perspectives emerging in the United States and globally... most surprising is that of Christian stewardship" "evangelical voices of Christian stewardship stand out both in contrast to secular environmentalism and in contrast to other conservative Christians"	Protestant Christian (Conservative, Mainline, Liberal)
(Kearns 1996)	"In the mid-1980s, religious environmental activism in the United States increased dramatically"	Protestant Christian
(Lieberman 2004)	"... "faith-based" environmentalism is only present in some congregations"	Protestant & Jewish
(Nooney, Woodrum, Hoban, and Clifford 2003)	"both gender and religious fundamentalism were related to Environmental Worldview but not to the performance of Behaviors. Although women and religious liberals were more likely to espouse the pro-environment stance of the NEP... they were no more likely to perform environmentally conscientious behaviors."	Judeo-Christian & Non-Judeo-Christian
(Peterson and Liu 2008)	"Environmental worldviews, however, were not related to religiosity. Those not affiliated with organized religion were most environmentally oriented, Mormon respondents were the least environmentally oriented, and Roman Catholics and other Christians fell in the middle."	Mormon & Non-Mormon
(Ridgeway 2008)	"Some studies find a statistically significant difference in environmental attitudes and behaviors between Christians and non-Christians, others find no difference, and still others find divergent patterns in the data."	Judeo-Christian & Non-Judeo-Christian
(Shaiko 1987)	"Judeo-Christians are more likely to subscribe to a Mastery-over-Nature orientation than are non-Judeo-Christians... distinction is a matter of degree." "not as though Catholics and Protestants hold views in opposition to those of non-Judeo-Christians... when [environmental] issue preferences are evaluated in the more complete models, the impact of religious affiliation is weakened significantly." p.257	Judeo-Christian (Catholic, Protestant, Jewish)
(Sherkat and Ellison 2007)	"...church participation spurred nonpolitical pro-environmental actions. Yet, because religious participation also influences political conservatism, attendance has a negative impact on political environmental activism."	Judeo-Christian & Non-Judeo-Christian
(Shibley and Wiggins 1997)	"time and money has been devoted in recent years to activating local congregations on environmental issues" by the NRPE national organization... "ethics available to most congregations will emphasize stewardship, not eco-justice, In effect, this will reinforce the environmental status quo in the US"	Judeo-Christian (Catholic, Protestant, Jewish)
(Smith 2006)	"most faith-based environmental groups were founded recently in the early 1990s; most operate nationally with equal & lesser percentages focusing on state or local work"	Judeo-Christian (Catholic, Protestant, Jewish)

Table 2.1: continued

Study	Summary of Major Findings	Religious Groups
(Smith and Johnson 2010)	"Young evangelicals are significantly more likely than older evangelicals to think that more should be done to protect the environment"	Protestant Evan. & Non-Evangelicals
(Tarakeshwar, Swank, Pargament, and Mahoney 2001)	"findings suggest that religious institutions have the potential to support or discourage care for the environment"	Protestant: Presbyterian USA
(Wolkomir, Futreal, Woodrum, and Hoban 1997)	"Neither biblical literalism nor religious salience have independent effects on environmental concern. As hypothesized, alleged negative religious effects are spurious; however, religious salience is found to be positively associated with environmentally responsible behavior."	Judeo-Christian & Non-Judeo-Christian
(Womersley 2002)	Religious environmental movement "has become large, widespread, and officially approved by mainstream Christian and Jewish denominations and has affected the concepts of religious identity and environmental stewardship taught by them. However, it has affected normative policy analysis ambiguously if at all and has provoked marked theological, philosophical, and political opposition."	Judeo-Christian (Catholic, Protestant, Jewish)
(Woodrum and Wolkomir 1997)	"Religious fundamentalism... negatively predicted individual environmentalism," but "religious affiliation strength has positive effects on individual environmental concern, and worship attendance has positive effects on individual environment behaviors, when fundamentalism and political variables are controlled."	Judeo-Christian & Non-Judeo-Christian

association with environmental concern, a primarily negative one, and when analysts found no evidence for the relationship or saw it as spurious. Most of this research focuses on Judeo-Christian faith traditions or various denominational forms of Protestantism.

Positive association and mixed influence

Table 2.1 identifies studies where analysts find measures of religiosity corresponding positively overall with examples of environmental concern or see mixed evidence of religion's role in environmentalism. This evidence appears despite Lynn White's decades-old charge that western Christianity creates contemporary ecological crises in modern societies (White 1967).

Multiple religious behaviors, beliefs, and values correspond with various expressions of environmentalism. Church attendees who more frequently worship indicate stronger pro-environmental attitudes (Eckberg and Blocker 1996) and engage in pro-environmental behaviors more frequently (Black 1997; Kanagy and Willits 1993; Woodrum and Wolkomir 1997). Believers who more strongly identify with their denomination or religion more frequently believe "nature is sacred because it is created by God." They express greater willingness to sacrifice for environmental quality or engage in pro-environmental actions. However, this is limited to private individual *consumer* behaviors, not more public expressions of support for environmental policy (Dietz, Stern, and Guagnano 1998).

Religious-based values heighten concern about human risks from genetically-modified foods, but not hazards from pollution, chemicals, or climate change (Biel and Nilsson 2005). Frequent church attendees also care less about animal welfare (Deemer and Lobao 2011). Christian respondents most frequently *disagreed* that "human interference in nature causes disastrous consequences", while *agreeing* "humans were meant to rule over nature" *and* that "plants and animals have as much right as humans to exist" (Peterson and Liu 2008). Overall, "religious institutions have the potential to support or discourage care for the environment" (Tarakeshwar, Swank, Pargament, and Mahoney 2001).

Negative association

Table 2.2 summarizes evidence of a predominantly negative association of religion with environmental concern. It equals roughly one-third the studies demonstrating a positive or mixed association. People who attend church and worship more frequently may engage in some environmental behaviors more often, but they give far less support to increasing environmental

protection than others (Black 1997; Eckberg and Blocker 1996; Kanagy and Willits 1993; Sherkat and Ellison 2007; Woodrum and Wolkomir 1997). Religious socialization experiences such as currently attending or growing up in a “fundamentalist” Protestant church corresponds with reduced support for environmental spending (Kanagy, Humphrey, and Firebaugh 1994). A distinct theme in these findings: Conservative Protestants perform individualistic private pro-environmental behaviors rather than those supporting public or environmental policy and government regulation or action.

Early explorations by Hand and Van Liere (1984) into the role of religion contend, as White does, that in the U.S. a “mastery-over-nature” orientation prevails among people more committed to “Judeo-Christian” religions compared to those less committed or non-Christian. Later efforts focus on specific theological beliefs conceptualized as “dominion” beliefs. More strongly held dominion belief significantly corresponds with less environmental concern among religious individuals (Wolkomir, Futreal, Woodrum, and Hoban 1997). Religious conservatives are “more likely to emphasize dominion over nature than other Protestants” (Hayes and Marangudakis 2001). When aggregated, however, denominational differences in dominion belief do not correspond with variations in environmentalism expressed by Protestants, Catholics, Jews, and non-Judeo-Christians (Wolkomir, Woodrum, Futreal, and Hoban 1997).

Table 2.2: Negative Association of Religion with Environmental Concern

Study	Summary of Major Findings	Religious Groups
(Brehm and Eisenhauer 2006)	"results indicate that respondents with LDS affiliation favor attitudes reflecting the domination-of-nature perspective more than do their non-LDS counterparts"	Mormon & Non-Mormon
(Carr 2010)	"Participants in this study tended to relate their religious beliefs to a lessened belief in and/or concern about climate change... did negatively relate their faith themes to concern about the environment in general and climate change in particular."	Protestant Evangelical Christians
(Eckberg and Blocker 1989)	"...belief in the Bible, and only belief in the Bible, predicted scores on all four indexes of environmental concern and did so in the direction expected by White's thesis."	Judeo-Christian & Non-Judeo-Christian
(Guth, Green, Kellstedt, and Smidt 1995)	"the complex of ideas in dispensational theology-and not just Biblical literalism-may well condition fundamentalists, Pentecostals, and other evangelicals against active concern with environmental policies. Indeed, the better the measure we have of this theology, the stronger the correlations with environmental attitudes." p.377	Judeo-Christian & Non-Judeo-Christian
(Guth, Kellstedt, Smidt, and Green 1993)	"Environmentalism is part and parcel of a liberal religious/political worldview." "the religious and political perspectives of conservative Protestants are certainly a barrier to the development of environmental consciousness" and attitudes	Protestant (Evangelical & Mainline) & Catholic
(Hand and Van Liere 1984)	"Judeo-Christians are generally more committed to the mastery-over-nature orientation than non-Judeo-Christians, but . . . this commitment varies considerably among denominations." Conservative denominations "are more likely to emphasize the dominance of nature doctrine."	Judeo-Christian & Non-Judeo-Christian
(Kanagy, Humphrey, and Firebaugh 1994)	"both church attendance and fundamentalism have statistically negative effects on support for environmental spending"	Judeo-Christian & Non-Judeo-Christian
(Schultz, Zelezny, and Dalrymple 2000)	"Our results provide strong evidence for an association between Christian beliefs and an anthropocentric basis for environmental concern..."	Judeo-Christian & Non-Judeo-Christian

Biblical literalism and inerrancy are a proxy for dominion beliefs in other studies. These entail quantitative measures of people's agreement that the Bible "is the inspired actual word of God", "must be taken literally word for word", or "is without error in its original writings". In the U.S., those with more literal biblical views express less willingness to "spend money on the environment" (Greeley 1993). Conservative Protestants and biblical literalists are "significantly less apt to report political or private environmental behaviors" (Sherkat and Ellison 2007). Those with stronger biblical literalism beliefs do hold more anthropocentric views toward nature, but their regard for scripture does not correspond with their self-reported pro-environmental behavior (Schultz, Zelezny, and Dalrymple 2000).

Although usually weak, when a negative association appears between religion and environmentalism it occurs with a measure of conservative Protestant fundamentalism (Dietz, Stern, and Guagnano 1998). "Fundamentalism", sometimes labeled theological conservatism or biblical literalism, is conceptualized in many ways: "literal belief in the Bible, preoccupation with eschatology, denominational association, political ideology, and a variety of behavioral indicators, such as personal religious experience and listening to gospel music" (Ridgeway 2008). Members of more fundamentalist Christian denominations, who also hold stronger belief in God and express greater biblical literalism, weakly or significantly oppose U.S. government spending on environmental protection (Boyd 1999; Kanagy, Humphrey, and Firebaugh 1994). Membership in fundamentalist churches also corresponds with individual's aversion to political environmental actions. Rather than specific theological beliefs, stronger religious sectarianism better accounts for when people judge economic growth more important than the environment (Eckberg and Blocker 1996).

People more strongly affirming traditional or orthodox Christian doctrines more frequently indicate fewer environmental preferences (Guth, Kellstedt, Smidt, and Green 1993). Moral and political conservatism is a distinctive of "Fundamentalists" and those concerned with "maintaining moral standards as a high priority are less environmentally-minded" (Guth, Kellstedt, Smidt, and Green 1993). They "dismiss environmental concern as part of a liberal political agenda that they reject" (Greeley 1993). Given this negative association of fundamentalism with environmental concern, some conclude that focusing on "the complex of ideas in dispensational theology and not just biblical literalism" is necessary because the "better

Table 2.3: Little or No Relationship between Religion and Environmental Concern

Study	Summary of Major Findings	Religious Groups
(Greeley 1993)	"Low levels of environmental concern correlate with biblical literalism ..., being Christian, and with confidence in the existence of God." When other variables are controlled, "correlations between religion and environmental attitudes seem to be spurious."	Judeo-Christian & Non-Judeo-Christian
(Hayes and Marangudakis 2001)	"there is no significant difference between Christians and non-Christians concerning environmental attitudes"	Judeo-Christian & Non-Judeo-Christian
(Hayes and Marangudakis 2000)	"...in general, Christians and non-Christians do not significantly differ regarding their concern for the environment. ...religious identification is an [sic] relatively weak and inconsistent predictor of environmental attitudes and behavior across nations."	Judeo-Christian & Non-Judeo-Christian
(Hornsby-Smith and Proctor 1995)	"religion has little or no discernible impact on the emergent forms of the environmentalist politics that are increasingly found in advanced industrial societies today."	Catholic & Non-Catholic
(Kanagy, Humphrey, and Firebaugh 1994)	Christians are found to be less environmentally supportive in some measures, but effects diminish with the addition of controls. "Overall, our interpretation of these findings challenges the dominant view that those in Judeo-Christian traditions - particularly religiously conservative individuals in these traditions - are less concerned about environmental issues than are other individuals."	Judeo-Christian & Non-Judeo-Christian
(Swartz 2008)	"Evangelicals in this analysis do not appear to be significantly less likely to profess concern over climate change" "evangelicals are less likely to support green laws—largely because of their Republican affiliations and their anti-government sentiment"	Protestant Evangelicals & Non-Evangelicals
(Wolkomir, Woodrum, Futreal, and Hoban 1997)	"denominational differences in dominion belief do not translate into difference in denominational environmentalism"	Judeo-Christian (Catholic, Protestant, Jewish)
(Woodrum and Hoban 1994)	"...dominion beliefs...are not significantly associated with conventional religiosity on the individual level. On the institutional level this study finds no empirical basis for singling out churches as culpable for environmental problems."	Judeo-Christian & Non-Judeo-Christian

the measure we have of this theology, the stronger the correlations with environmental attitudes” (Guth, Green, Kellstedt, and Smidt 1995).

No evidence or spurious relationship

Some find the relationship between religion and environmental concern a red herring. **Table 2.3** depicts those who find no evidence of its association with environmentalism or see only signs of a spurious relationship. Nearly equivalent to research showing a negative relationship, this work reveals either minimal or no observable positive or negative influence of Christianity on environmental concern in the U.S. Although “being Christian” and other religious factors initially correspond with less supportive environmental attitudes, their association dissipates when controlling for measures of political conservatism—leading to charges of spurious relations (Greeley 1993).

Others caution against unmerited confirmations of Lynn White’s assertions of the anti-environmental tendencies of western Christianity and its believers (Minteer and Manning 2005; Ridgeway 2008). The strength of association between Judeo-Christian and religious conservative identity and their opposition to environmental regulations remains “very low” once analysts account for age, education, sex, and geography (Kanagy and Nelsen 1995). Distinguishing policy-related measures of environmental concern from its other expressions brings more clarity to religion’s role in environmentalism. Evangelical Protestants “are no less likely to exhibit [attitudinal expressions of] concern about climate change” than Roman Catholics, but they are more inclined to oppose environmental policy and government regulation addressing it (Swartz 2008).

Despite these refinements and caveats, Woodrum and Wolkomir (1997) and others argue non-religious factors such as “environmental apathy” or lack of environmental knowledge and information are still more consequential for believers’ environmental concerns than religiosity fostered by their institutional and local churches. Djupe and Hunt (2009) found “social sources of information” shape U.S. churchgoers’ religious beliefs and environmental attitudes more strongly than doctrinal beliefs or religiosity through how congregations serve as social networks that convey and reinforce political ideas. A few analysts oppose White’s thesis entirely, arguing Christianity does not have a singular responsibility for a negative effect on environmentalism nor does it foster solutions to environmental problems. Instead, social changes within and across Western societies driven by a “modernization process that

fundamentally changed the humanity-nature relationship through industrialization, urbanization, enlargement of scale, and economic growth has affected anthropocentric views among Christians and non-Christians alike” (Dekker, Ester, and Nas 1997).

In other words, although U.S. Protestants and Catholics more likely hold a mastery-over-nature view of human-environment interaction, the comparative differences observed with non-religious are not qualitative. Their views are not oppositional and the association of religious affiliation with preferences on environmental issues weakens under more nuanced examination (Shaiko 1987). Christians and non-Christians sometimes do not vary significantly in their environmental views whether positive or negative. Broad measures of “religious identification” intermittently predict respondents’ environmental concern. Religious differences emerge when sub-group comparisons occur between individuals in *different denominations* within the *same Christian religious tradition*. Significant variation appears in people’s “attitudes toward the environment” with respect to public policies intended to improve environmental quality or strengthen regulatory protection measures that carry corresponding economic implications and consequences (Hayes and Marangudakis 2000).

Besides questioning if religion matters for environmental concern, analysts disagree about which specific theological beliefs negatively influence it. Some argue dominion beliefs and attitudes are not uniquely Christian today. Instead, they are associated with certain social and demographic characteristics, and grounded in more comprehensive arrays of views and values. Hayes and Marangudakis (2001) found British Christians and non-Christians alike expressed dominion over nature attitudes, that lower educational attainment or less scientific knowledge most encouraged it, and atheists expressed them significantly more. Others in the U.S. find them most prevalent “among those with little formal education or environmental knowledge” and conclude dominion beliefs have more complex religious *and* non-religious origins because religious salience and church attendance are not associated with them (Woodrum and Hoban 1994). Finally, among US Presbyterian ministers of Lynn White’s religious denominational affiliation, Holland and Carter (2005) found nearly everyone identified themselves as “stewards of the Earth rather than dominions” when provided with text definitions of each position. This further confounds the association between these religion and environmentalism measures.

Biblical literalism’s role varies relative to different expressions of environmental concern. When observed it does correspond with less concern in the way White claims

Christianity reduces it, but the “effect was never strong” (Eckberg and Blocker 1989). Others find believer’s “high” view of scripture shows no direct influence on adherents’ environmental concern, concluding that the assumed or perceived association between them is spurious (Wolkomir, Futreal, Woodrum, and Hoban 1997). Even conceptualizing biblical literalism as agreement that “The story of Creation as written in the Bible is true” does not correspond with variations in denominational environmentalism (Wolkomir, Woodrum, Futreal, and Hoban 1997). More unexpectedly, biblical literalism and other typical expressions of individual’s conservative Protestant religiosity do not significantly associate with dominion beliefs (Woodrum and Hoban 1994). After finding biblical literalism and stronger belief in God (both cognitive belief religiosity measures) corresponds with weaker support for environmental protection spending, while frequent prayer (a religious behavior measure) was associated with those more willing to do so, Boyd (1999) concluded religious factors held little promise for understanding U.S. environmentalism better.

Some seek firmer foundations for religion’s role in environmentalism by focusing on conservative Protestant fundamentalism. But again, despite evidence confirming its negative association, findings are not consistent. Although Christian “religious fundamentalism negatively predicted individual environmentalism”, other religious factors still do foster “individual environmental behaviors when fundamentalism and political variables are controlled” (Woodrum and Wolkomir 1997). Although used repeatedly as a religiosity measure in quantitative studies, the importance of singling out biblical literalism for its association with environmental concern is not certain. Its influence on environmental views appears enmeshed within a larger array of religious beliefs distinct to conservative dispensational theology (Guth, Green, Kellstedt, and Smidt 1995). Although initially strongly associated together, the effect of biblical literalism on congregants’ environmental attitudes dissipates or vanishes after accounting for the influence of social sources of information in their churches (Djupe and Hunt 2009).

In response to the still ambiguous evidence for the association of religion with environmentalism, some attribute the dampening effect of dominion belief and biblical literalism on environmental concern to a more encompassing fundamentalist orientation with both religious *and* non-religious cultural foundations. In this view, “Dominion Theology” has no scriptural basis and its associated environmental attitudes are not biblically based (Eckberg and

Blocker 1996). This approach “would account for the ubiquitous Fundamentalism effect and could leave room for the positive effect of religious participation...[and] explain why we find independent effects of fundamentalist affiliation that do not clearly flow from the [Lynn White] Dominion hypothesis and why Bible belief has no independent effects [on environmental concern]” (Eckberg and Blocker 1996).

Conflating “Christian” with conservative Protestant or fundamentalist maintains both an illusory homogenous negative association between religion and environmentalism and continues yielding findings showing little to no effect of religiosity on environmental concern. The cultural foundations of conservative Christians’ views about environmental issues and problems may really rest on their “fundamentalist Biblical orientation”, but it quickly mixes with their political commitments and economic values (Hand and Van Liere 1984). Religiously conservative social activists’ “views on environmental policy are part of much more comprehensive religious and political worldviews” (Guth, Kellstedt, Smidt, and Green 1993). Individuals’ adherence to a wider, complex, but “rigid political and religious ‘story’”—rather than simple “biblical literalism”—better accounts for the contradictory expressions of environmental views with some behaviors (Greeley 1993). This likely includes the contrast observed between highly religious people’s willingness to perform individualistic private pro-environmental behaviors and opposing acting to support public policy solutions to environmental problems intended to address structural societal causes.

Another response to these mixed findings relies on structuration or cultural social theory to reconcile religion’s seemingly contradictory influences. In these quantitative investigations, religious beliefs intermix with political and economic values to influence people’s views about resource depletion and pollution issues such as the effect of human activity on ecosystems, the relationship between nature and the economy, and environmental policy (Dekker, Ester, and Nas 1997; Dietz, Stern, and Guagnano 1998; Hornsby-Smith and Proctor 1995; Kanagy, Humphrey, and Firebaugh 1994; Sherkat and Ellison 2007). This work demonstrates religion itself does not exclusively shape how people view human-environment relationships or consider environmental policy. Political factors mediate or neutralize otherwise pro-environmental intentions for Protestants who identify more strongly as political conservatives (Sherkat and Ellison 2007).

Summary

The general social bases of environmentalism among the U.S. public are clearer and more stable than the view on its religious base. Evidence shows it exists and work continues identifying which forms of environmental concern religious people typically express. Demographics describe, however, but don't explain why believers care about environmental problems or participate in the environmental movement. These structural characteristics give little insight for how religious beliefs actually shape peoples' perceptions of ecological conditions as problematic or inform their personal judgments about environmental policy. Deeper exploration into environmental concern across and within religious sub-groups in relation to social institutions and social structures is needed (Freudenburg 1991). These include factors social constructionist perspectives emphasize like different socialization experiences such as religious upbringing and inter-generational mass media effects (Kanagy, Humphrey, and Firebaugh 1994).

Three factors obscure religion's role in environmentalism. A methodological constraint is ongoing reliance on quantitative investigations that keeps analysts from exploring how religion informs highly religious people's perceptions of environmental problems. Lack of theoretical correspondence among conceptual variables and measures of religion and environmental concern exacerbates this, increasing confounding or spurious findings. And few analytic frameworks are designed to capture how individuals use religious beliefs in constructing perceptions about environmental problems and expressing views about environmental policy for addressing them. This makes it difficult to reconcile the apparently contradictory empirical results presently in the literature that describe religion's apparently competing relationships with environmental concern. The consistently weak statistical association between varying measures of religiosity and environmentalism, and inconsistent distinctions between engaging in individual pro-environmental behaviors and expressions of public support for environmental policy, continues reflecting the lack of clarity.

The fundamental challenge these factors pose is illuminating better why religious people do (or do not) express environmental concern. Increasing the use of qualitative methodologies can strengthen this effort. Combining it with social constructionist approaches to social problems increases analyst's capacity for identifying which religious beliefs, attitudes, and values inform people's understanding of specific ecological conditions. Implementing this is the

goal of the analytic framework I use to explore the role of religion in conservative Protestant's perceptions about global environmental problems.

Analytical Framework of Case Study

Evangelical Christians and Climate Change

Risk societies are marked by disruptive and contaminated ecological conditions resulting from technological and industrial practices that organize them (Beck 1992). Many of these problematic conditions exist unseen and appear far removed from citizens' everyday lives. Without direct knowledge or access to scientific information about them, people choose who to trust when forming opinions about environmental problems or rely on themselves and trusted others for what they learn. Environmental movements actively work to increase public environmental concern about threatened ecosystems and build support for environmental policies to address them. One segment of US society witnessing greater efforts at this appears in the increasing "faith-based" environmentalism and the activism of religious people on environmental issues and global environmental change. Although work mapping the specific social and demographic boundaries of this religious social base continues advancing, efforts at understanding religion's role in environmental concern lag behind. This includes clarifying the active means by which individuals' use religious beliefs when constructing perceptions of global environmental problems. Two aspects of the prior research in this area warrant reassessing current strategies for examining the association of religion with environmentalism.

First, a broader analytic focus is needed that does not commit itself to a single measure for parsing religion's apparently complex role in public environmental concern. Broad, quantitative population surveys excel at identifying which religious segments of the US public portray the greatest or least environmental concern among them. But three decades of mainly quantitative investigation still offers contradictory evidence on which religious beliefs, attitudes, values, and dispositions are associated with environmentalism or what role these have in religious people's perceptions of environmental problems. To what extent are dominion and biblical literalism religious beliefs truly foundational to a Christian's environmental concern? What does "Biblically-based stewardship" mean to highly religious people with respect to local versus global environmental problems? Although a cross-section of individuals across faith traditions and Protestant Christian denominations express environmental concerns in ways

comparable with their non-religious counterparts in US society, why do most conservative Protestants engage primarily in private, individual, pro-environmental behaviors?

Second, a deeper exploration is necessary into religion's significance for environmental policy. The literature suggests a consistent association between conservative Protestantism and public opinion against policies and government action to address environmental problems. However, this relationship is ambiguous too and exactly which theological tenets are significant remains murky. How do religious beliefs inform highly religious people's views about personally responding to environmental problems either through personal lifestyle changes or by addressing them with public policy? Does the entire fundamentalist religious disposition underlie opposition to environmental policy? Or are only certain religious sentiments such as high supernatural beliefs or eschatology ideas about the "end times" of the world consequential when believers consider global environmental problems?

I address these two aspects of the literature on religion and environmental concern with a qualitative investigation into conservative Protestants' views on changing global ecological conditions deemed problematic by many. It features a case study of evangelical Christians who live in the Dayton, Ohio area and their perceptions about climate change. Other qualitative investigations focus mostly on religious elites or leaders and organizers active in the emerging religious-based environmental movement. Using a social constructionist approach, I explore what role religion plays in citizens' public understanding and concern about this global environmental problem, and lay religious believers' views about addressing it.

This case is fitting for three reasons. First, climate change is characteristic of the ecological disruption wrought by the risk society's processes of industrial production. Its organization of modern life is based on fossil fuels for gasoline transportation, coal-fired and natural gas-based electricity generation, petroleum-based consumer products, and more. All of these transparently increase concentrations of greenhouse gases into the Earth's atmosphere. This results in gradually warming atmospheric and ocean temperatures, leading to more rapid arctic and glacial ice melt, sea level rise, ocean acidification, and other large-scale ecosystem changes. These changing molecular atmospheric proportions bring corresponding fluctuations to climatic patterns such as increased rates and intensity of flooding, droughts, hurricanes, snowstorms, and other extreme weather events whose ecological consequences disrupt and destroy people's everyday lives.

Second, climate change is an illustrative example of the social construction of a contemporary global environmental problem. This can be stated without discounting climate science or the ontological reality of this ecological phenomenon and its consequences. Climate scientists have the closest access to information about it, but even their expert knowledge is mediated by technology and indirectly obtained. Most people, including the most active climate protection advocates, are far removed from direct knowledge about actual conditions within the Earth's atmosphere. This is different from those with direct experience of its consequences and impacts that disrupt peoples' everyday lives, especially who do not live in modern societies where disbelief in climate change is more endemic.

Furthermore, although it is seen by a majority as a pressing, if not urgent, instance of global environmental change, this view is not equally held among U.S. citizens. There are those who deny it is happening and who vigorously contest the definition and meaning of anthropogenic climate change as an environmental problem. Among segments of U.S. society most likely to hold these views, conservative Protestants are the most separatist in their perceptions. Many self-identified highly religious believers are the most skeptical that climate change is happening or that human activities contribute to it. Simultaneously, a growing number of evangelical Christians, including younger generations, are involved in climate activism and the larger U.S. environmental movement's efforts toward moving policymakers to taking substantive action for greater climate protection. U.S. conservative Protestants illustrate the contradictory relationship between religion and environmental concern by what they say and do, even if they share the same beliefs.

Third, focusing on evangelical Christian's perceptions of climate change offers opportunity to observe which religious factors may inform public opinion on environmental policy and how they do so. Frequent measures for environmentalism ask religious peoples' willingness to support broad societal actions (government policy or regulation) toward the generic "environment" at the national or global scale. This case study offers climate change as a specific example. Most environmental advocates' calls and social movement campaigns to address global climate change include proposals of U.S. national or international policy responses. Inquiring directly about this global environmental problem makes it easier to observe religious beliefs people may rely on in their views about addressing it to the extent individuals deem them relevant.

I use the following broad questions to frame my case study and guide my exploration of religion's role in the environmental concern of highly religious people about global environmental problems: What religious beliefs appear with evangelical Christians' understandings of climate change and scientific information about it? What religious beliefs inform evangelical Christians' perceptions of climate change as an environmental problem and its risks? What religious beliefs, attitudes, or values guide evangelical Christians' views on responding personally to it or using environmental policy as a means to address climate change?

CHAPTER 3

RESEARCH STRATEGY

The central question I explore in this dissertation is how religion informs public environmental concern about global environmental problems among highly religious people in U.S. society. I consider it with a qualitative approach featuring a case study of conservative Protestants' perceptions of global climate change. The accounts I present are drawn from in-depth, semi-structured interviews with self-identified evangelical Christians attending churches in the greater Dayton, Ohio area. In this chapter, I describe the research strategy, participants, and the methods I use to analyze the data. The overall goal of this research is a clearer understanding of the relationship between religious beliefs and environmental concern.

Data Collection Strategy

By intent and design, qualitative research offers analysts the means for "inquiring into the meaning individuals or groups ascribe to a social or human problem" (Creswell 2006). Environmental sociologists applying a social constructionist perspective to social problems employ qualitative research for investigating peoples' perceptions of ecological conditions and their actions to define them as contaminated, dangerous, or not a problem (Norgaard 2006b). Case studies represent one means for examining how structural and cultural forces organize these definitions of reality, individual behaviors, actions of other social actors, and the structure of institutions (Cable, Shriver, and Mix 2008).

The key advantage of case study designs is allowing researchers to obtain new knowledge through an intentionally deep exploration of social phenomena (Gerring 2012), particularly complex ones (Yin 2009). A case study is an appropriate method when analysts prize rich description over generalizability (Gerring 2001) and intend to pursue exploratory research questions (Yin 2009). These advantages correspond with the emphasis of the social constructionist perspective: analyzing people's constructions of meanings by examining natural-language data (Creswell 2006).

I adopt a case study approach because my research purpose is exploratory, the theoretical concepts on which I focus are multi-faceted, and existing findings show the known association between them murky. Individuals' express myriad forms of public environmental

concern with respect to countless aspects of local, national, and global ecosystems (Dunlap and Jones 2002). Religion's role in this remains unclear even after decades of study by social scientists (Proctor and Berry 2005), partly because of the theoretical range in analysts' conceptualization and reliance on quantitative, broad-based sampling.

Evangelical Christians' views on climate change who live in Dayton, Ohio are relevant to the extent their socio-demographic characteristics reflect those of the larger national population of conservative Protestants. "Just as a large sample of units reflects on a broader population so might a small sample consisting of a single unit, studied intensively" (Gerring 2012). Participants in this research evidence religious beliefs typical of conservative segments of Protestant Christianity in the U.S. and attend churches associated with its characteristic denominations.

The case study comprises in-depth, semi-structured interviews with 52 evangelical Christian adults. Although less in comparison to survey methods, interview sample sizes typically are smaller because of the time and expense required for interviews, the quantity of data generated, and the complexity of data analysis (Singleton and Straits 1999). This data collection method generates comparatively large amounts of natural language data relative to the more easily quantifiable information that survey research obtains.

Semi-structured interviews offer researchers simultaneous flexibility and control that aids the investigator's ability to draw parameters on discussions while allowing openness within those boundaries (Singleton and Straits 1999). This feature enables collection of qualitative data restricted to participants' views on global climate change but still making it possible for individuals to discuss other topics. Although an ecological phenomenon and scientific questions is the core subject of this inquiry, semi-structured interviews also capture the emergence of religious and non-religious factors informing peoples' perceptions. Participants may express their religious views about various matters whenever they wish, whether specifically or directly asked about them or not. For investigators, facilitating these kinds of discussions requires an active listening stance and the adaptability to "branch back" conversations when participants go too far beyond the research topics of interest (Babbie 2011).

Data Collection Processes

Participants are self-identified evangelical Christian adults, 18 years and older, living in the greater Dayton metropolitan area of Montgomery County in southwest Ohio. This area includes an urban center (Dayton), neighboring suburban areas, and a surrounding rural region.

Participant Recruitment

Before interviewing participants, I conducted background research by visiting two large conservative Protestant churches to determine if they were suitable sites for recruiting participants. I compared the churches' official declarations of religious beliefs ("Statement of Faith or Doctrine") with denominational self-definitions (N.A.E. 2012) and professional survey definitions of "Evangelical Christians" (Barna 2007). I also attended worship services and examined print and online promotion materials, drawing on my personal knowledge and experience of U.S. evangelical Christian sub-culture.

Family members and their acquaintances living in the region served as initial key informants, or "individuals with whom the researcher begins data collection because they are well informed, are accessible, and can provide leads about other information" (Creswell 2006). Key informants serve as "gate-keepers" who function as "sponsors," endorsing analysts, legitimizing their research efforts, and facilitating contact between investigators and potential research participants (Creswell 2006). These key informants facilitated my subsequent recruitment of potential research participants through their long-time membership in one of the large churches and extensive social network within it. My interaction with them took place through direct, face-to-face conversations. I also contacted lay and clergy leaders of the other large evangelical church by e-mail to ask about their willingness to participate, and to inform others in their congregations about the possibility of being involved the study.

As I interviewed participants, I continued recruiting through snowball sampling, a referral technique reflecting people's social networks (Singleton and Straits 1999). In this method, participants are asked to identify and contact others who meet specified research eligibility criteria (Babbie 2011). I asked participants, and those who declined interviews, to provide me with the names of two or three others who might be willing to speak with me if they were comfortable doing so (**Appendix 3.1: Participant Recruitment Materials**). I continued doing this until I completed 53 interviews.

Participant Characteristics

Table 3.1 on the following page summarizes select social and demographic characteristics of all participants in the case study. Nearly equal numbers of women (28) and men (24) participated. Almost everyone (96 percent) self-identified as white or Caucasian. Participants' birth years span from 1924 to 1982 and younger people are underrepresented. This likely reflects both the typical age of many people in my original key informants' social network and the increased availability of older individuals to be interviewed during work hours on weekdays. A slight majority of participants was 35 to 54 years old (55.7 percent) and a little more than a third was 55 and older (34.6 percent) when interviewed. More than three-quarters (44) are married; most participants have children (82.7 percent).

Individuals included in this case study are more educated overall compared to U.S. society. More than three-fifths (44) have undergraduate college degrees, or hold more advanced degrees and professional training. Their overall income also is not representative of the general population. Barely a fifth of everyone (21.2 percent) earned \$49,999 or less annually in household pre-tax income in 2008. An equal number of participants (36.5 percent) either earned between \$50,000 and \$89,999 or had \$90,000 or greater in annual family household income.

The evangelical Christians I interviewed are nearly uniform in political affiliation and behavior. Only one person each identified as either a Democrat or Independent. Everyone else who was willing (42) declared themselves conservatives, Republicans, or both. No one voted for Democratic candidates (Senators Al Gore or John Kerry) in the 2000 or 2004 U.S. presidential elections. Almost everyone (94 percent) voted for President George W. Bush of the one hundred U.S. presidential votes that participants disclosed to me. The two exceptions were selections made for Reverend Patrick Buchanan and consumer rights activist Ralph Nader.

The Interviews

I interviewed fifty-three (53) evangelical Christians living in the greater Dayton, Ohio area over two periods. Wave one interviews (24) occurred from Thursday, 14 August through Thursday, 21 August 2008. A second wave (29) took place from Saturday, September 20 through Saturday, September 27 2008. The accounts reported here are drawn from fifty-two interviews (N = 52). One person withdrew from the research immediately after concluding the interview.

Table 3.1: Summary of Participant Characteristics (N = 52)

Characteristics	Participants	
	Number	Percentage
Sex		
Female	28	53.8
Male	24	46.2
Skin Color / Ethnicity		
White	50	96
Black	1	1.9
Asian	1	1.9
Age		
34 years and younger	5	9.6
35 to 54 years	29	55.7
55 years and older	18	34.6
Educational Attainment		
High school, 2 year community college or vocational school	8	15.4
4 year college, MA, PhD, or further professional training	44	84.6
Total Annual Household Income		
\$49,999 or less	11	21.2
\$50,000 - \$89,999	19	36.5
\$90,000 or greater	19	36.5
Refused to disclose	3	5.8
Occupational Status		
Professional/Military	13	25.0
Management/administration	09	17.3
Technical	05	9.6
Teacher	06	11.5
Clerical/Service	07	13.5
Homemaker, Home educator	12	23.1
Marital Status		
Married	44	84.6
Single or never married	6	11.5
Divorced	2	3.8
Children		
Living at home, attending college, with families of their own	43	82.7
None	9	17.3
US Presidential Votes (2000 and 2004)		
Republican (George W. Bush)	98	94
Democrat (Senator Gore, Senator Kerry)	0	0
Other (Rev. Patrick Buchanan, Ralph Nader)	2	1.9
Unable to determine	4	3.8

Table 3.1: continued

Characteristics	Participants	
	Number	Percentage
Town of Residence		
Kettering	19	36.5
Centerville	11	21.2
City of Dayton	10	19.2
Other	12	23.1
Church Attending		
Fairhaven Christian Missionary Alliance	29	55.8
Apex Community Church	7	13.5
Patterson Park Church	4	7.7
Other	12	23.1
Interview Wave		
Wave 1: 14 – 21 August 2008	23	44.2
Wave 2: 20 – 27 September 2008	29	55.8

I conducted interviews at times convenient for participants, speaking with them in their homes, public spaces such as cafés and library quiet study rooms, or in meeting rooms of the church they attended. When people indicated a willingness to participate, I provided a description of the research and a copy of an informed consent form (**Appendix 3.2: Study Information Sheet and Consent Form**). I scheduled and confirmed interviews with participants by e-mail, phone, or in person.

When participants do not change the sequence of subjects discussed, interviews generally follow a three-part topical order (**Appendix 3.3: Interview Guide Materials**). The first part focuses on participants' accounts of their religious experiences and aspects of their backgrounds. I began by asking about the role their faith played in their everyday lives. In the second portion, I drew individuals' attention more directly to contemporary events. I asked them about their views on the relationship between religion and politics because of U.S. evangelicals' historical and contemporary involvement in it, and since it was a current subject of national political debate. Another topic in this second part was participants' opinions about the present state of the country and the direction they felt it was headed. Here I specifically asked about their concern about current or future social and environmental problems, if people did not already refer to them.

I direct conversations in the third part of interviews toward a deeper exploration of participants' views about environmental problems. I focus on two dimensions (general, specific) of public environmental concern in this final section. The first portion broadly explores peoples' views (beliefs, attitudes, values) underlying their generalized concern about the environment. I offer participants a series of open-ended statements as probes to identify whether religious, political, economic, or other cultural factors inform their social constructions of the relationship of humans with the natural environment, overall perspectives on environmental problems, and general views about environmental regulation. I use these statements to transition interview conversations toward the topic of my specific research interest (climate change) and to obtain qualitative data relevant to previous inquiries of religion's relationship with environmental concern, especially among conservative Protestants.

The five open-ended statements I offer participants are based on the New Ecological Paradigm (NEP) quantitative survey approach used by analysts examining religion's association with environmentalism (Hand and Van Liere 1984; Kanagy, Humphrey, and Firebaugh 1994; Nooney, Woodrum, Hoban, and Clifford 2003; Peterson and Liu 2008; Schultz, Zelezny, and Dalrymple 2000; Smith and Johnson 2010). In addition, while other scholars examining religion's role may not directly rely on NEP items, they also use comparable measures of environmental concern (Dekker, Ester, and Nas 1997; Dietz, Stern, and Guagnano 1998; Djupe and Hunt 2009; Eckberg and Blocker 1996; Guth, Green, Kellstedt, and Smidt 1995).

The NEP framework is a survey research method designed to gauge individuals' overall orientation toward the natural environment (Catton and Dunlap 1980). Analysts calculate respondents' predominant ecological "paradigms" by summing their Likert-style responses of agreement or disagreement to a 15-item index. Within the index, three statements each tap five facets of individuals' ecological worldviews: degree of anti-anthropocentrism, rejection of human exemptionalism, belief nature's balance is fragile, belief ecological limits exist to economic growth, and belief an ecological crisis is possible (Dunlap, Van Liere, Mertig, and Jones 2000). Due to the increased time required for unstructured interviews and use of open-ended questions, I use a single hybridized version of the three statements from its quantitative survey application to tap each of the NEP's five facets and elicit participants' views about each one in my qualitative approach. During interviews I use the five NEP statements included in the

interview guide to identify and more deeply explore cultural factors informing individuals' ecological worldviews while transitioning conversations toward a discussion of climate change.

The central topic of interest in this case study is the role of religious beliefs in evangelical Christians' perceptions and understandings of anthropogenic global climate change. Many participants reference and mention climate change voluntarily in response to the NEP-based statements or earlier in the interviews. When this did not happen in my conversations with people, I specifically brought up climate change at the end in this second portion of the final (third) section of interviews. This reflects my focus on a narrower dimension of public environmental concern than that assessed by the previous open-ended NEP statements: individuals' knowledge, perceptions, and responses to a specific example of an ecological condition or environmental problem (climate change). Reports of participants' responses to the open-ended NEP statements in the findings (Chapters 5, 6, and 7) only occur to the extent that people discuss climate change when responding to them and reference their religious beliefs. Specific discussion in this dissertation of evangelical Christians' views about the facets of ecological worldviews tapped by the NEP statements only occurs intermittently as a result.

When I discuss anthropogenic global climate change with participants, whether at the end of interviews or as appropriate when they bring it up, I make an extended inquiry into their views in a manner informed by previous qualitative investigations of public understanding about it (Kempton, Boster, and Hartley 1996) and other quantitative surveys of public opinion about climate change. Although the specific wording I use varies occasionally, discussions of climate change with participants focus on their beliefs about if it is happening, whether human activity contributes to it, its consequences or impacts; views about and reactions toward its perceived risks or threats; perceptions of and trust in sources of information about climate change; intentions of supporting government actions to address it or willingness to make changes in their personal lifestyles in response to it; self-reports of individual climate-related or personal behaviors reducing ecological impacts on the natural environment; and other related topics that vary depending partly on the subjects participants bring up as they co-direct the direction or topics discussed during the un-structured interviews.

I digitally recorded audio of all interviews, which ranged in length from 27 minutes to a maximum of 2 hours and 44 minutes. This resulted in a total 4,080 minutes of conversation.

Coding

The “key process in the analysis of qualitative social research data is coding—classifying or categorizing individual pieces of data – the aim of data analysis is the discovery of patterns among data, patterns that point to a theoretical understanding of social life” (Babbie 2011). These interpretative activities by researchers to describe and understand participants’ perspectives involve reviewing their accounts multiple times and are similar to grounded theory analytic techniques. It is amenable to “a social constructionist perspective that includes emphasizing diverse local worlds, multiple realities, and the complexities of particular worlds, views, and actions” as well as revealing the “beliefs, feelings, assumptions, and ideologies of individuals” (Creswell 2006). Coding broadly encompasses an overall iterative, dialectic between various data processing activities and analysis steps by qualitative researchers.

I transcribed interviews along with a team of graduate and undergraduate student transcribers, employed through funding provided by Houghton College. Each undergraduate student transcriber participated in a training session that included orientation to audio playback and editing software, instructions for recognizing and managing significant vocal pauses, and techniques for maintaining consistency in transcription text format for speakers (interviewer versus participant) or indicating undecipherable portions of interviews’ audio recordings. The graduate transcriber team leader and I reviewed completed transcriptions for errors. I listened to audio while reading transcripts to verify accuracy, make corrections or formatting revisions, and insure the overall integrity of the printed transcript versions of participants’ accounts.

I used free digital audio editing software (WavePad 2013) available via the Internet to convert participants’ natural language recorded during interviews from its original electronic form to text-based data compiled in Microsoft Word documents amenable to coding.

Direct coding of participants’ transcripts for the purposes of examining how evangelical Christians perceive climate change, and the role of religion in their perceptions, occurred in several iterative stages. My first initial coding of people’s interviews was organizational. I read each transcript specifically to identify which portions corresponded with the three major parts of the interview guide and inserted topical headings designating them. I also added sub-headings to indicate specific content from the interview guide and find it more easily.

Three objectives guided the second coding phase. The first two include identifying specific social and demographic characteristics, and applying an initial categorization scheme to

participants' discussions based on previous relevant research on religion and environmental concern. In this phase I used highlighting features of MS Word to designate different types of talk or discourse (religious, political, economic, environmental, climate change) in each person's interview transcript and formatted text (word, phrases, sentences) to indicate mention of religion and environmental concern variables identified in the literature.

The third objective in this second stage of manual coding and analysis was forming comparative sub-groups among the 52 participants with respect to my research purpose and existing conceptualizations of environmental concern. The central goal of this dissertation is exploring the role of religious beliefs in conservative Protestants' construction of their perceptions of environmental problems. Individuals express myriad examples of concern about nearly limitless instances of ecological conditions and scholars empirically examine numerous examples of its different forms (Dunlap and Jones 2002). "Environmental concern is a multidimensional theoretical concept that reflects the degree to which people are aware of environmental problems, believe they are serious and need attention, are willing to support efforts to solve them, and actually do things that contribute to their solution" (Routhe, Jones, and Feldman 2005:878). I pursue this case study's research goal by profiling Ohio evangelical Christians' environmental concern about anthropogenic global climate change and examining how religion informs it.

Although this research obtains qualitative data reflecting these four different dimensions of participants' environmental concern about climate change, its primary goal is not a comprehensive, categorical quantification of the degree of each individuals' climate change concern. Instead, this dissertation focuses on identifying how people rely on their religious cultural resources or mental schema to interpret it. It reports how religion informs individuals' understanding, disposition, and behavioral stance toward it rather than offering a judgment about the scope and depth of their climate change concern. Participants are distinguished from one another in the theoretical or technical sense on the basis of certain dimensions of their environmental concern about climate change (and not others) for analytic purposes only to illustrate variations (or the lack thereof) in religion's influence.

Analysts report variations in public environmental concern about climate change in several ways. Previous quantitative assessments based on national-level surveys use environmental concern's various dimensions (beliefs, attitudes, intentions, behavior) to

categorize individuals among sectors of U.S. society. One method consistently used since 2008 by the Yale Project on Climate Change Communication employs a 3-item index to differentiate respondents by their strength of belief in anthropogenic global climate change, concern about its effects, and motivation to support national policies to address it (Leiserowitz, Maibach, Roser-Renouf, Feinberg, and Howe 2013). Individuals then are segmented into “Alarmed, Concerned, Cautious, Disengaged, Doubtful, or Dismissive” audiences based on their responses to these close-ended survey questions. Another method follows the social bases approach to environmental concern and profiles conservative white male respondents’ denial of climate change through their beliefs about climate science, perception of climate scientists’ consensus about anthropogenic global climate change, and degree of personal concern about it (McCright and Dunlap 2011a).

I make the methodological choice for *reporting* individuals’ views about climate change in accordance with my primary research purpose and to emphasize aspects of the role of religious beliefs in them. In this case study, I differentiate participants into three sub-groups for exploratory purposes by the most fundamental level of their constructions of their perceptions about climate change—peoples’ belief that it is happening and that human activity (anthropogenic forcings) contribute to it in some degree (see Chapter 5 introduction). I assign individuals to a “Believers” group if they indicate clearly in their interview responses some agreement (whether minimal or greater) to these two basic scientific beliefs about climate change. If participants disagree human activity contributes to it and state they believe it is a naturally occurring phenomenon with other causes, I categorize them as “Deniers.” Finally, I identify people as “Uncertains” if they provide no clear indication in their responses of their views about these climate science beliefs and indicate they do not know, are unsure, or remain uncertain about their perceptions of it despite me directly asking about it. Utilizing additional measures of individuals’ environmental concern about climate change and including, for example, participants’ perception of the seriousness of climate change as a criterion for group comparisons masks notable variations in their views and potentially obscures religion’s role. Although nearly half of all participants do not believe human activity contributes to climate change while one quarter do, nearly all of them together do not evaluate its effects as significantly concerning (see Perceptions of Climate Change as Environmental Problem, Chapters 5, 6, and 7).

I conducted the final third stage of coding using NVivo software analysis procedures (NVivo10 2013) for more complex and nuanced qualitative data analysis within and across participants' transcripts (Bazeley 2007). My purpose in this phase was exploring more deeply individuals' perceptions of climate change; identifying religious beliefs, attitudes, and values appearing in their discussions of it according to themes emergent from participants' talk; developing thematic categories for describing the role of religion in Ohio evangelical Christians' constructions of their perceptions of climate change; and presenting them with respect to the three sub-groups formed for analytic and reporting purposes (see Chapters 5, 6, and 7).

CHAPTER 4

EVANGELICAL CHRISTIANS IN U.S SOCIETY

Environmental policymakers respond to environmental movement pressure and public opinion expressed about environmental problems. The environmental movement gains leverage for desired environmental policy by influencing public opinion and by claiming to represent segments of the population based on public opinion polls. Influencing public opinion about contemporary environmental risks is complicated by the ambiguous nature of certain environmental problems. Unlike vanishing species or burning rivers, the biophysical nature of global climate change and its relationship to human activity is not directly visible, even to climate scientists.

Under these ambiguous conditions, non-scientific structural and cultural factors can shape public understandings of scientific phenomenon and information. One dimension where this occurs is everyday life social interactions. People tend to be more influenced by similar others than by science, scientific knowledge, and the expert scientists generating it. Similarity between individuals depends on the importance placed on social groups to which a person belongs. Social groups are established and formed on the basis of various types of personal characteristics, interests, and social institutions such as religion.

For highly religious persons like many conservative Protestants, this includes the local churches they attend and other Christians they interact with regularly at church and in homes throughout the week. In these interpersonal contexts, people share opinions on myriad issues and problems, express political preferences, and occasionally are motivated to personal or political action. As a social movement, evangelicalism, “is itself best understood not only by its distinct beliefs and practices, but also by its interaction with American culture and politics” (Swartz 2008).

Brief History of American Evangelicalism

Historians, political scientists, sociologists, and others document multiple phases of conservative Protestants’ collective societal action and organized evangelistic efforts throughout the past centuries. Their first emergence occurred early in the development of modern U.S. society with the “First Great Awakening” beginning in 1739 (Noll 1992). This period witnessed

the onset of wide-spread and rapidly increasing expressions of certain theological forms of conservative Christianity. Missionaries of various European origins initially nurtured its establishment. Native-born preachers, proselytizers, and evangelizers then encouraged its expansion. Another religious resurgence, a “Second Great Awakening”, soon followed in 1790, continuing into the 1800s (Noll 1992). One significant change wrought within U.S. society by this religious fervor: Evangelical “church membership had doubled to twenty-five percent by 1860” (Hulsether 2007).

Although increasing proportions of U.S. society attended conservative Protestant churches, a separatist momentum grew as efforts at “transforming the culture” or taking control of various religious and other modern social institutions failed (Hulsether 2007). This “fundamentalist” sub-culture was constructed intentionally following the 1925 Scopes evolution trial in Dayton, Tennessee (Balmer 2010). By 1950, many conservative Christians in the U.S. “socialized almost entirely within that world, and so comprehensive was this alternative universe that it was possible...to function with virtual autonomy from the larger culture”, having little social interaction with anyone outside of it (Balmer 2010).

Signs of countercurrents to this isolationism from U.S. culture and voluntary non-participation in larger societal institutions such as politics and higher education appeared mid-century. Previously self-identified fundamentalist conservative Christians grew dissatisfied with their self-imposed separatism. They began meeting specifically to consider strategies for reversing this orientation among them, beginning with a spring 1942 “National Conference for United Action Among Evangelicals” (Smith 1998). As efforts increased by these more moderate “fundamentalists” to differentiate themselves from separatists through the formation of social movement organizations such as the National Association of Evangelicals, modern U.S. evangelicalism emerged (Hulsether 2007). This self-identified “evangelical” re-engagement with U.S. society began in earnest during the turbulent decades of social upheaval and change during the 1960s and 1970s (Smidt 2013). The progress and advance back into the wider culture by this more activist conservative Christian religious tradition became symbolized when “Newsweek declared 1976 ‘The Year of the Evangelical’” (Balmer 2010). After 1980 or so it was “no longer a counterculture” (Balmer 2010).

Conservative evangelical Christians became thoroughly entrenched within broader U.S. society when they actively entered politics and government in the late twentieth century. “The

Christian Right of the late 1970s and 1980s increased its "formalization" as a social movement by establishing organizations with professional staff who implemented strategies for obtaining goals desired by its members and constituents (Blumer 1969). One of the first examples during this period was the "Moral Majority" organization founded in 1979 by the Southern Baptist pastor Jerry Falwell. Although its leaders claimed broad support, it "was made up of a minority of white, middle class Protestants, as was the social movement it epitomized: the New Christian Right" (Lee 1991). In 1989, former presidential candidate and religious broadcaster Pat Robertson started the Christian Coalition, another national religious political advocacy organization comprised of a spectrum of conservative Protestants whose primary mission was voter mobilization. Ralph Reed was its executive director until 1997 when he left to start a political consulting firm. For some observers, the efforts of the "small gathering of restless fundamentalists" begun mid-century "fundamentally altered the landscape of American religious identity and practice" (Smith 1998).

Evangelical Christians are no strangers to U.S. politics. "Throughout American history, evangelicals have exhibited a cyclical pattern of political engagement and withdrawal, and more than a quarter century has now passed since the most recent wave of evangelical involvement in politics began" (Smidt 2013). Despite their stated aversion for public policy actions by the federal government, conservative Protestants now actively involve themselves in organized and sustained political action "from the presidency to the local school board" (Balmer 2010). Evangelical Christians' vigorous and cohesive political activities compared to other voting blocs in U.S. society give them the semblance of a social movement and make them consequential to some policymakers in many areas of public policy (Wilcox and Larson 2006).

Contemporary Religious Beliefs and Doctrine

Today in the U.S. evangelical Christians are not a homogenous group, but differ on religious and political grounds" (Wilcox 1989). These "doctrinal and religious differences which divide evangelical, fundamentalist, and charismatic Christians" translate into different political histories and activities (Wilcox 1988). Although the conceptual boundaries of "Evangelical Christian" often are blurred, a set of religious beliefs, attitudes, and behaviors characterize them. Certain cultural characteristics are pervasive such as a strong individualism (Hollinger 1983), reflected in the priority they give to a personal relationship with God. Other expressions

of religiosity and theological tenets also bind them together, creating affinities between them and others outside evangelicalism.

Ninety percent of adults affiliated with evangelical churches are “absolutely certain” of their belief “in God or a universal spirit”, and this is comparable with historically black churches (90%), Mormons (90%), and Jehovah’s Witnesses (93%). More than three-quarters of all evangelical adults nationally (79%) say religion is “very important” in their life. More than half attend church either more than once a week (30%) or weekly (28%). Almost eight of ten evangelicals pray daily (78%) and almost a third (29%) say they “receive a definite answer to a specific prayer request at least once a week.” Almost sixty percent believe the Bible is the “Word of God, literally true word for word” (59%), while close to a third (29%) agree it is the “Word of God, but not literally true” (Pew 2007).

Several distinct religious beliefs and broader theological perspectives mark both self-identified evangelical and fundamentalist conservative Christians. Some reflect views toward religious texts or the Protestant Scriptures. The typical interpretive stance of most evangelicals toward the Bible includes a strong literalist view, belief in its inerrancy, and conviction it “has authority” over their everyday lives. Their conception of the divine reflects a great significance they place on the “sovereignty of God” or belief that God controls events that happen on Earth. This potentially distant dimension of their religious experience becomes connected to religious believers through a “personal faith and relationship with Jesus” that reflects a “high supernatural” belief or perception that God is involved closely in a person’s everyday life.

Evangelical Christians view human nature as inherently “sinful”, a state resulting from choices made by humans at the beginning of time that has both human and ecological consequences. Reflecting and integrating many of these previous beliefs, they perceive the origins of the natural world as an effect of divine agency, coming into creation directly through the voice of God. This array of religious views also coalesces into a complex theological perspective on the future of Earth. Most evangelical Christians’ response to this question wholly or in part reflects interpretations based on an “End Times” eschatology and dispensationalist orientation that expects a second coming of Jesus Christ as the divine Son of God. Evangelicals’ hope in his imminent return is the sign they believe will herald the end of world (Barker and Bearce 2012; Curry-Roper 1990; Strozier and Simich 1991; Weigert 1988).

The cultural distinctions of these conservative Protestants and their religious beliefs influence the matters of this world that concern them, their organized political activity in responding to them, and their views about the role of public policy in addressing social or environmental problems.

Social Concerns and Political Action

Besides these common religious practices and beliefs, many evangelical Christians and conservative Protestants share a similar interest in a narrow range of social concerns. Half (50 percent) of those attending churches in the evangelical tradition say government should do more to protect morality in society, ranking third after Mormons (54%) and Muslims (59%) among various U.S. religious traditions (Pew 2007). They discuss the current state of America and the direction it is headed from the pulpit, via radio or television, in print, and online. Among myriad possible concerns, two stand out: issues of sexuality and personal spirituality. Although not all evangelicals view these as problematic conditions, their priority is reflected in the rhetoric of elites within the evangelical movement, discourse of national and local leaders, and national polls of the general public.

Abortion, "gay marriage", and human sex-trafficking illustrate aspects of human sexuality alarming many. "More than 9 out of 10 evangelicals believe abortion is a major problem - easily making it their top concern. And nearly 8 out of 10 evangelicals say that homosexuality is a major challenge facing the nation" (Barna 2008b). They even perceive concerns like these motivate others like themselves. Prior to the 2008 presidential election, "48% of evangelicals believe it is accurate that their voting peers will focus primarily on abortion and homosexuality" (Barna 2008b). Among the nearly 15 million evangelicals who voted, their top cited concerns were "abortion (94%)...personal debt of Americans (81%), the content of television and movies (79%), homosexual activists (75%), and gay and lesbian lifestyles (75%)" (Barna 2008a).

Evangelicals oppose the constitutionally mandated prohibition of prayer in public schools (Schwadel 2013; Stanley 2013) and discussion of evolution in science textbooks (Chang 2006; Kaufman 2010). They see these as removing God from public life along with secular "attacks" on Christmas happening in public spaces (Cooperman 2006). They take them as symptomatic of deeper spiritual problems "plaguing" US society and signs of the "ensuing

decline of America" (House 2012; Rogers 2013). Participants in this case study mentioned all of these as examples of social problems that personally concerned them. Abortion and government recognition of marriage for homosexuals were the two top issues most frequently cited.

The selective attention U.S. evangelical Christians give certain problematic social conditions translates into their public policy preferences. During the 2008 presidential election, 40 percent stated a "candidate's position on moral issues" was "their primary reason for supporting the candidate they selected" (Barna 2008c). In February 2011, the top concerns registered evangelical voters said "will most affect the candidate people support for President in the 2012 election" were: taxes (76%), terrorism (71%), abortion (71%), and health care (70%). Gay marriage (63%) was a close second tier issue, following immigration (67%), along with employment policies (53%), Middle East wars (52%), and dependence on foreign oil (44%) (Barna 2011).

Their views on these issues have not changed. Among likely 2012 presidential election voters, "evangelicals were notably distinct from other groups" on the issues influencing their decision "a lot" compared to other religious and non-religious segments of US society. While "abortion ranked last on the list of influential issues for all likely voters, among evangelicals it ranked third. Only taxes and health care were deemed more important. Similarly, gay marriage was ranked tenth among likely voters, but was fifth on the list among evangelicals who are likely to cast a ballot in November" (Barna 2012).

Nationally representative surveys further demonstrate evangelical Christians unequally rank the importance of spiritual, social, and environmental problems. Those concerned with "maintaining moral standards as a high priority are less environmentally-minded" (Guth, Kellstedt, Smidt, and Green 1993). During the 2012 presidential election, the proportions of likely evangelical voters indicating the following issues would influence their decision "a lot" included: health care (79%), taxes (68%), abortion (59%), foreign oil (58%), gay marriage (55%), Middle East wars (52%), jobs and employment (51%), terrorism (49%), immigration (45%), education (41%), domestic violence (36%), and environment (22%) (Barna 2012). Conservative Protestants consistently rank environmental problems as least important.

These highly religious U.S. citizens are willing to do something about conditions that concern them and that they perceive as problems. Although individualistic in their perceptions

of causes and preferred solutions, they engage in organized collective political action to address them. Despite their stated aversion for public policy actions by the federal government, they now actively involve themselves in politics. Evangelical Christians' vigorous and cohesive political activities compared to other voting blocs in US society make them consequential to some policymakers in many areas of public policy (Wilcox and Larson 2006). "Survey data consistently show that evangelical Christians have among the highest rates of voting turnout among all voter groups and are, in fact, strikingly different from the rest of the population - even from other born again Christians who are not evangelical" (Barna 2008c).

Estimates of these politically active believers widely vary. The National Association of Evangelicals claims they comprise "fully one quarter of all voters" (N.A.E. 2004). The Southern Baptist Conference declares 16 million believers attend their churches, making them the second largest religious group after Catholics (Kosmin, Mayer, and Keysar 2001). Professional survey organizations estimate the relative proportion of evangelical Christians within the entire U.S. population at 18 million or about 8 percent nationally (Barna 2007).

The political action of evangelicals and conservative Protestants appears in multiple social organizations and takes various forms. It includes the "Moral Majority", Christian Coalition, and the Family Research Council (Heilbrunn 2007). Evangelical Christian elites "now wield power in the White House and on Wall Street, at Harvard and in Hollywood" (Lindsay 2007). More recently, some view Focus on the Family supplanting the conservative Protestant influence claimed by the "Moral Majority" and "Christian Coalition" in the later twentieth century (Gilgoff 2007), with Dr. James Dobson as "the Christian right's most powerful leader" (Heilbrunn 2007).

Other means of political influence in U.S. society take less cohesive social form. Some see significant "The Base" or segments of white conservative Protestants that supported the twice successful consecutive candidacies of Republican President George W. Bush ((Green, Rozell, and Wilcox 2003; Newport 2007). Others identify "The Family" deeply embedded in the social networks of political power in Washington, D.C. (Sharlett 2008) or an "Arlington Group" of Christian right "top leaders that meets regularly to discuss strategy (Heilbrunn 2007). Recently, more moderate and liberal evangelical Christians are becoming more vocal and politically active, opposing the traditionally conservative political activism of mostly white Protestants in the U.S. (N.E.P.C.G. 2013; Sojourners 2013).

A majority (52%) of U.S. citizens in the evangelical tradition describes their political views as conservative; they are second only to Mormons in the proportion of adherents holding this political ideology. In the U.S. Religious Landscape Survey, evangelical adherents are not unusual in their preferences about the size of government with almost half (48%) saying they “would rather have a smaller government providing fewer services. Although slightly more than the national average (43%), it is less than the proportion of Mormons (56%), Mainline Protestants (51%) and only slightly more than Other Christians (44%) who share this sentiment” (Pew 2007).

Evangelical Christians and Environmental Concern

Although most conservative Protestants rank environmental problems low in importance, there are those who stand apart from the majority. Three ways evangelical Christians’ environmental concern currently appears in U.S. society are through a growing movement within evangelicalism of believers who “care for creation”, an increasing religious framing of a “biblically-based environmental stewardship”, and the emerging evangelical activism on global climate change.

A spate of recent research on the relationship of religion with environmental concern profiles and describes its recent emergence among Protestant Christians (Dietz, Stern, and Guagnano 1998; Holland and Carter 2005; Lieberman 2004; Smith and Johnson 2010; Tarakeshwar, Swank, Pargament, and Mahoney 2001). Most prior work specifically investigating evangelical Christians’ association with environmentalism focuses on elites and leaders within the evangelical environmental movement and is qualitative (Fowler 1995; Guth, Kellstedt, Smidt, and Green 1993; Kearns 1996; Larsen 2001; Smith 2006; Womersley 2002). Older current “evangelical environmentalist” leaders began their religious environmental activism with their highly publicized advocacy for renewing the Endangered Species Act in Washington DC from 1987 to 1992 (Kearns 1997). Although sharing similar social and moral concerns (Barna 2010), younger evangelicals overall are more supportive of greater environmental protections compared to their elders (Smith and Johnson 2010).

Although Evangelicals' give increasing attention to the relationship between their faith and theology with environmental concern, these discussions diverge in two directions. For example, the Evangelical Environmental Network (E.E.N. 2011a) advocates a pro-environmental

stance, favorable to improving environmental quality by reducing mercury emissions and increased climate protection by reducing emissions of greenhouse gases (E.E.N. 2011b). Opposing it and the National Religious Partnership for the Environment (NRPE) is the Cornwall Alliance (Cornwall 2013) and its “Interfaith Stewardship” coalition, representing a network of Protestant, Catholic, and Jewish leaders. Widely known pastors of large evangelical U.S. mega-churches urge evangelicals toward environmental stewardship as a matter of faith with online documentaries, but avoid mentioning ecological conditions such as climate change seen as controversial among conservative Protestants (Merritt 2013; Northland 2013). Some describe the conflict between the organized emergence of environmentalism within evangelicalism and its more conservative segments as a “growing civil war”.

Christian or “biblically-based environmental stewardship” dominates the discourse of evangelical Protestant and other religious environmental groups (Kearns 1996; Kearns 1997; Shibley and Wiggins 1997; Stoll 1997; Wardekker, Petersen, and van der Sluijs 2009; Womersley 2002). Although usually ambiguous in its meaning (Feldman and Moseley 2003), it influences people’s environmental and political views (Shaiko 1987). When stewardship means “humans should respect nature because it was created by God”, conservative Protestants and those interpreting the Bible more literally believe it more strongly and may act on it if not circumvented by their political conservatism (Sherkat and Ellison 2007). Carr (2010) discovered that every conservative Christian who discounted climate change science because of their view on how humans relate to the environment, still agreed that “stewardship of the environment was an important human responsibility based on their faith”.

National Context for Study

Finally, activism by U.S. evangelical religious leaders and environmentalists to address climate change is increasing despite persisting signs of apathy about it among many lay conservative Protestants. This divergence within evangelicalism of public environmental concern about this large-scale ecological phenomenon provides the backdrop for this case study. White evangelical Christians repeatedly appear the least likely to believe “there is solid evidence that the earth is warming, and if so that it is caused by human activities” (Pew 2006; Pew 2009a). Only self-identified Republicans and political conservatives are more likely to deny global warming exists and human activity contributes to it than this religiously defined segment of U.S. society (Pew 2009a). These are not mutually exclusive social and demographic groups as nearly

all participants in this case study self-identify with both these political categories. In terms of responding to and addressing climate change, U.S. citizens who are “disengaged, doubtful, or dismissive” about it “are significantly more likely to identify as evangelical Christian” than those who are “concerned” about or “engaged” with climate change as an environmental problem (Maibach, Roser-Renouf, and Leiserowitz 2009).

In contrast, evangelical activism on global climate change and other environmental issues is increasing. Richard Cizik began advocating for greater concern about it by Christians when N.A.E. vice-president and continues to do so with the New Evangelical Partnership for the Common Good (Cizik 2013a; Cizik 2013b). Books such as “Global Warming and the Risen Lord” offer theological expositions of the link between it and Christian discipleship (Ball 2010). And a year-long campaign through fall 2012 and spring 2013 toured college campuses, most of them affiliated with conservative Protestant denominations, to mobilize younger evangelicals for climate activism (Y.E.C.A. 2013). Evangelicals intentionally appear to be “cultivating a middle ground” on anthropogenic climate change between conservative Christians who deny it exists and secular environmentalists concerned about it (Wilkinson 2012). **Table 4.1** identifies the various declarations of religious leaders of U.S. evangelicalism and evangelical environmentalists exhorting conservative Protestants to greater concern for climate change and the environment.

Table 4.1: Evangelical Declarations for Increased Climate Change and Environmental Concern

Year	Declaration
1994	“On the care of Creation: An evangelical declaration of the care of creation” (E.E.N. 1994)
2002	“Oxford declaration on global warming” (J.R.I. 2002)
2004	“Sandy Cove covenant and invitation” (E.E.N. 2004)
2004	“For the Health of the Nation: An evangelical call to civic responsibility” (N.A.E. 2004)
2006	“Climate change: An evangelical call to action” (E.C.I. 2006)
2007	“An urgent call to action: Scientists and evangelicals unite to protect creation” (N.A.E. 2007)
2007	“Principles for federal policy on climate change” (E.C.I. 2007)
2008	“A Southern Baptist declaration on the environment and climate change” (S.B.C. 2008)
2013	“Evangelical Scientists Climate Letter Project” (forthcoming)

(Adapted from Wilkinson 2012)

The potential these recent developments hold for changing the social concerns and priorities of most other conservative Protestants remain unknown. Whether the religious beliefs they share in common with one another are necessary or sufficient to increase their environmental concerns and include climate change in it remains uncertain. Besides various religious barriers, non-religious factors also are impediments. The intersection of evangelical Christians' political engagement, environmental concern, and climate change reflects how their religious views shape both their political beliefs and trust in science. "Two animating features of the postwar evangelical community [are] distrust of government and suspicion of the secular scientific community" (Swartz 2008). They perceive greater government involvement and perceived intrusion into their everyday lives reduces believers' personal faith (Woodberry and Smith 1998). Evangelicals also distrust most scientists because they accept Darwinian evolution and naturalism as valid approaches for explaining and understanding the natural world (Lindberg and Numbers 1986; Noll 1994).

Conservative Protestants' perceptions of environmental problems appear enmeshed in a matrix of social, political, economic, and religious influences. The role religion has in citizens' public understanding of large-scale ecological conditions that must be addressed with public policy remains unclear. Conservative Christian elites' qualitative responses to climate change reveal distrust in government and science influence evangelical leaders' preferences for environmental priorities (Nagle 2008). The extent this holds true among lay evangelical Christians who sit in the pews remains little explored. "Evangelicalism as an idiosyncratic religious group features a complex theological, sociological, and historical identity which shapes the way its adherents make decisions and view the world" (Swartz 2008). Understanding how this informs their perceptions of climate change is one means for clarifying religion's role in conservative Protestants' overall environmental concern and views on environmental policy. Chapters 5 through 7 describe how evangelical Christians living in the greater Dayton, Ohio area use their religious beliefs in their constructions of climate change.

CHAPTER 5

“I BELIEVE IT’S REAL”: BELIEVERS IN ANTHROPOGENIC GLOBAL CLIMATE CHANGE

This chapter explores the views of lay conservative Protestant church members about global environmental problems. It identifies religious beliefs, attitudes, and values emerging during discussions of climate change drawn from qualitative semi-structured interviews with fifty-two (52) evangelical Christian adults living in the Dayton, Ohio area.

Appendix 5.1 provides short descriptions of each person’s individual social and demographic characteristics, and details for their interview in alphabetical order of participant pseudonym. **Appendix 5.2** lists participant pseudonyms by interview case numbers.

Believers, Deniers, and Uncertains

I posed two basic scientific questions concerning global climate change to participants: Is climate change occurring and, if so, does human activity cause or contribute to it? Analysis of responses revealed three general stances among them on anthropogenic climate change: Believers, Deniers, and Uncertains.

Believers (Group 1) are 14 participants (26.9 percent) who believe anthropogenic climate change occurs, expressing some level of agreement with the scientific statements that climate change is happening and that human activities (anthropogenic forcings) contribute to it in some degree:

Well, I think there's getting more and more evidence...I believe it's real. – Grant

So the scientific evidence is quite compelling that there is a global warming issue. – Logan

I think that there is an environmental change taking place. A small percent of that I think is probably man-made. – Jonathon

At this point I’d probably say 40% is human, but I’m inclined to think more, more than half is natural cycle. – Trevor

Deniers (Group 2) are 25 participants (48.0 percent) who disagree that anthropogenic climate change is happening:

I think that global warming is a joke. – Rosalie

I think global warming is a kind of hoax. – Vince

Now as far as global warming, I don't even agree that that exists. – Barbara

I don't buy that our planet's getting warmer. I don't buy that at all. – Kenneth

I haven't decided whether I think that humans have caused the whole climate change thing or not. But I think that it's indisputable that climate change is happening. – Bruce

I think our average daily temperatures, as a whole, against, uh, against the almanac values, are on the rise. Is that directly attributable to human behavior? I don't believe so. Don't believe that link's been proven. – Jared

Uncertains (Group 3) are 13 participants (25 percent) who express no clear position on anthropogenic climate change, responding that they were uncertain either that climate change is happening or that human activities contribute to it in some way:

Whether it's taking place or not, I, you know, I don't know. – Chelsea

I don't know what I think about it...But I haven't studied the matter. – Jocelyn

...let's take global warming for instance. I really don't know what's valid, what's hyped, what's true, what's not. – Lori

Well, I'm not sure yet. I read all these things that show the evidence is there. But I guess I'm just not sure about it. – Monroe

I didn't say that climate change isn't real. I said that the debate over that issue is being conducted in a disingenuous way. I don't, I, I'm personally rather agnostic on whether or not we have a serious ecological problem right now. – Ryan

Fifty-two (52) evangelical Christians living in the greater Dayton, Ohio spoke with me about their perceptions of climate change. I divided them into three groups based on their overall stance on whether human activity contributed it. **Table 5.1** on the following page summarizes the basic social and demographic characteristics associated with each group. Slightly more than a quarter (14) indicates some degree of belief that anthropogenic causes exist (*Believers*, Group 1). Nearly half (25) deny it (*Deniers*, Group 2). One quarter (13) say they do not know if human activity contributes to climate change (*Uncertains*, Group 3).

Believers comprise fourteen individuals (27 percent). Almost three-quarters (10 participants) are male. The majority of them (64 percent) are 35 to 54 years old, with the rest almost evenly divided between younger and older. More than three-quarters (11 participants) hold master's and doctorate degrees, or have additional education beyond four year undergraduate college. Exactly half (7 participants) earned a total annual household income from \$50,000 to \$89,999, with more than an additional third (5 participants) earning \$90,000 or greater. The occupations of *Believers* includes professionals working in technology and medical-related fields; sales, operations, and general managers; educators; two homemakers; and a retail store clerk. Almost all are married and a majority (64 percent) has children of various ages.

Table 5.1. Summary of Climate Belief Sub-Group Characteristics (N = 52)

Characteristics	Total Participants		Believers (Group 1)		Deniers (Group 2)		Uncertains (Group 3)	
	#	%	#	%	#	%	#	%
Sub-Group n	52	100.0	14	26.9	25	48.1	13	25.0
Sex								
Female	28	53.8	04	28.6	14	56.0	10	76.9
Male	24	46.2	10	71.4	11	44.0	03	23.1
Age								
34 years and younger	5	9.6	02	14.3	03	12.0	00	00.0
35 to 54 years	29	55.8	09	64.3	12	48.0	08	61.5
55 years and older	18	34.6	03	21.4	10	40.0	05	38.5
Educational Attainment								
HS, 2 year college, or vocational school	8	15.4	01	7.1	06	24.0	01	7.7
4 year college	22	42.3	02	14.3	12	48.0	08	61.5
MA, PhD, or further professional training	22	42.3	11	78.6	07	28.0	04	30.8
Total Annual Household Income*								
\$49,999 or less	11	21.2	02	14.3	06	24.0	03	23.1
\$50,000 - \$89,999	19	36.5	07	50.0	07	28.0	05	38.5
\$90,000 or greater	19	36.5	05	35.7	11	44.4	03	23.1
*Refused to disclose: Groups: 1(1), 2(2)	3	5.8	00	00.00	01	04.0	02	15.4
Occupational Status								
Professional/Military	13	25.0	05	35.7	06	24.0	02	15.4
Management/administration	09	17.3	03	21.4	05	20.0	01	7.7
Technical	05	9.6	00	00.0	04	16.0	01	7.7
Teacher	06	11.5	03	21.4	02	08.0	01	7.7
Clerical/Service	07	13.5	01	7.1	03	12.0	03	23.1
Homemaker, Home educator	12	23.1	02	14.3	05	20.0	05	38.5
Marital Status								
Married	44	84.6	12	85.7	20	80.0	12	92.3
Divorced, single, or never married	8	15.4	02	14.3	05	20.0	01	7.7
Children								
Yes	42	80.8	09	64.3	21	84.0	12	92.3
None	10	19.2	05	35.7	04	16.0	01	7.7

Deniers include twenty-five individuals (48 percent) nearly evenly split between females (14 participants) and males (11 participants). Twelve (48 percent) are 35 to 54 years of age and another ten (40 percent) are 55 years and older. Almost half (48 percent) hold four year undergraduate degrees, with nearly equal numbers having less or more education. Eleven individuals (44 percent) earn total annual household incomes of \$90,000 or greater. *Deniers* work in various occupational settings. Almost a quarter (24 percent) are professionals in manufacturing engineering, electric utility financial or computer systems analysis, nursing, or military officer. Others (20 percent) work as managers and administrators in finance, human resources, health care, and are small business owners. Five people who do not think human activity contributes to climate change are homemakers. Twenty *Deniers* (80 percent) are married and one more than this (21 participants) all have children.

Uncertains represent thirteen participants (25 percent) of all Ohio evangelical Christians interviewed. About three-quarters (10 participants) are women. All are 35 or older, with a majority (62 percent) younger than 54 years. A majority (62 percent) also hold four year undergraduate college degrees and almost all the rest (31 percent) obtained additional education. More individuals (39 percent) earn a total annual household income of \$50,000 to \$89,999 compared to others unsure if anthropogenic climate change is happening. Although they include people working in each occupational status category, the greatest proportions of *Uncertains* are homemakers (05) and those employed in clerical or service occupations (03). All but one is married and has children.

Several differences among these social and demographic characteristics appear when comparing these Ohio evangelical Christians by the three stances they take on anthropogenic climate change. Regarding sex, *Believers* and *Uncertains* mirror each other, with nearly three-quarters (71 percent) of those agreeing anthropogenic climate change being male while in contrast slightly more women (77 percent) say they are unsure if it is happening.

By age, *Deniers* have the fewest (48 percent) who are 35 to 54 years of age, and the most individuals (40 percent) 55 and older. No one under 35 years is an *Uncertains* and nearly two-fifths (39 percent), like *Deniers*, are older than 54 years.

Educationally speaking, *Believers* have the greatest proportion of highly educated individuals with nearly eighty percent holding advanced or terminal degrees. While *Deniers* and *Uncertains* have nearly equivalent proportions to each other when this category is combined

with those with baccalaureate degrees, they both are comparatively less than *Believers* by about twenty percent. Among the three groups, *Deniers* have the greatest proportion of individuals (24 percent) who do not hold a four year undergraduate degree. This corresponds with a nationally representative sample examining evangelicals' climate change concern finding "those having a junior-college education are less likely to be concern than those who have completed college" (Swartz 2008:30). Hayes and Marangudakis (2001) found British Christians and non-Christians alike expressed dominion over nature attitudes, and that lower educational attainment or less scientific knowledge most encouraged it.

Participants' political affiliations and presidential voting behavior are not reported in Table 5.1. The Ohio evangelical Christians' in this case study nearly are unanimous in their reported selection of Republican President George W. Bush in the 2000 and 2004 presidential elections. Almost everyone describes themselves as conservative, Republican, or as both. Prior research on these highly religious peoples' views of climate change show "republicans and political independents are also less likely to profess [attitudinal] concern" about the various effects of climate change on humans, other species, and the natural world (Swartz 2008:30).

At the very end of interviews, participants indicated their total pre-tax family income, from all sources, for the prior year by selecting one of twelve categories (**Appendix 3.3**). I collapsed their overall responses into the three larger income groups indicated in Table 5.1. *Believers* have the fewest individuals (14 percent) within their group earning \$49,999 or less compared with those expressing other stances on climate change. In contrast, they have the greatest proportion of participants (50 percent) among the three groups earning \$50,000 to \$89,999. *Deniers* have the most (44 percent) earning \$90,000 or greater, either among themselves or comparatively with *Believers* and *Uncertains* in the highest income category.

In terms of individuals' occupations, *Believers* have the greatest proportion (36 percent) employed in professional fields and as teachers or educators (21 percent). They have the fewest among the three groups working in clerical or service occupations (7 percent) and not working because they are staying at home (14 percent). *Deniers* fall between the other two groups in the proportions of participants working in the various identified occupation categories except in one case. They have the most individuals (16 percent) working in technical occupations such as manufacturing and pharmaceutical sales, accounting, camera technician, and video production.

Uncertains reflect both comparative ends of the spectrum for the occupations they hold. Those who are unsure about if human activity contributes to climate change have the fewest individuals working as professionals (15 percent) or in management and administration (8 percent). Among participants separated by their stances on climate change, they have the most working in clerical or service occupations (23 percent) and greatest proportion who are homemakers (39 percent).

Participants do not largely vary by whether they are married or not, and if they have children. Among them all, *Believers* have the fewest participants (64 percent) within their stance who have children currently living with them, attending college, or living on their own.

Table 5.2 identifies by their case number the individual participants expressing each of the three stances on anthropogenic climate change. Additional details for each Ohio evangelical Christian interviewed are located in the appendix. **Appendix 5.2** lists participant pseudonyms by interview case numbers. **Appendix 5.1** provides short descriptions of each person's individual social and demographic characteristics, and details for their interview in alphabetical order of participant pseudonym.

Table 5.2: Evangelical Climate Change Belief Sub-Groups by Participants (N = 52)

BELIEVERS: Some or minimal anthropogenic causes to climate change (Group 1, n=14)		DENIERS: Anthropogenic climate change is not happening (Group 2, n=25)		UNCERTAINS Don't know if anthropogenic climate change is happening (Group 3, n=13):	
03	28	01	31	02	19
05	32	07	33	04	35
06	34	08	37	09	36
10	42	11	38	12	40
14	44	16	39	13	41
24	50	17	43	15	52
25	53	20	45	18	
		21	46		
		23	47		
		26	48		
		27	49		
		29	51		
		30			

In the remainder of this chapter I present participants' discussion of climate change within these sub-groups differentiated by peoples' stances on it. I describe how religion appears in their perceptions toward this large-scale ecological condition with respect to the three research questions identified earlier in Chapter 2:

1. What religious beliefs, attitudes, and values appear in participants' climate change knowledge (beliefs) and their understandings of scientific information about it?
2. What religious beliefs, attitudes, and values inform participants' climate change risk assessments (beliefs, attitudes) and their perceptions of it as an environmental problem?
3. How does religion inform participants' views about personally responding to climate change and addressing it with climate policy?

Discussion of the significance of these conservative Protestants views on climate change and their implications for understanding religion's role in environmental concern, environmentalism, and environmental policy occurs in Chapter 8.

Believers

Believers' Climate Change Knowledge

I asked *Believers'* questions about their climate change beliefs, including views about its ontological reality, the biophysical effects of human action on ecosystems (Earth's atmosphere), and the relationship between anthropogenic activity and ecological systems (climate) or physical processes (temperature change). Usually I asked participants directly about these cognitive and scientific aspects of climate change; in other instances, they brought up and discussed other examples on their own.

Religious themes emerge in *Believers'* conversations about climate change and about science. For example, religious values appear in their "anthropogenic" explanations and their explanations of it as a "natural" phenomenon.

Participants discuss their perceptions of the relationship between human activity, Earth's temperature, and the climate in several ways using their religious beliefs. Those believing in anthropogenic climate change vary in their agreement with its scientific basis and evaluation. Earnest expresses certainty in his conviction that "if the human aspect was taken out, then the Earth would probably do just fine." He immediately then references a religious basis ("Creation" belief) for his understanding and conception of an ideal state of the natural

environment. “You know, as God created it, if we’re not polluting and we’re not destroying, then it would probably do just fine.”

Darren takes a different view despite also being a *Believer*. He thinks human activity contributes “maybe 20, 30%” to climate change. However, he is reluctant to conclude this is a problem because “I feel the Earth has consistently been warming. That’s just part of God’s plan.” Sharra expounds on this theological view about God’s involvement with respect to the scientific question of whether the Earth’s temperature is warming or changing:

But, we don’t know for sure. And God knows, God’s got the world in His [sic] hands. We can’t control the temperature. We can do things and I...There’s some theories that the more greenhouse gases we release will affect the temperature, but there are areas without greenhouse gases that, you know, the temperature fluctuates, they’re getting higher or lower. We can’t control what the sun does in its course of its life. So I think that there’s mysteries in nature that God has built into His creation that we don’t understand, that we won’t be able to understand and that we can’t...Or consequences to technology that we don’t perceive, at least we can’t control, or might take a while to get under control. – Sharra

Even as participants admit anthropogenic climate change is happening, they qualify or limit the impact of human activity on the Earth’s atmosphere using their religious beliefs. This occurs when they discuss the notion of a “natural history” or “cycle” related to climate change.

I feel that the ice age began after Noah’s flood, and the ice has gradually been melting away ever since. And that we’re still in that process. I know there’s some peaks and valleys where it was colder and warmer, but overall the ice is slowly, slowly melting, and I think that we’re in the midst of that natural process. We may be adding to it a little bit with all of our fossil fuel burning activity, but we’re not the sole cause of it and I don’t think it’s going to be devastating. I don’t think it’s going to be devastating. – Darren

Darren further explains how his religious beliefs inform his perception that the Earth is consistently warming as “part of God’s plan”, citing both his belief that “it [Earth] will eventually end in fire” and his conviction that the observed changes are a “part of our [Biblical] Fall, it’s a fallen world”. Despite its perceived inevitability, Darren believes climate change offers “constant change and challenges for people to face up to and work with each other and adjust to.” He also associates warming temperatures as having a possible “positive effect”.

Earnest expresses a similar view when asked why he thought it is important to know why a “switch in temperatures and precipitations” is happening and why “winters [were] maybe less harsh.” He indicates the Bible informs his perception that even though knowing why human activities affect the Earth’s atmosphere is important, the observed changing climatic patterns are not unexpected.

Well, I think it's important to know the why so maybe we could change something, so that things could become little more stable, you know. I mean, we're gonna have – the Bible tells us we're gonna have, you know, seed time and harvest, we're gonna have rain, we're gonna have all these things... – Earnest

The Bible verse Earnest indirectly references is Genesis 8:22. “As long as the earth endures, seedtime and harvest, cold and heat, summer and winter, day and night will never cease” (NIV). He is not the first to apply this theological interpretation to climate change nor is this view unique to participants I interviewed. Others in U.S. society who use this Scriptural reference are more skeptical than Earnest, and their opinions receive a wider audiences. Republican Oklahoma Senator James Inhofe repeatedly cites this verse in his book *The Greatest Hoax: How the Global Warming Conspiracy Threatens Your Future* (REF 20##) and in media appearances to argue his view that “God’s still up there. The arrogance of people to think that we, human beings, would be able to change what He [sic] is doing in the climate is to me outrageous” (REF Tashman, 2012).

Despite being concerned about environmental issues and believing anthropogenic climate change is happening, even *Believers* are not certain or clear always about what to think of this environmental problem. Edward reflects this when he discusses the issues or problems related to the environment that interest him.

I would like to know the truth as to whether or not global warming is a factor. I would like to see us be able to go to the electric cars, the wind, and things like that, and not put so much pollution out and things like that. I also think that we're gluttons and we need to learn how to conserve and do a better job of, you know, eating less so there will be more food for others. Just everything, just being better stewards of the world that God's given us. – Edward

While identifying several examples of environmental issues, he also links global warming with pollution. He ends his comment by sharing his religiously informed view about his responsibility that he perceives with respect to climate change, other environmental issues, and the natural environment overall.

Sharra adopts an approach similar to Edward's with respect to car vehicle use. Noting that “we use our cars, and so there are things that we're emitting greenhouse gases [sic]”, she describes a more active role for herself when asked how she addresses environmental problems if she sees them occurring as “part of God's plan.” Sharra explains she and her husband are “not just sitting back and doing what we want because, well God will take care of it one way or another.” In her view, “this is a balancing act” between “trying to be [environmentally] conscious but also not consumed with what every scientist says” and their religious

understanding that “stewardship-wise, you know, we work with what fits in our finances and the budget.” So they minimize the ecological impact of their vehicle use with him bicycling to work since they cannot afford to buy hybrid car.

Participants also evidence religious themes when discussing effects and consequences forecasted to occur with climate change. Climate scientists identify a variety of impacts associated with the increasing atmospheric CO₂ concentrations and warming temperatures resulting from human activity (REF). One is an increased rate of melting polar and glacial ice (REF). Although agreeing anthropogenic climate change is happening, ice is melting, and sea levels are rising, Collin disagrees with the rate these changes will occur on the basis of his religious understanding of the future (end) of the world.

Inconvenient Truth. Twelve million refugees all at once. Well I think that's bunk. The water is not going to come flooding in. It's going to come gradually, and as more icebergs melt, and people are going to decide to leave.” – **Can you tell me a little bit more about maybe why you believe that?** “Well, because that's not going to be the end of the Earth. That's not what the Bible is predicting, that we'll all just die of heat or flood or—that's not what the Bible says. And so I certainly don't have—I have no faith that that's how mankind's going to—global warming's not going to cause mankind's end. The Bible talks about how mankind's end is going to happen, and it doesn't seem to match up. So I don't put too much faith in it. – Collin

Another *Believer* echoes a similar religious sentiment with respect to the pace of widespread weather events such as flooding and freezing associated with climatic change. Trevor references these beliefs while discussing his perception about the possible occurrence of ecological crises and mass media depictions of them. Compared to Colin, however, he identifies a fictional movie. Instead of focusing on how the world will end, Trevor reasons climate change will not bring the end of humanity because “God has made the world, hopefully sufficiently stable.”

Hopefully the precipice on the other side should give us questions on how we do things. But, unfortunately that always gets used in the alarmist sense. And I guess my own impression of how God's created the world is, yeah we have to watch out for crises, but I think He's [sic] created the world to be livable enough that, again, nature is somewhat resilient. And yeah we might have a crisis on this aspect or that aspect, but I, I think [pause] we're unlikely. God—I think God has made the world, hopefully sufficiently stable that I'm not that super fearful that we're going to destroy all the world with a, you know, flood. You know, let down—I'm trying to think what movie it was. You know, one of the more the recent disaster movies, you know, all of a sudden everything is turning down to freezing in New York City. **Oh was that The Day After Tomorrow?** Yeah. That kind of thing. You know, it's scare-tactic-ish and yeah, it's a potential, but I'm inclined to believe that it's unlikely to be the way God's made things. – Trevor

Besides appearing in their explanations of causes and effects of climate change, participants who believe some degree of human activity contributes to it also rely on their religious perspective in their response to scientific information about these aspects.

When asked who they trust to tell them the truth about climate change or the connection between human activities and changes in the Earth's atmosphere, participants offer religious-based reasons in several ways. Sharra demonstrates a nuanced, reflective view. She admits holding a default position in which she assumes that "Christian" identifying media organizations are "seeking the truth." She also sees the potential influence of bias on "Christian scientists", but hopes information about climate change provided "from the Christian perspective" will be "reliable and trustworthy and true."

So what do you trust to tell you the truth about how things are? I tend to trust the conservative media a little more... **Why's that? What gives you the confidence that you can believe what they're saying?** It may be naïve, I don't know. But a lot of those sources at least claim to be Christian, so there's a trust that they are seeking the truth. I sometimes feel that other media, mainstream media, latches on to an idea sometimes and the facts shape to fit their view. Or that some people shape what they observe to fit. **Sure.** Which, I know that happens some on both sides. I know that it's very easy for Christian scientists to take what they see, filter it through in a Christian perspective and come up with a set of facts. Or a non-Christian scientist or a more liberal scientist or a scientist who's not something [unintelligible 0:54:32] or has an agenda. Or towards, I think everybody has a bias and everybody has an agenda and everybody filters the information through those glasses, to some extent. I don't think it's possible to be entirely neutral. But I also think that there are a lot of people who believe strongly in Global Warming that are very sincere in their beliefs and they have data and they have researched it and that's what they see happening. So it's just that from the Christian perspective, I hope it to be reliable and trustworthy and true. – Sharra

Alan more directly identifies who he personally trusts to tell him about the connection between human activity and what is going on in the Earth's atmosphere. Besides conservative political columnists Charles Krauthammer and George Will, he considers psychologist and religious broadcaster "James Dobson and his magazine Citizen" reliable since "He has a lot of good articles in it." When I ask Alan how Christians should figure out who to believe about global warming, he tells me:

I'd say it's based upon what, uh, the facts that each side generates, whose facts you want to believe. Who you think is performing or doing the most accurate work. **For yourself personally, how do you judge who's doing accurate or not accurate work?** For right now I'd say it's just a feel. Just a gut feel on my part. As to who's doing it. – Alan

Like Sharra and Alan, Darren trusts Christian scientists to tell him the truth about climate change. He identifies *Answers in Genesis (AiG)*, a non-profit religious organization, saying he is "very impressed with their work." AiG is "an apologetics (i.e., Christianity-defending)

ministry, dedicated to enabling Christians to defend their faith and to proclaim the gospel of Jesus Christ effectively”, focusing “particularly on providing answers to questions surrounding the book of Genesis”, and reflecting a “young Earth” creationist perspective and literalist interpretation of the Bible (REF Answers in Genesis). Darren cites their theological interpretation and religious perspective as criteria for his confidence in their views on science because they “start with a Biblical worldview” and “the theories and ideas they present are always presented humbly and as much as plausible ideas rooted in Scripture [sic].”

Edward also takes this stance toward sources of information about climate change. However, he is more willing to allow non-Christian scientists to inform him. Admitting, “I’m not quite educated, I would probably have to go out and figure out who’s doing what”, he then states that on “environmental issues [pause] I would hope I could trust the EPA [laughs] and agencies to do that.” But religious identity and affiliation still appear more important to Darren based on his personal experiences.

Are you inclined to trust more or less Christian or non-Christian scientists about global warming? “Yeah, I have to be honest and say that I’m more inclined to trust believers, Christian scientists, and the only reason why I say that is because I’ve had direct interaction with both because of teaching at universities, and you know, I’ve just heard some things from non-believers that are pretty radical, and the universities have a real problem. They have a problem with the more radical folks.” – Darren

Edward is aware of his predisposition for doing this on the issue of climate change. He admits he does this in other aspects of his everyday life. “I do have a tendency to do that. Yeah, I just seem to trust Christians more, even in my friendships, um, people that I do business with, everything. I really seek out Christians for almost everything.” He offers a religious rationale for his decision to trust Christian scientists more on climate change and assumption he can give greater confidence to their views. “I just try to follow Biblical principles and I feel like that they would be more inclined to follow Biblical principles. I hope that they would.”

Few *Believers* discuss climate change or scientific information about it with people they interact with regularly or at church. One explanation for why this does not happen emphasizes its disruptive potential for social interactions or relationships at church. It also highlights the gap one participant perceives between the different perspectives on scientific knowledge about climate change dominant among some church members and the challenges this poses for communicating scientific information about it.

Have you ever discussed climate change with people that you interact with on a regular basis or even people at church? “No. Because their view is that there is no such thing as global warming. That it’s just a hoax as you suggested. So there’s no point in bringing it up, because that just leads to an argument, which leads to division and I don’t know if that’s a healthy thing or not. **Yeah, yeah. So you would cha–how** – I mean I’ve got – there – people make statements at church that global warming is a hoax. Maybe not in those terms...So, I mean, I don’t even know how to begin dialogue with a person like that, who has that kind of a view. That’s adamantly opposed to the scientific evidence and my understanding of it. But I’m not a biologist, I’m not an expert in these issues, so there’s something that they might know that I don’t know, but none of these people are scientists so I don’t think they know more than what the scientific evidence is.”
– Logan

Believers’ Perceptions of Climate Change as Environmental Problem

I also asked participant’s about their general views of global climate change as an environmental problem. Usually I directly posed a question to them, but sometimes people volunteered their views on this aspect before I brought it up or at various points during the interview. Religious values emerged in *Believers’* perceptions of the problematic nature of this large-scale ecological phenomenon just as they did when discussing the more strictly cognitive dimensions of climate change reflecting their knowledge about it.

One gauge of how people view ecological conditions as environmental problems is probing the personal concern they have about it and the degree they prioritize the conditions as worth addressing. Nine of the eleven *Believers* reference their religious beliefs as they directly discuss their concern about climate change and the priority the place on it as a problem. Several themes emerge for how religion informs these aspects of their environmental concern for climate change.

Darren accepts climate change is happening and estimates the proportional effect of anthropogenic forcings at “20, 30% of the problem” compared to other drivers. However, he immediately revises this description. “Er, it’s not even a, it’s maybe wrong to categorize it as a problem. You know, I feel the Earth has consistently been warming. That’s just part of God’s plan.” A non-religious belief about the historical record of Earth’s temperatures and a religious based conviction of how this fits within the intent of God inform Darren’s evaluation of the climatic changes that he accepts as happening.

Alan indicates he is likely to heed other evangelical Christians’ arguments that he should be concerned about climate change “probably more so than if I read it from somebody else that in the past I haven’t really trusted.” However, his willingness to accept this seems tempered even in his agreement: “Yeah. I would probably, you know, yeah.”

Clark had never heard of other Christians or evangelicals talking about being concerned about climate change, global warming, or the environment for religious reasons (“No, not really.”). When I ask what he thinks about the connection between his faith and these things, he first replies, “I don’t know that there really is a connection.” Then Clark tentatively continues by mentioning his understanding of a religious based stewardship belief that appears to him a universal mandate that is not “really directly related to my faith and my religion.”

I guess it’s God’s planet, and like I said, I think we should be good caretakers, good stewards of the earth and the land like anyone else should be. I don’t know if it’s directly related to me being a Christian. I mean, I think just take care like anyone else. And don’t, you know, be irresponsible with it. I don’t know if it’s really directly related to my faith and my religion.” – Clark

Jonathon also was not aware of talk by others that he should be concerned about climate change because he was Christian. When I ask he responds, “Not really. I think that, as an issue, it’s not foremost in the minds of, as a Christian, if you see what I’m saying. It’s an issue for other people. You know what I’m saying?” He elaborates what he means by identifying what he views are the priorities required of a Christian. Jonathon believes climate change functions as a replacement for God for those concerned about it.

And some people you can just tell by the way that they live their lives, that that’s what takes the place of religion in their lives. For me as a Christian, I’m more concerned about my family and my day to day life and my responsibilities as a father and husband. And...I like having a clean atmosphere, you know, and having water and electricity and gasoline in my car and those all contribute, but they are not front and center on my day to day life.”- Jonathon

During interviews I directly asked people if they have any concerns or issues related to the environment that are most important to them. I also asked about individuals’ concern about climate change or global warming as it came up in our conversations at either my direct prompting or participants’ voluntarily bringing it up. Participants vary in the strength of their concern about it, the priority they give it as a problem, and how they use religious understandings to express these views.

Although Darren is a *Believer* of the scientific assertion that human activity contributes to climate change it is not something that concerns him. In fact, other statements he makes when discussing environmental concerns important to him make it seem he may hold a different stance on it. His first response to me asking what issues “most concern” him show him distinguishing between recycling (“very important”, “so basic”, “really obvious”) and climate change (“But then this other, you know, all the greenhouse gas and the global warming, I don’t necessarily believe all that”). In this comment, Darren identifies a perceived moral imperative

(“be good stewards”) between this statement and an earlier one where he declares, “I think that environmental issues are very important”. He limits the relevance of his stewardship to recycling, and other related issues he mentions in a follow up such as “resource use” and “city planning.”

Edward is interested in better understanding reasons for being concerned, but admits his actions do not reflect this. He differs from Darren’s sentiments on climate change, but shares his intentions on stewardship. In contrast, he would “like to know the truth as to whether or not global warming is a factor. I would like to see us be able to go to the electric cars, the wind, and things like that, and not put so much pollution out and things like that.” Edward’s religious beliefs inform his understanding of stewardship and provide a normative standard for “just being better stewards of the world that God’s given us.” When I ask what his stewardship looks like in his everyday life, he reflectively identifies a gap between his religiously based ideals and actual behavior that does not make climate change a priority for him. Besides not engaging in pro-environmental behaviors he deems relevant (“I don’t have an electric car”), Edward attributes the low priority on climate change to a lack of personal commitment on his part to engage in activities (work, discipline, research) he perceives would reflect a higher one.

Well right now it doesn’t, it doesn’t mean much to me, because unfortunately I say that it’s important, but I can’t say, I mean, I can say I don’t litter. I can say that, I guess, it’s on my mind, but I don’t do a lot about it. You know, I don’t have an electric car. I don’t recycle. I don’t, I probably have a horrible footprint, you know. So, so yes, that’s probably an area where I don’t, I just don’t do anything about.” **Any ideas as to why that’s the case?** “I think because it would take work and discipline to, and research, to do it, and I think for me, if it’s not easy, I guess it’s not a priority. I guess that’s what I’m saying, it must not be a priority to me. So, I’m saying it by my actions.” – Edward

Religious beliefs and experiences also are why other *Believers’* express minimal concern about climate change even though they agree anthropogenic causes exist for it. The role of religion appears unexpectedly with one participant.

In response to me asking how concerned people should be, Earnest responds, “[pause] Well, the truthful answer is probably people should have a lot of concern. Uh, and again the truthful answer is I don’t have a lot of concern.” He continues on discussing the relationship between concern and peoples’ willingness to act, ending his initial comment with the observation, “Unfortunately the choices usually are made to – to get involved with these things when things are really bad.” The conversation continues at length on this topic as I ask him to further explain and it turns to whether he discusses concern about climate change much with

others. Suddenly, he interjects to tell me what he believes is the likely reason for his lack of concern with respect to his perception of the degree that God is involved in his everyday life.

So for you yourself– “Can I interrupt here? **Go for it.** “The Holy Spirit just told me – the reason, Earnest, that you don’t become involved is that you feel that you are on the latter portion of your life and it doesn’t really matter anymore, when in reality it probably does. You asked how do we hear from the Lord? That’s how we hear from Him. Always listening.” – Earnest

Religious and personal experiences dampen *Believers’* concern about climate change in other ways. After discussing the recent dry hurricane in which most of her neighbors lost electrical power for several days, I ask Eleanor if there are any other environmental problems that concern her or that she is aware of. She notes an article she read recently about global warming that, “I guess is affecting us in ways that some of us don’t even know yet.” Eleanor then explains how a personal biological reason and an aspect of her social religious experiences lead her to not worry about climate change or prioritize it. Describing her reaction to the article, she says,

You know, I guess, quite frankly I don’t get so hung up with the text with many of these things. And that goes back to what I was saying about the older I get I’m more thankful I don’t have children. You know I say I don’t have children, I don’t have nieces and nephews and when I am gone that’s the end of my generation and you know if I did have children and...I would probably be much more concerned about you know the global warming and a lot of these long term issues. And I know people get so hung up and so intense about different topics, like politics and whatever. Maybe part of it is the stage of life I am at where either I’m trying to simplify and/or I’m just busy focusing on the business. I don’t have time to get concerned and intense about all those other things, plus like I said, part of it could be, I know I don’t have children, I’m not going to worry about it after this. – Eleanor

A second reason Eleanor is not concerned about climate change or willing to prioritize it comes from her personal experience in past social relationships. She continues on to describe a period in her life when she felt overwhelmed by the activities she was involved in and her efforts to assist “friends that needed a lot of help.” Another woman from her church in turn helped Eleanor transition from this time. She shares the lesson from this experience: “I know I can’t be all things to all people, and I learned that the hard way.” Her mentor gave Eleanor advice based on Bible passages, which Eleanor uses to evaluate whether she should prioritize global warming as a problem with respect to other competing concerns.

And what do I do, where do I draw the line? And she came up with a beautiful analogy that took a load off my shoulders, she said well you have to think like what Jesus did, Jesus took care of a lot of people but he couldn’t take care of everyone. So what he did was took care of his disciples and they took care of the next level, and they take care of the next level and on and on. And I’m like, ah, so that’s the way I look at it.” – Eleanor

Like Eleanor, Margaret is “not worried about it.” In her case it is a consequence of an array of religious beliefs about how God relates to humanity, the interaction between human agency and the environment, and the Earth’s future. She comments, “global warming is interesting”, when explaining which environmental issues personally concern her. Margaret identifies her lack of concern stems from her religious beliefs describing God’s involvement in the world. “From what I’ve heard, or the thought was, well I’m not going to worry about it. God has a plan. Not denying the [?] sovereignty of God but um then I can’t fix it.” Margaret’s assurance that she need not be concerned about climate change comes from two ways she applies her theological conviction.

In the first instance, Margaret’s understanding how human actions affect the natural environment comes from her belief about how God is involved in the world and other religious beliefs about God’s relationship to humans. These are based on her theological interpretation of Bible passages that she uses to assess humans’ “free will” (agency). This religious-based view allows negative ecological conditions to come from human actions and the possibility of non-Christian scientists to provide information about these connections.

Yeah I mean God allowed Adam to fall, He [sic] allowed them, I mean He didn’t stop them from his freewill. So we had freewill. So if we’re going this way with the environment; He’s letting our freewill play it out, He’ll let the freewill and allow the consequences to come to pass. So yeah. Um...maybe we could listen to the environmentalists and listen to them even though God is out of the equation. Listen to them, because they’re obviously coming from the scientific standpoint.”– Margaret

In the second instance, Margaret’s belief about God’s involvement in the world informs how she perceives the ecological consequences that come from human choices and actions. This application emphasizes the control God has over what occurs and how what happens may serve God’s purpose. At another point in our conversation, I ask Margaret if she is aware of people talking about climate change as an ecological crisis and if she feels like she is in one. She responds,

If it is and if it’s going to be then it, then it has been a part of whatever God’s plan is to get there. Maybe it is just part of the puzzle that will, He’ll [sic] use, for His plan, if there’s...Um...I mean if God already knows it’s going to happen and either we’ve allowed it, He’s allowing it because, like you said, the consequences of our free will allow that. You know the gases and the greenhouse effect and all that, you know technology and all that; but it could also be a part of His plan for the future. You know it is being allowed to happen because it is going to fit.– Margaret

This use of her belief about God’s involvement in the world also reflects aspects of her theological perspective on history and the future of the world. Her religious beliefs add

confidence to her reasoning for why she does not to be concerned about climate change. As Margaret declares at the end of her comment above, “Maybe that is why I am not worried about it, I have faith.”

Sharra also mentions technology when explaining the religious rationale for her lack of concern. She characterizes her concern about global warming as, “I don’t see it as a crisis, so it’s not...I don’t lose sleep over it. I don’t worry about it.” It is not a priority because “it’s not as important for me as some other issues. It doesn’t come as close to home as some other issues... It’s not a passion of mine.” She discusses it in the context of her views on the possible occurrence of ecological crises and her religious conviction that “God knows, God’s got the world in His [sic] hands.” Her comments lead me to ask her what this means to her with respect to whether God will prevent or protect people from the consequences of technology and the ecological effects of human actions, or if God might cause certain negative conditions in the environment. Her lengthy response evidences multiple religious beliefs.

I don’t know that He [sic] would necessarily protect us from the consequences of our actions. Although prayer is powerful, and He could if that’s part of His ultimate plan. He caused the flood to happen physically, and He’s promised not to, or let, a worldwide flood to happen again, but He’s got an ultimate...He’s got the world in His hands, He’s got an ultimate plan for humanity, and so if it’s not in His plan for us to mess the environment up so badly that it makes it unlivable, it’s not going to happen. If it is part of His plan to bring people to Him, then He is going to allow the things to happen. I’m not sure, you know, how, how He’ll work it. I definitely don’t pretend to know that. – Sharra

Sharra believes in the efficacy of religious spiritual practices (“prayer is powerful”); God is involved in ecological events of the natural world (“[God] caused the Flood”); there are spiritual limits on the possible negative impacts of human actions (“if it’s not in [God’s] plan for us to mess the environment up so badly that it makes it unlivable, it’s not going to happen”); there are spiritual reasons for why environmental degradation occurs (“If it is part of [God’s] plan to bring people to Him [sic], then He is going to allow the things to happen”); there is a spiritual purpose for what occurs on Earth (“[God’s] got an ultimate plan for humanity”); and that she does not know the extent and means of God’s involvement in the world (“I’m not sure how He’ll [sic] work it”).

This array of theological notions leads Sharra to her religious based evaluation of the global ecological phenomenon of climate change. “I guess I’m not terribly worried. Umm. Because ultimately, I know He’s going to work whatever we do to the good of His people.” Her

lack of concern about it rests on Sharra's confidence God has a purpose for what will come from the human experience of climate change and its consequences.

Evaluation of ecological conditions as an environmental problem is also based on people's beliefs about the degree of threat or risk from them, their observation of its effects or forecasted consequences, and the perceived rate at which large-scale environmental changes will occur. I coded participants' transcripts for these aspects of peoples' perceptions about climate change and their assessments of whether concern about climate change reflects hysteria, hype, a popular fad, or is a hoax. *Believers'* religious views emerge in some discussions of these dimensions about climate change concern and if it is an environmental problem.

Alan disagrees with the suggestion of being concerned about climate change because it will bring a "major catastrophe." "I don't think that's going to happen, no." This is not because he sees this outcome as impossible. Instead, Alan believes it is exaggerated.

Do you think that because it's not possible or because it is not as bad as they say? "I don't think it's as bad as they say. Anything is possible, I mean, the 'End Times' is possible. It may happen. [laughs] Maybe that'll come in the form of a climate change. We don't know how it's coming."
Some people say that. "We don't know how that's coming. – Alan

It is not clear his religious belief about the future end of the world directly is the reason for his evaluations of scientific assessments of climate. It appears relevant to Alan though, at least to the extent that what he does consider possible is that climate change and its consequences could be how the "End Times" happen. However, Alan reiterates that knowing if this is true is not possible.

Collin agrees with Alan's assessment climate change is not a crisis, but would disagree with his theological conclusion. Collin begins discussing his evaluation of the effects of climate change while considering the likelihood of ecological crises occurring.

I think they're exaggerating a lot, but sure, I mean I think, I think it's very possible that, that the environment could be drastically changed because of this. And it, and it may be too late. So if that's, if that's a crisis, then that's what it is. But, I don't know. I don't see it as a crisis because I see human beings are very adaptable. Whatever happens, we're going to be able to survive. So, I'm not too worried about it. – Collin

Collin's religious perspective contrasts Alan's although it involves the same belief and he is much more certain. When I ask him why he thinks it is "maybe 60% possible" that drastic consequences will come from climate change, but they will not occur suddenly and are exaggerated, Collin responds,

Well, because that's not going to be the end of the Earth. That's not what the Bible is predicting, that we'll all just die of heat or flood or—that's not what the Bible says. And so I certainly don't have—I have no faith that that's how mankind's going to—global warming's not going to cause mankind's end. The Bible talks about how mankind's end is going to happen, and it doesn't seem to match up. So I don't put too much faith in it. – Collin

The suggestion of catastrophic consequences occurring from climate change in the communication by scientists and activists about it appears a tipping point for other *Believers* too in their judgments about the threat or risk it poses. Agreeing that human activity contributes to climate change does not mean one accepts the scientific perspectives and information presented in depictions such as the documentary *An Inconvenient Truth*. Participants can also still view it as mostly a naturally occurring phenomenon on the basis of their religious beliefs about how God “made the planet.”

But I do not see, I mean, Al Gore's film, you know, I think the media picture or whatever, basically depicted a global catastrophe, catastrophe type of an event and I do not believe that. I don't see any—I think that there is an environmental change taking place. A small percent of that I think is probably man-made. I think that environmental change takes place all the time. That's why we have weathermen. We don't know—we can't predict what it's going to be like tomorrow, without, you know, understanding what's happening, but weather will change. And it has changed long before we had any control, any type of impact on it as human beings. And it is changing for natural reasons, from the sun or from natural cycle of the planets, and that continues today and I'm convinced of that. And I really don't think that human activity is mostly responsible for that. I think the human activity that contributes to it, and I'm thinking, you know, 5 or 10%. And, even the environmental change that we see is not necessarily always bad. It can be merely but a change. And, we adapt to change. And that's a good thing. That's the way God made the planet. He [sic] didn't make the planet to stay the same all the time and we shouldn't expect it to. He gave the planet the ability to adapt and to change and to flow and to compensate for things when they occur. So, just more amazing insight, I think from, and planning on the part of the Creator. – Jonathon

Jonathon assessment even allows for positive outcomes to come from the effects of climate change. His conclusion comes from the application of various environmental beliefs about the Earth's resiliency and environmental change, along with a theological perspective reflecting his religious beliefs about the creation of Earth and how God is involved in the world. Like many others, he sees intentionality, purpose, and direction of God in the ecological conditions observed.

Darren too is “not real concerned” and “not so interested in this whole global warming climate change issue.” He hears only “a little bit” of talk by other Christians about it. For him, the link between his religious beliefs and climate change means, “faith allows you to more think it's everything in God's hands [sic]. I think people who are real extreme on the climate change wagon that think it's a dire emergency are probably predominantly not Christians.” Despite this,

Darren is “more interested in simple living, simple and wise living and resource use”, including “solar homes or Earth-sheltered homes” and “energy efficiency” since high school. He explains the reason why most Christians he knows are not concerned about climate change with a reference to both his religious belief about God’s involvement in the world and his judgment that it receives attention because it is a popular issue.

Again maybe more of a long-range view on life and, God’s plan and not getting caught up in every little—shouldn’t say little, but every passing fad. I don’t know if I would call it a fad; it’s more than a fad now. But, uh, the hysteria of it is concerning.” – Darren

Not every *Believer* evaluates the consequences of climate change in the manner voiced by Alan, Collin, Jonathon and Darren. Trevor offers examples of its impacts and recognizes their severity varies. His explanation comes in response to whether he sees any connection between his faith and global warming.

Oh yeah. The uh, you know, the effects of global warming, again we can have significant crisis points, I’ll say, short of the major crisis things. You know, we have significant effect on, you know, societies and groups around the world. Part of the global warming is making the Sahara bigger and, you know, that makes it that much harder for people, those parts of Africa to get the food they need. And, then it becomes, the value of those people, you know, and providing for their needs. So yeah it fits in there. Also, you know, we’re called to be stewards of the Earth. And so, yeah, it, it fits within that, within that, that camp.” – Trevor

Trevor’s perception of the ecological and social impacts of climate change lead him to a conclusion that a response is necessary (“then it becomes, the values of those people, you know, and providing for their needs”). He partially justifies this on the basis of his understanding of the responsibility that “we’re called to be stewards of the Earth.” However, his religious belief about “the way God made things” and “the world, hopefully sufficiently stable” tempers his inclination toward panic. He sees “the more recent disaster movies [such as *The Day After Tomorrow* in which] all of a sudden everything is turning down to freezing in New York City” as “scare-tactic-ish.”

In the next section I describe the response of Trevor and other *Believers*, and how religion informs their views toward and actions for addressing climate change.

Believers’ Responses to Addressing Climate Change

What people believe about ecological conditions (knowledge), and their perception of whether it is an environmental problem, influence how people behave themselves with respect to the environment, their intentions to do so, and their views (beliefs, attitudes) about other possible actions such as their willingness to support or oppose environmental policy.

In this section I describe ways participants' religion appears in their direct responses to climate change as a large-scale environmental problem and the ecological conditions climate scientists associate with it. I also identify how *Believers'* religious knowledge, values, and schema emerge in their indirect responses to it to through their reactions to suggestions of individual behavioral and societal public policy responses for addressing climate change and its consequences.

Linkages emerging between the previous two sections of the role of religion in *Believers'* perceptions of climate change become clearer in this third section. In some instances, transcript text previously described above is referenced briefly again to highlight religion's influence on participants' views about their actual or considered responses to climate change.

In describing participants' views about these aspects of environmental concern about climate change, I distinguish between two general categorical types of human response to its consequences and the necessity for addressing its effects: individual and societal level. Individual level responses include personal actions and behaviors that people perform in their everyday lives. Many of these are private and some are consumer oriented. Societal level responses include public policies crafted, implemented, and revised to reduce anthropogenic causes of climate change, mitigate the ecological impacts of human activities, and forestall its disruptive consequences. Many of these are environmental climate policy measures. However, this type of response also includes political and economic policies due to the worldwide scope of this large-scale ecological phenomenon and its linkage with a global economic system relying extensively on carbon-based fossil fuels.

I first describe below the extent that religion is evident in how *Believers* consider and act toward climate change with respect to individual-level responses. I examined various dimensions of this type of response in participants' transcripts by coding text for their discussion of individual actions, their expressed motivation (intentions, willingness) to perform them, changes in their personal lifestyles they made or intended to in response to climate, and their perceptions of personal control or ability to make a difference in this environmental problem through their own actions. I then reviewed these for religious beliefs, attitudes, schema, and emergent religious themes in these aspects of our conversations about climate change. I also asked participants if they discussed climate change with others at church, Christians or people they interacted with regularly, and whether they recalled hearing church leaders discuss it.

Role of Religion in Individual Responses to Climate Change

One individual way people can express their concern about climate change and indirectly address it is to talk about it with others. I asked participants whether they either personally discussed climate change with Christians and others they interacted with on a regular basis, or if they recalled hearing leaders at church discuss it or the environment. Fourteen *Believers'* describe their experiences doing this.

Most (11 *Believers*) in fact do *not* talk about it with people at church or Christians and others they regularly interact with. Four individuals identify reasons why they avoid it. One person explains it is because they do not see it important based on his religious and spiritual priorities. Another *Believer* reveals it does not affect her regular everyday life activities that are the focus of much of her interactions with others.

I think we're more concerned about other people and, and meeting their needs as people rather than some entity out there called the environment that we want to protect, you know. That's not our mission." – Jonathon

Not that I see on a day to day basis. More extended family. So it's not something that I've talked about with neighbors or even friends from church much. I guess our lives, my friends and my circle of influence focus on parenting, and so the discussions tend to run more towards issues that we see as immediately affecting our family." - Sharra

Two others offer other explanations for why they do not discuss climate change or environmental issues with others. Both accounts reflect a desire to avoid relational conflict. Eleanor's comes from personal experience with relational conflict that resulted from discussing controversial topic.

I think I've learned the hard way from an experience this past winter, spring; politics really isn't a topic to talk about with friends, or unless you know that you're the same orientation. And how I learned that is, it's kind of those devastating experiences, this is another example of what I was saying of...things are becoming more complicated, relationships are becoming more complicated, people are just more stressed, more...dealing with more of their own issues, whether it is trying to survive or what have you." – Eleanor

Logan's is a personal decision not to discuss controversial issues to avoid social conflict, influenced in part by his status as a non-U.S. citizen with a green card.

There's a lot of things that I don't share with people at church. [pause] And the only time I share my views...be they political, be they economic, be they even spiritual, is when I'm asked. But I do not talk to people about these issues unless it's part of our natural conversation. – Logan

It also results from his uncertainty about how to communicate with others who do not accept the scientific basis for anthropogenic climate change.

I mean I've got—there—people make statements at church that global warming is a hoax. Maybe not in those terms...So, I mean, I don't even know how to begin dialogue with a person like that, who has that kind of a view. That's adamantly opposed to the scientific evidence and my understanding of it. But I'm not a biologist, I'm not an expert in these issues, so there's something that they might know that I don't know, but none of these people are scientists so I don't think they know more than what the scientific evidence is."— Logan

Only four *Believers* specifically indicate they discuss climate change or environmental issues with others. Collin does with his co-workers and others in his "house church", but their discussions are "usually not very deep." Margaret personally finds global warming interesting. She indicates it becomes a topic in her social interactions "only if I bring it up", usually with the response that "the most I hear it's political, not really happening."

The most singular experience among *Believers* is Crystal's. She speaks freely with others about environmental concerns, especially water quality and resource related issues since she works in this field. Her discussions are limited mostly to certain pro-environmental behaviors, not climate change, and she admits sheepishly that gives her something of a reputation among her friends.

Yeah they all think I'm a wacko. [laughs]...And so I've heard a few conversations, you know, and I have gotten some of them start buying locally, buying food locally with me. And some of them were kind of interested in that before, being from California and having sort of a different view about the environment. Yeah, so we, you know, we have a few conversations along those lines of behavior change. And try to help them to do the right things, like bike places and—well we have kids, so it's a little harder to transport, but... — Crystal

Another dimension to the relationship of religion with environmental and climate change communication is the extent it occurs in the social context of a church or is addressed directly by its leaders. No *Believers* specifically indicate they hear it being discussed at church by others or their leaders. Eight say they have not heard of such discussion taking place and offer direct religious or religion-related reasons for why this is the case.

Two mirror reasons why *Believers* do not talk about it themselves. One theme reflects the view that the focus of church is people and their physical and spiritual needs, not environmental concerns. Clark says, "The church I go to, I'm sure the people are concerned about the environment and things. I think the focus of their church is like ministry and outreach." Another *Believer* explains certain environmental activities could occur, but only in circumstances clearly related to meeting peoples' needs.

What we want to do is help people. And we help them with cleaning up and things that make their lives better. So we don't really see, and it's kind of putting the cart before the horse, I think, if you're out there working on the planet. What we really want to do is help people, and if part of

that means helping them clean up or landscaping issues, helping them if a tree fell down or something like that then we see that as helping the people and meeting their needs rather than helping the planet. The planet is not an entity. It's what's around us."- Jonathon

Others' explain these discussions only happen if weather and natural events affect peoples' everyday lives. Earnest observes, the "only time the environment comes up is if we're in the middle of a storm...At church, we talk spiritual things." Or they do not occur because they are not relevant to the purpose of their current social interactions with others. Eleanor explains, "when I'm with people at church it's, you know, like a meeting, we are talking about business at hand...when I'm with friends, we're catching up just with our own lives."

Believers' also suggest reasons for silence in their churches on climate change and environmental concerns come from a desire to avoid popular hysteria and political issues. In Darren's perspective this is,

Again maybe more of a long-range view on life and, God's plan and not getting caught up in every little—shouldn't say little, but every passing fad. I don't know if I would call it a fad; it's more than a fad now. But, uh, the hysteria of it is concerning."- Darren

Trevor wonders if it is "probably because it's become too politicized...And so to some degree, church wants to stay out of the politics issue of it." Edward echoes Trevor's view. He also simultaneously reflects that his own lack of understanding about environmental issues might come as a result from the lack of discussion about them at church and the extent that his social network and interactions extensively includes people from there.

Well, and that, it's just really, it's something today, really kind of enlightened me a bit is that the church really doesn't talk a lot about environment issues, and that just came to my mind, and that's probably the reason why I don't know a lot about it because I spend so much time with people at church, and they don't talk about it. So, I don't know anything about it. We don't have any, I, maybe it's because the church generally doesn't feel like it should get involved in politics, and the environment is seen as a political issue." – Edward

Others allow for the possibility of discussing climate change and environmental concerns in church, but only under specific criteria that reflect anthropocentric values. If no relevance to peoples' needs is demonstrated, then there are limits on what at least one *Believer* is willing to do.

No, I don't think it's inappropriate. I—it's more a matter of prospective. We want to meet the needs of people and if that includes helping them create an environment around them that's conducive to their lifestyle or whatever, improve their lifestyle, meet their needs, then yes. But I'm not going to go to Antarctica, where there aren't any people in the area and make—and the snow is too dirty—and help clean it up just for the sake of having whiter snow. That's not the purpose of our existence. So it centers around meeting the needs of people."- Jonathon

Believers also discuss various aspects of personally responding to climate change directly through actions they take, or their willingness and intentions to do so. Their comments give evidence to two predominant religious themes.

One emergent theme among *Believers* is identifying the relevance of their theological understanding of stewardship when discussing the connection they perceive between their religion (“faith”) and climate change or environmental issues, and individual actions they do (or do not) take to address them.

Although concerned about global warming, Edward recognizes a gap between his expressed interest in it and his personal actions. “I guess it’s not a priority. I guess that’s what I’m saying, it must not be a priority to me. So, I’m saying it by my actions.” He further admits, “I don’t have an electric car. I don’t recycle. I probably have a horrible [ecological] footprint.” Despite this personal assessment Edward’s religious beliefs inform what he perceives are his responsibilities toward the natural environment.

I also think that we’re gluttons and we need to learn how to conserve and do a better job of, you know, eating less so there will be more food for others. Just everything, just being better stewards of the world that God’s given us.” – Edward

Collin too sees a connection between Christianity and addressing climate change that he describes at the end our conversation together. He also puts it in terms of his religious understanding of stewardship and explains how this motivates his willingness to act.

Well sure. I mean, uh, the part that connects is I’m, as a Christian, I’m supposed to be a good steward. And if good steward means being more environmental then **[unintelligible 01:24:02]** But I’m only going to change my behavior because it’s the Christian thing to do, not because it’s the liberal thing to do, not because, you know, for some other reason.” – Collin

Earlier in the interview, however, Collin does say what other reasons will lead him to change his behavior when he first begins discussing climate change. He identifies both a specific criteria (“I’m going to need to see more evidence”) and a general theory of human behavioral change.

I think what’s really going to have to happen is we’re eventually just going to have to see whether or not some of these predictions are coming true or not. I don’t think human behavior—humans by nature are very independent. I don’t think they’re going to start really, seriously changing their behavior ‘til they either start seeing a prediction coming true, like icecaps in great, huge amount are melting and the sea level is rising. And unless we actually see that we’re probably not going to change that much.” – Collin

Sharra does more than Edward and Collin apparently in response to climate change and explains the rationale for her actions in terms of her views on stewardship. She describes it in a

discussion of how she perceives and responds to environmental problems with respect to the influence her religious belief that they happen as “part of God’s plan” has on her willingness and motivation to respond to them. She identifies several individual behaviors her family does currently (“we try to recycle, reuse...my husband bikes to work...conserving”) and ones she realizes are beneficial but does not do yet (“we can’t afford a hybrid car”).

Her religious belief about God’s involvement in the world does not stop her environmental behavior and response to climate change. Although Sharra believes events that happen are a part of God’s plan, she is “not just sitting back and doing what we want because, well God will take care of it one way or another, but, you’ve seen, okay there’s this technology and there’s this concern.” Her conception of stewardship also includes values that are not inherently religious such as “trying to be responsible”, asking “is it reasonable”, and being “in the middle.”

So stewardship wise, you know, we work with what fits in our finances and the budget, or within our budget, within our finances. So this is a balancing act. But we’re not sitting back and doing nothing. We are trying to be conscious but also not consumed with what every scientist says. And obviously we use electricity and we use some, we use our cars, and so there are things that we’re emitting greenhouse gases, and we’re using electricity, and using the natural resources. And so we haven’t...try to be in the middle.” – Sharra

Jonathon also discusses the role “stewardship” takes with respect to his views on the connection between his faith and concern for climate change and the environment. His response to the suggestion that other evangelical Christians argue for this includes examples of what he considers appropriate personal behaviors, his normative rationale for these based on his religious beliefs about the role of humans in the environment, and value criteria relevant to him for guiding “good stewardship of the environment.” He concludes these are basic lessons people should learn when they are young.

I personally haven’t seen that beyond, at least in the churches and people that we associate with, beyond good stewardship of the environment that we have and picking up after yourself. Don’t be littering and destroying and things like that. But, be good stewards and caretakers of God’s Creation, and respectful of it and, it’s just a balanced appropriate response that Christians and anybody else should take to, you know, that’s the kind of things you’re supposed to learn in Kindergarten, right? [laughs]” – Jonathon

His judgment about other kinds of environmental activism and religious beliefs influence what he believes is a “balanced appropriate response.” He disagrees with actions involving property destruction. In trying to understand the motivation behind them, Jonathon draws on

his theological framework to explain them. He sees them as a consequence of people “who worship different things” than Christians and the result making environmentalism their religion.

You mentioned that you see for some people that what we’ve just been talking about as their religion and you said you can see it in their lives. Can you tell me a little bit about what that looks like to you? I’m basically thinking of people like, um, oh, who went around torching the car dealerships and...PETA or other...Doing an ostensibly good thing, which is preventing cruelty to animals, but doing it in ways that are disrespectful and actually destroying the property. And I don’t agree with that at all, but these are people who have taken these to extremes that defy any explanation, um, and it seems like they, that’s the way that they—what they have centered their lives around it in much the same way that we as Christians center our lives around the Bible and Jesus Christ. So it’s my belief for people were created with a need for, call it religion, call it a relationship, in their lives, and some people fill that in different ways. They worship different things. And for some people it is environmentalism.” – Jonathon

Darren reflects sentiments that these other *Believers* express in response to the suggestion of a link between his faith and something like global climate change. He holds a religious belief similar to Sharra’s theological conviction about God’s involvement in the world (“faith allows you to more think it’s everything in God’s hands”). And he evidences the same perception as Jonathon about environmental activism specifically toward climate change: “I think people who are real extreme on the climate change wagon that think it’s a dire emergency are probably predominantly not Christians.” Although not concerned directly about “this whole global warming climate change issue”, Darren identifies an interest beginning in high school in actions climate activists argue can address it such as “solar homes”, “energy efficiency”, and “simple and wise living and resource use.”

Another primary role of religion in *Believers’* views when responding to climate change through their own individual actions is how their theological understanding informs perceptions about the efficacy or capacity of their personal behaviors to address it as an ecological condition and environmental problem. Among all participants interviewed, twenty-four (24) discuss their perceptions of the degree of personal control and efficacy of their actions to respond to and address climate change. *Believers* voice a spectrum of perceptions about theological limits on human agency for addressing this large-scale ecological phenomenon.

Grant is not willing to ignore climate change and do nothing about it even if others believe it is in “God’s plan” or see it as progression towards the end of the world. “

The Bible doesn't spell that out. So I'm not willing to allow the Earth to be destroyed because...I mean if that's true, then it won't matter what we do, will it? If that's in God's plan, it won't matter what we do. But we don't know that that is God's plan. So why would we just allow that to happen. Doesn't make any sense to me. Just because you believe that's the way the world's going to end and you interpret Scripture that way, I don't interpret it that way. So I'm not willing

to throw in the towel. So I would say that it's nonsensical to begin just to let the world go to hell in a hand basket, especially because that's what—you could say the same thing about wars.” – Grant

Although he agrees God has a “plan”, Grant’s theological interpretation of the same Bible passages differs from others. “I mean don't know. That's just their interpretation of Scripture. I don't know that that's, don't know how the end of time is going to happen. Could be, but I don't know. That's just their interpretation of it.” Human action is necessary on climate change because his belief about how God is involved in the world does not give him certainty for presuming the religious significance of climate change: “you're saying let's focus around how I interpret the End Times are going to come. The Bible doesn't spell that out.”

Crystal identifies several pro-environmental actions while explaining how her religious beliefs about God’s involvement in the world influence her willingness to make changes in her own life personally. They include “trying to eat more local food”, “the whole organic thing”, and “used clothes and used things.” She identifies some limitations: “we have done some alternate transportation. This year's not been as easy to do that with the new house”, and “when you're a family you have to make decisions as a family. So some things, um, aren't always 100% how one party or the other would do it on their own.” When she discusses her thinking and approach for responding to climate change, Crystal’s religious beliefs and theological understanding about the role of human action appear.

I think that the right approach is to **[unintelligible 01:13:51]** The why, sort of long-term approach, is to never assume that you know the timeline or the, um, the cause and effect relationship or, or what God has in mind. I mean just even thinking about the Middle East and how many decades that we now have been saying, ‘oh this is it, oh this is it, oh this is it’. Or the conflicts are going to lead to Armageddon and an end times sort of scenario. And, um, I think that's because we don't know what technology will do, we don't know what God has in mind, we don't know how much impact, really, our own choices will make. But it's better to err on the side of caution that it will, that it will make an impact and that God will be merciful and extend people's opportunity to come to Him [sic]. And we'll have longer, longer time to deal with whatever choices as a society we make and how that changes the planet.” – Crystal

While engaging in several pro-environmental behaviors and allowing for the possibility of human action to address climate change, her religious beliefs inform how she perceives them. Crystal believes there is “physical, destruction kind of end to the planet...described in the book of Revelation.” She is unsure exactly how clearly this will be perceived. “[It] may be obvious at the time that it's coming from the hand of an angry God or it may be obvious at the time that it's coming from our own selfishness, our own bad choices. I don't know.” Although not apparently

her own perspective, Crystal describes a related theological perspective on the relationship between human action, the “End Times”, and environmental change: “There's really different Christian views about that, too, and about evangelism and can you change the timeline on Christ's return by faster spreading of the Gospel. Can you change the course of decay based on environmental choices?”

Crystal's response to the possibility climate change and large-scale environmental change has an anthropogenic or a spiritual cause reveals her perception that her religious beliefs require “an act of obedience and stewardship” has a paradoxical tension.

It, yeah, it can be unsettling and—in terms of thinking of those who would not be a part of the Kingdom to come. That's unsettling to me, and causes me to pray for those that I love who are not with Christ. And I think too that if it's part of, if the environmental decay that we see is part of—in an academic sense—is part of what our Father [sic] in Heaven has known about from the beginning would happen then, I think we need to live as if we can delay it but know that we really can't. That we need to try to make choices to prevent it or—you know, environmental choices, but...[pause]...I think more as an act of obedience and stewardship act as in any, as opposed to any real sense that, that the timing can be changed because of what...I don't know.”
– Crystal

Sharra echoes this paradoxical tension Crystal expresses. After initially commenting on the possibility of ecological crises occurring, she offers historical “temperature fluctuations” as an example of “forces and factors” not in human control. She is aware “there's some theories that the more greenhouse gases we release will affect the temperature, but there are areas without greenhouse gases that, you know, the temperature fluctuates.” Her conclusion with respect to addressing climate change reflects Crystal's view: “I think if we're responsible, we can, you know, work to counter-balance the things that come up as much as is in our control...But, we don't know for sure. And God knows, God's got the world in His [sic] hands.” Sharra's perception is strengthened further by a second theological conviction “that there's mysteries in nature that God has built into His creation that we don't understand, that we won't be able to understand”.

For Alan, like other *Believers*, the connection between his faith and environmental issues like global climate change is “we are put here to take care of the earth.” This means not overreacting (“I don't necessarily think that we had [sic] to do everything on a knee jerk reaction to do it”) because things are not as bad as they seem (“We'll probably solve or handle the situation without a major catastrophe”). He allows, “Anything is possible, I mean, the End Times is possible. It may happen. [laughs] Maybe that'll come in the form of a climate change. We

don't know how it's coming." However, Alan disputes the theological interpretation that human activity brings this about due to environmental impacts even though he agrees human actions can "solve or handle" climate change.

No, I've never heard that. I don't think we're going to be able to determine, or accelerate, or decelerate when the End Times is coming. Man's not going to have a say in that. All—the only thing we know is that it won't come until everybody has heard the Word. But other than that, I don't think we can speed it up or slow it down." – Alan

Although the two themes presented above for the role of religion in *Believers'* views about individually addressing climate change may appear discretely held by different individuals and categorically separate, reality is more complex. Margaret offers the most extensive account among *Believers* of the interplay of religious beliefs to inform people's theological understanding of stewardship and perception of the capacity for individuals to address climate change.

She takes a literal interpretative approach to the Bible and holds a religious understanding of the future end of history. When I ask if global warming is fitted in God's plan after she seems to suggest it, Margaret replies at length,

"No, not that...doing it's like, all these things could be, could be fit into the...um...the End's Time thing. That if you take Revelation literally, is that you know there, you know there...you can, you can study Revelation and there are things in there, obviously that are natural disasters that happen, you know asteroids and...So the changing of the earth is that [sic] growing pains of those types of things...So that's what all of these environmental things happening because of God's sovereign plan, you know Him [sic] is allowing..." **So are you saying God's causing them or...?** "No just letting...could they be leading up to those things...how He's [sic] going to allow His plan to unfold, you know. Could that...so you know when I hear scientists say we have to try to, we have to save the earth, what is the worldview, where is he coming from? If he is coming from an evolutionary perspective, then [pause] I don't know, then, yeah, they're going to try to save it cause there's no God who's involved. If God's involved, look what's happening? Maybe, I don't know, I don't know if He's done it or all that, but allowing, there's that sovereignty." – Margaret

At the end her comment, Margaret references the classical theological concept that reflects her belief about the extent of God's involvement in the world: the sovereignty of God. She begins explaining her views on stewardship when I immediately ask her next how this religious understanding relates to how she views responding to and addressing climate change.

So, from your view would that mean that you don't think we should be involved in, I mean, quote, during the things that... "Right. Hmm...[pause]...Well we're stewards, we're supposed to be stewards, but I guess there just has to be a balance in that. They're not going to save it if it's [unintelligible 0:53:05] But there is a point, because we are supposed to be stewards in everything, you know everything in our lives, I feel, I should be a steward. So...um...I guess there's so much we can do and it is in God's hands. There is so much I can do as a Christian and living on this Earth God gave me and being responsible and being the best I can be and...you know if that

means taking a more active role in [unintelligible 0:53:47] issues or being part of an AWLS club then...but I know He [sic] has an ultimate plan and I'm going to trust that. I am not going to be worried about the whole end or what would happen if..." – Margaret

Margaret allows for the possibility she might have to respond to climate change on the basis of her perception of the religious responsibilities arising from her theological understanding of stewardship. However, her belief about God's sovereignty and involvement in the world ultimately forestalls this realization from becoming an intention and possibly resulting in action. She soon reiterates this perspective and affirms her religious perception of the relationship of human agency to God's sovereignty with respect to ecological conditions and climate change: "The end is not the ultimate control at all, that is not in control, God is. So that's where I will do my best, but I know that He [sic] is the ultimate control of what is really going on."

As suggested earlier in her perceptions about its problematic nature, Sharra's exhibits little willingness to respond and address global warming. Her personal lack of concern described earlier about climate change does not mean for her that others Christian cannot care about it or that she might eventually change her mind about what she thinks. Her perspective on the connection between global warming, her faith, and addressing climate change reflects the potential responsibility Christians may have for being concerned about it, a reflective assessment of her possible biased view, and a cautious approach in the application of her religious based stewardship. Sharra sees a responsibility for Christians to respond if concern about climate change is warranted.

But I can see Christians...I can imagine Christians being concerned. I can't think of any examples. But that doesn't mean that I haven't heard that perspective. If it is a concern and if it is something that's happening, then I do think as Christians, we should be concerned about it. – Sharra

She acknowledges a possible reason for her own personal lack of concern may come from a skewed understanding and limited information. "I talked earlier about filtering things through bias. I know that I have biases that may be, I hope not, may be closing my mind off towards some of the arguments for global warming." Sharra recognizes her own inaction may be unjustified and misplaced. And if Christians should care about climate change, she believes they must address it. However, Sharra sees a limit on the extent of that response and a danger to avoid that would limit the effectiveness of their response.

If it is an issue, I do think that we, as Christians, should be concerned about it. And do what we can. But I think there is a...I think we need to be careful with other extremes. Especially with

stewardship, I think extremes can...I don't know that you can necessarily be the best steward if you are extreme." – Sharra

And Sharra believes God limits human impacts on the environment and the consequences of technology on it. Her theological understanding about God's involvement in the world informs her view of the effects of human activity on ecosystems ("I don't know that He [sic] would necessarily protect us from the consequences of our actions"), how much God controls what happens in the natural world ("He's got the whole world in His hands, He's got an ultimate plan for humanity, and so if it's not in His plan for us to mess the environment up so badly that it makes it unlivable, it's not going to happen. If it is part of His plan to bring people to Him, then He is going to allow the things to happen."), and her perception of ecological conditions ("...earthquakes and tsunamis and horrible events. I don't know if they are the results of actions that we have done, but He can use those to bring people to Him").

Finally, Darren also embodies this complexity described above of religious influences on *Believers'* perceptions of this global environmental problem, but puts it more succinctly. His response to a link between faith and climate change—

Oh, I guess faith allows you to more think it's everything in God's hands. I think people who are real extreme on the climate change wagon that think it's a dire emergency are probably predominantly not Christians, I would guess, I have to guess." – Darren

Role of Religion in Societal Responses to Climate Change

Another way of addressing global environmental problems and their consequences requires coordinated, collective actions. With climate change this can occur through environmental, political, or economic public policies. Citizens can involve themselves indirectly in doing so via expressions of their willingness (intentions) to support or oppose policies, and by conveying their understanding (beliefs) and reactions (attitudes) toward them via surveys.

Public policy was not a direct focus of this qualitative inquiry into participants' perceptions of climate change. However, unsurprisingly participants mentioned and discussed various examples of climate policy proposals. I coded individual's transcripts for various aspects that illustrate examples of societal response to climate change as an environmental problem. These include peoples' views about whether climate change should be prevented or ignored, or if society should adapt to its effects. Other policy-related topics that emerged include using a market-based approach, and participants' discussion of fossil fuel use, alternative energy sources such as wind energy, and the role of technology. For each of these different dimensions

of societal responses to climate change and its consequences I reviewed coded transcript text for evidence of individuals' religious beliefs, attitudes, and values.

Darren observes "the one part of my job I find very silly is the utility tracking. I guess it's got its benefits in noting trends and trying to track things down. But, as far as extrapolate all of that into carbon footprints." He continues on discussing the upcoming "carbon tax" that Britain will implement and notes, "that's going to ruin the economy and livelihoods. I mean the impact is so clear, you know, into the third world, and, you know, the starvation and it will have a huge effect."

Darren declares his preference for addressing climate change is "concrete conservation and recycling things versus all this carbon footprint." He relies on his religious understanding of stewardship to make his conclusion and assessment of mitigation policies based on carbon footprint analysis.

I think that's a really bad example of, from the Christian worldview of being in charge of the garden and being a steward of it, to being a slave to it that you can't use it and you have to, uh, I don't know, feel bad about your consumption of any of it. Try to almost pretend you don't exist: like erase your footprints from right underneath yourself or something. Like, wait a minute, God put me in this garden." – Darren

Alan's religious belief about the role and relationship of humans with the natural environment motivates his inclination to support responses to climate change and its effects. He sees the connection between his faith and climate change is "we are put here to take care of the earth." However, his support is contingent on his perception of the severity of the response. "But I don't necessarily think that we had to do everything on a knee jerk reaction to do it. That, you know, we are taking care of it, and that yeah we are swinging a pendulum." Alan seems most amenable to an adaptive approach of societal responses to climate change.

Edward's willingness to support societal changes ("I would like to see us be able to go to the electric cars, the wind, and things like that") comes from a theological perception of his responsibility about "just being better stewards of the world that God's given us." Collin also prefers a gradual, adaptive response. He wonders, "But does that mean we have to change everything right now? Why can't we just be working towards it because we know it'd be better?" He is amenable to proposals increasing energy production from non-fossil fuel sources, but opposes what he perceives as coercive policy measures.

Yeah, I guess, like I say, kind of a wait and see, but yet at the same time, sure, try to do alternate energy. Yeah, invest in wind energy. Sure. I don't have any problem with using global, er, solar

energy. Great. It's a great idea, so do it. But, like I say, I don't, I wouldn't support this if a law came up that said, okay, look, we can't drive our cars anymore. You know, there's too much pollution or there's too much CO2. You have to wait until, you know, you get your hydrogen car. I couldn't support that. I'd say okay, fine. Start making them, start making them affordable, and people eventually will trade them in and buy them. You know?" – Collin

He does not think the effects of climate change will occur suddenly. For example, he believes "The water is not going to come flooding in. It's going to come gradually, and as more icebergs melt, and people are going to decide to leave." Collin does consider it possible "it may be too late. So if that's a crisis, then that's what it is. But, I don't know. I don't see it as a crisis because I see human beings are very adaptable. Whatever happens, we're going to be able to survive." The confidence in his perception and assessment of the human capacity for addressing climate change comes from his religious beliefs about the future end world and his literal interpretation of the Bible.

Can you tell me a little bit more about maybe why you believe that? "Well, because that's not going to be the end of the Earth. That's not what the Bible is predicting, that we'll all just die of heat or flood or—that's not what the Bible says. And so I certainly don't have—I have no faith that that's how mankind's going to—global warming's not going to cause mankind's end. The Bible talks about how mankind's end is going to happen, and it doesn't seem to match up. So I don't put too much faith in it." – Collin

Believers' religious beliefs about the future (end) of the natural world and a literal interpretative approach shape their evaluation of the necessity of addressing the consequences of climate change. Like Colin, Margaret's biblical literalism and religious beliefs about the future of humanity and Earth incline her to wonder both about her personal capacity for responding to climate change and even the possibility that society will really need to address its fossil-fuel related causes and its ecological consequences.

Yeah, I don't think, I don't think, I don't think we're going to kill ourselves off, because I believe in the [Biblical] Rapture and I believe that there's going to be the revelation. I take Revelation literally, I believe there's going to be that, He's [sic] going to renew the earth, He is going to create a new heaven and a new earth. I don't know when, so in my lifetime you know I can do what I can to...You know, I don't know if we are going to deplete everything and it's going to be unlivable. That's hard, it's hard to know. But I think, I know that's there, I think that we need to maybe develop...Can we deplete all the natural resources and oil and all of that? Maybe. Maybe there has to be new ways to, to provide. I don't know, that's a hard one, to answer." – Margaret

Darren takes an adaptive stance too. He believes anthropogenic causes exist for climate change and that "fossil fuel burning activity" is "adding to it a little bit." He is confident it can be dealt with even if substantial impacts occur because of the rate of ecological change. "I think it's going to be a gradual change. It'll definitely be an impact. We're definitely gonna lose Florida

and some of these low-lying areas someday, you know, 100 years out or more. But it's not going to disappear overnight in a fashion that we can't work around it, accommodate."

Further on in his discussion of why he believes this, Darren offers a religious basis for his perceptions about the dynamics of human impacts on the Earth's atmosphere and climate with respect to climate change. It comes from his theological understanding of God's involvement in the world and how he views climate change with respect to "God's plan to be with the Earth." The spiritual consequences of human action ("The Fall") make the observed global environmental changes expected, put a temporal limit exists on the possibility of mitigating negative or harmful ecological conditions ("it will eventually in fire"), and even provide social benefits to phenomenon such as climate change.

Um. Well, that it will eventually end in fire, but I guess in the meantime that, um. I think, well, it's part of our [Biblical] Fall; it's a fallen world. And this is one of many things in life that are difficult. But, also in the sense that they provide constant change and challenges for people to face up to and work with each other and adjust to." – Darren

Jonathon shares the perception predominant among *Believers* that adaptation is an enduring human quality ("we do have the ability to adapt to them. Um, which is what gives us our resilience"). And that environmental change is an inherent quality of Earth's ecosystems. Both of these conclusions come from his religious beliefs about "the way God made the planet" and support his evaluation of climate change.

And, even the environmental change that we see is not necessarily always bad. It can be merely but a change. And, we adapt to change. And that's a good thing. That's the way God made the planet. He [sic] didn't make the planet to stay the same all the time and we shouldn't expect it to. He gave the planet the ability to adapt and to change and to flow and to compensate for things when they occur. So, just more amazing insight, I think from, and planning on the part of the Creator." – Jonathon

One form of perennial human adaption is technology. As with public policy, this was not an intentional focus of interviews. However, it emerged as a topic among *Believers*. Eleven (11) participants overall discuss aspects of using technology in options for responding to and addressing climate change. Four (4) of seven (7) *Believers* who discuss technology also reference religious beliefs and theological perspectives when discussing their views about it.

Ernest's explanation of his understanding of climate change begins with him discussing why he thinks it is occurring. He believes "it's important to know the why so maybe we could change something, so that things could become little more stable, you know." He then references a Biblical passage and applies it to ecological conditions and environmental change

("the Bible tells us we're gonna have, you know, seed time and harvest, we're gonna have rain"). He immediately gives an example of air pollution and the role of technology in both creating the environmental problem, and the unsuccessful effort to use technology to solve it. In the context of his discussion it seems an ostensible commentary on the feasibility of addressing climate change using it.

...you know, over in China they've been – well the Olympics they've just got going on at this present time, and they have such tremendous pollution just because of the advance of technology in their country, with millions of cars, more cars and factories, uh, so they had to cut that back. Well they did – one way to cut it back was to make it rain, so they tried to use the technologies to make it rain –" – Earnest

Sharra also recognizes there are "consequences to technology that we don't perceive at least, we can't control, or might take a while to get under control." Her assessment of its disruptive potential is amplified by one religious belief about the role of science ("there's mysteries in nature that God has built into His [sic] creation that we don't understand, that we won't be able to understand") and assuaged by her theological understanding of God's involvement in the world ("God knows, God's got the world in his hands. We can't control the temperature") with respect to climate change.

Two others draw a clearer connection between technology, climate change, and the optimistic possibilities for addressing its consequences. Crystal observes "we don't know what technology will do, we don't know what God has in mind, we don't know how much impact, really, our own choices will make." Her perspective on the role of technology in responding to climate change combines both her religious beliefs about God's involvement in the world and her perception of its possibility for an adaptive approach for addressing its consequences.

I think that the right approach is...sort of long-term approach, is to never assume that you know the timeline or the, um, the cause and effect relationship or, or what God has in mind...I guess this is one of those situations where technology, if it's adapted, adapted fast enough, could slow it down, I think, if it's also partnered with, with behavior change. Where we're, uh, we're having technology to get us around a different way, perhaps...so I think that, can't be one or the other exclusive. I think that both choices and technology are, are the only thing that have a sliver of hope of delaying or changing what's going on, the direction that climate change is going." – Crystal

Margaret believes technology could be a means through which God would direct humans toward a solution for addressing climate change, but allows it might create environmental problems as well. Her theological perspective suggests how this would occur ("the Spirit would speak"). She also perceives the human responsibility and relationship to the

natural environment in terms of both a religious understanding of what stewardship means shared with other evangelical Christians and religious based expectations for how she should parent.

How would you, if you could, a Christian get a message from God that this is something to be concerned about? “I think, just if anything, they would get ideas, I think the Spirit would speak to the Body about it, um, you know, I think you have um...I mean I think of the Israelites and that they, um, had some, it was um...Just if anything, like, there’s His [sic] children, you know I take His will on how to take care of the children now. And His Plan and I want to train them the way He wants them to be trained. You know the same thing with if He gives you a house, He gives you finances, He gives us, you know, the environment, He gave us this Earth to live on and how do you want to handle it? How should we manage it? How should we take care of it? Look at all this technology that we’ve got developed. I think there is the possibility that we’re not doing things right.” – Margaret

No *Believers* clearly convey the view that climate change could be prevented. Crystal is the closest any came to expressing this perspective toward responding to it. Her explanation of it reflects a religious belief about the relationship between God’s involvement in the world, the impacts of humans on ecosystems, and environmental change (“the environmental decay that we see is part of—in an academic sense—is part of what our Father in Heaven has known about from the beginning would happen”). She explains the assumptions that should guide responding to climate change reflect her theological understanding and describes them in terms of “obedience and stewardship.”

I think we need to live as if we can delay it but know that we really can't. That we need to try to make choices to prevent it or—you know, environmental choices, but...[pause] More as a, I think more as an act of obedience and stewardship act as in any, as opposed to any real sense that, that the timing can be changed because of what... I don't know. Yeah.” – Crystal

Whether or not this is an ecologically sustainable approach or theologically justifiable response is a matter of debate. As Margaret observes at the end of her comment about the likelihood of depleting “all the natural resources and oil and all of that”, this is not happening: “I don’t know, I don’t know the Christian community just doesn’t talk about this, not that I, not in my experience, I don’t hear it a lot.”

The likelihood participants discuss these matters more in their churches or with others they interact with on a regular basis depends on *Believers’* perceptions of what others think about climate change. Among this study’s participants, *Deniers* would differ with them by disputing scientific assertions of anthropogenic climate change, even as they share many *Believers’* same religious beliefs and theological perspectives.

CHAPTER 6

“I DON’T BUY THAT AT ALL”: DENYING ANTHROPOGENIC GLOBAL CLIMATE CHANGE

Deniers

Deniers’ Climate Change Knowledge

Religious themes also appear in participants’ accounts of why they do not believe that anthropogenic climate change is happening. Among the 24 *Deniers*, nine *specifically* reference religious beliefs. They offer various forms of religious-based reasoning for why they do not believe global warming either is true or happening.

One religious theme that emerges is “Creationist” beliefs in a “young Earth” and opposition to evolution. Barbara explains the confidence in her denial of anthropogenic climate change comes from her experience teaching eighth grade physical science to her daughter using the conservative Christian material from *Apologia*. *Apologia* “publishes homeschooling curriculum and resources, and hosts online classes to help families learn, live, and defend the Christian faith.” The high school science materials they provide parents are “young Earth creation-based science courses” from a biblical worldview based on the belief that “the Bible is the inspired, inerrant word of God” (*Apologia* 2013). She admits to “just a little bit of understanding about it [global warming], but I don’t feel like I’ve got a great big grasp of it.” Barbara concludes the discussion of anthropogenic causes to climate change, “seems ridiculous to me.”

More direct use of religious “young Earth” beliefs appears in *Deniers’* discussing the possibility of humans affecting the Earth’s overall temperature and whether this results in warming temperatures. Jared acknowledges average temperatures are increasing, but disputes any suggestion of anthropogenic causes in part because of his biblical “Creation” beliefs. “I think our average daily temperatures, as a whole, against the almanac values, are on the rise. Is that directly attributable to human behavior? I don’t believe so. Don’t believe that link’s been proven.” He argues this is only a concern “if you believe in a million year old Earth and don’t believe in a created Earth.” Jared sees these changes occurring in a natural, historical cycle: “...we have a global history of changes like this from Eden—in scientific minds, from pre-human time. And so to think that—we’ve had ice ages. Before people. Certainly before cars and the Industrial Revolution.” His religious beliefs lead him further to the conclusion, “I don’t think it

matters how much fossil fuel we burn until it does” based on his perception of the magnitude and degree that God allows human actions to affect the natural world. He states,

I think it's kind of arrogant of humans to assume that we can affect the Earth that God's created on that scale with this little amount of effort in the grand scheme of things. Um—“ **So you think that—** “But I'll...I don't think that there's a Biblical promise there will never ever be global warming. We harness enough power to completely and totally destroy and obliterate it. Um, so to say that humans [sic], it's arrogant to think that humans could destroy the Earth, that's quite out. But to think we can overwhelm the environment with such a, with heat [speaker's emphasis]. Knowing that the atmosphere bleeds it off into icy cold space [speaker's emphasis]. It just seems a little silly.” – Jared

Barbara's and Jared's perspectives converge and are reflected in Kathleen's belief about how susceptible the Earth is to the effects of human activity. Before I directly ask her about climate change, statements I present to her about the resiliency of Earth's ecosystems immediately make her think of it and the plausibility of anthropogenic causes.

On one hand people say nature is fragile, and on the other hand others say the balance of nature is strong enough to withstand human interference “I don't—One of the things that came to my mind with human interference is this whole global warming. And that one of the textbooks that a friend of mine studied said, Are we so arrogant that we think we can affect God and the earth's temperature? Are we that arrogant to think? Earth has gone through so many cycles of heating and cooling without human intervention that are we the cause of it? I don't think so. It's just one of the natural orders that God has set up for our earth. I mean, we know there was an ice age. Well, if there was an ice age there was probably a warmer time, too. And we don't necessarily know where we are in that cycle. And we could be in one that's going to go warmer and we could be in one that's going to go colder again.” – Kathleen

Multiple religious influences appear in her response. Like Barbara, Kathleen accepts the proposition in home education materials that the scientific claim of anthropogenic influence on atmospheric temperatures reflects human arrogance. She also equates possible ecological impacts of human activity on the Earth's temperature with the implausible likelihood that humans “can affect God.” Like others, Kathleen perceives that changing temperatures are a natural phenomenon based on her religious belief for how God established the natural world. Her comment above ends with a statement directly reflecting that both her religious belief about how God is involved in the world and suggesting her theological views about how it will end are also relevant. She concludes, “And none of this happens without God knowing what's going to happen, and what He [sic] wants in the end.”

Other *Deniers* follow Kathleen's religious interpretation of ecological conditions. Darlene saw anthropogenic causes of global warming as implausible because her religious beliefs negate the possibility humans affect the Earth's atmosphere. “I don't think God has indicated anywhere

that that was something that He [sic] intended to give us power over.” In response to a similar question, Veronica immediately replies, “I think you’ve gotta say [sic], well, is it in God’s plan? As a Christian you think, well this is all in God’s plan.”

Asking Deniers’ to explain the role of religion in their perceptions of anthropogenic global warming reveals the complex theological and philosophical implications underlying this discussion.

When you talk about something like global warming as being part of God's plan, does that mean, for you, that God would cause something like global warming? “Hm, well, earthquakes and hurricanes and different flooding and so forth. It could be a part of that plan.” **But does that for you mean that God causes things like that?** “I don't know that He [God] really causes it. Sometimes...He [sic] allows it. Or if—sometimes He can't control it, even. But He'll use good out of that situation. I mean, I think this recent [dry hurricane] has taught us a lot., it's shown more people how vulnerable they are.” – Veronica

Denial by participants rests, in part, on belief that a non-Christian worldview leads people to overestimate the influence humans have on the environment. Darlene did not think scientific information about large-scale environmental problems such as global warming, acid rain, or ozone depletion “is true.” She offers a religious rationale for why “what’s being hypothesized there or described” is false.

that group of information comes from that group of people who would like to influence us in a direction that says we, you know, we’re the ones who will be in control. Um. There’s no Creator, and we have the power to be—we can be in control. And we need to take control. And it’s up to man to have the power over all these things.” – Darlene

Willard also believes a Christian biblical worldview provides a more realistic perspective of the degree human activity affects the Earth’s atmosphere through the release of carbon dioxide.

Or you can have the worldview of, uh, my worldview, if you will. Um, someone who has faith in God, something bigger than himself [sic]. The world does not revolve around me. I may not be able to understand everything or prove every climate anomaly or justify every course of action that I think we should or shouldn't take. But I have confidence to know that my God, whom I believe is real, is one who is in control of all things. And ultimately if He wants the North Pole to melt, it will melt no matter if we put a million refrigerators up there to keep it frozen.” – Willard

He contrasts his worldview with the perspective he sees held by those who “believe that they’re the center of the universe. That all things revolve around man, and man is the controller of all things good and bad.” It is this philosophical non-religious perspective, not empirical observation of climate science data, which Willard believes is what leads “humanists”, “secular”, and “liberal” proponents of anthropogenic climate change to conclude humans are responsible for melting polar ice.

The fact that, you know, you have something that, like carbon, and you want to jump to the conclusion that the release of this portion of—this fractional amount of carbon—that man is the cause of, has this broad scoping ramifications that we want to try to reverse or prevent is...I think that, you know, on a worldview level I think it's presumptuous in, with regard to how much influence we have." – Willard

Rebecca offers several different religious beliefs for why she is convinced that something like global warming or climate change is not happening. In a single extended response she declares three times her conviction that it will not happen unless God desires it.

[1]...if God wants this to happen, He [sic] would allow it to happen, and if He doesn't want it to happen, it's not going to happen – [2]...But if it's God's plan it's going to happen. If global warming is a thing that brings that [end of the world] about, then it's going to happen whether we want it or not – [3]...God is in control of this. We need to be responsible, but He's [God's] really the one that's in charge of what's happening and what's going to happen." – Rebecca

Rebecca further explains that her religious beliefs about the future, and ultimate end, of the world inform her perceptions of this ecological phenomenon. "I think there's a bigger picture as a Christian. The world will end when Revelation takes place." Rebecca is unsure she will be present if it happens. "I don't know if we're going to be Raptured before, during, post. I don't know. I don't know how all that's going to happen."

Despite her denial of anthropogenic climate change, Rebecca also holds religious based values that inform her view of human responsibility for care of the natural environment. It appears connected to her religious belief illustrated above about how God is involved in the world. Twice she directly expresses what appears as a tension between a religious normative mandate for human action and constraints she sees God placing on it. The first instance occurs in her response to a question about if it is plausible that human activity could influence the Earth's atmosphere. "It could, but only if God allows it. So I think we have to be wise with what He's [sic] given us." Her second explanation elaborates on how she thinks God might "allow it."

So I guess kind of my feeling is that, we need to be responsible but we can't change what God's plan is, and if He [sic] wants His people to stay and live on the earth I think that He will make that happen, whether that's through showing somebody through technology how to fix this supposed problem with the ozone. Or revealing that that's not really happening and all the money and energy that's going towards Al Gore and Leonardo DiCaprio and all the other stuff, people will realize, oh wait a second, that's the wrong focus. – Rebecca

Deniers frequently describe their disbelief of anthropogenic climate change and state their personal support for other pro-environmental concerns at the same time. One way they do this is by following their denial with a statement affirming the value of an environmental ethic that appears grounded in their religious identity and perception of religious norms. When asked

if she thought climate change is happening, Norma replies, “I have a hard time believing it sometimes. But I believe we should, as Christians, take care of where we’re living.” To Sidney global warming “doesn’t make sense” and “I don’t buy it from the logic standpoint.” However, asked if anything related to the environment concerns him, Sidney replies “I think we were given the charter back in Genesis. You know, we’re to care for it.”

Several others make this distinction between the scientific question of whether anthropogenic climate change is happening and the value-based discussion of how should humans relate to the natural environment. Kenneth says,

So, I don't buy that our planet's getting warmer. I don't buy that at all...we want to assume that a little bit of carbon in the air is actually causing something, and no one as far as I can see, has really provided true evidence of that.

He supports his perception by immediately explaining how his religious beliefs lead him to this conclusion. “I think there’s God involved in this matter; it’s not a man-made...I think we have a man-made idea of a problem that’s not really there...I just don’t think that God has given us that much power over the planet.” In fact, Kenneth sees it much more likely that methane emitted from cows contributes to observed changes in the Earth’s atmosphere, temperature, and climate. He observes, “Well what do those cows give? Well, those aren’t milk cows, those are methane cows.”

While he denies it occurs, Kenneth’s view on anthropogenic climate change does not mean he does not care about the environment. He supports measures climate change advocates offer for addressing it. “But I do believe that there's a place for those things. I think we need to, we need to find better efficiency.” In fact, his religious beliefs guide and inform how he constructs the relationship between humans and the natural environment.

I think the environment is a critical thing. I think we have to take care of it. God made us stewards of this planet.” **So what does that mean for you?** “Well to be a steward is to take care of what you've been given. [pause] When we purchase something we use it the best we can use it. Meaning don't, don't waste.

Another participant, Bruce, shares, “I haven't decided whether I think that humans have caused the whole climate change thing or not. But I think that it's indisputable that climate change is happening.” However, he cites humans’ overall negative impact on the environment as among the problems that concern him. Simultaneously with noting his disbelief in climate change, Bruce also explains how his religious beliefs inform his views about the ideal relationship of humans to it and his belief in the resiliency inherent to Earth’s ecosystems.

I think a second issue is how we treat the environment. And whether or not the ecosystem in which God has placed us is going to continue to support life as we know it. And, you know, I think that the Earth is an amazing ecosystem that has the ability to recover from lots of abuse. At the same time it would please me if we stopped abusing it quite so much... – Bruce

Loraine sees the question of whether anthropogenic climate change is occurring as irrelevant to how humans should relate to the natural environment.

And so you mentioned, I think earlier, that you don't believe that something like global warming or climate change is happening? Not really at this time. I think it may be...maybe not global warming...but the resources will run out." – Loraine

She perceives the more urgent environmental problem involves how resources are used. Her religious beliefs both inform how she views they can be addressed and provide the values that she believes should guide people's actions.

I don't think we're all going to burn up because the ozone layer is getting thin. No, I don't think it's something to be too concerned about. But I think it's part of our responsibility that God gave us to be resourceful. He [sic] gave us everything we need to survive. Even though we have technology these days, use it still, but well with the environment. Use not so much of your non-renewable resources. – Loraine

Naomi did not think human activity contributes to climate change. Although she perceives it occurring, her religious belief about God's involvement in the world makes her uncertain about how its consequences affect humans. "I know it's happening, but I don't know if it will destroy us or if God keeps the cycle going that keeps us alive." And again, like other participants, she immediately follows this admission with a religiously framed perception of how she is responsible for acting toward the natural world.

I know it's happening, but I don't know if it will destroy us or if God keeps the cycle going that helps keep us alive. It, but I—to me, it still goes back to that idea of just being responsible with the gift that we have and maybe that's what some of the environmentalists just want to do. Keep people informed of not wasting what we have. You know, don't be excessive." – Naomi

She taps religious beliefs when discussing the possible occurrence of ecological crises and air pollution, referring to how "God keeps the cycle going" and the human responsibility of "taking care of the Earth."

I mean, I think God can do anything. Again, I don't think we should be frivolous. Just because God can change the air doesn't mean we should just mess it up. Do everything we can just to make it dirty just because we know He [sic] can change it. I think that's where the responsibility comes of having received a gift and taking care of the Earth." – Naomi

Not every person distinguishing between their views about anthropogenic causes of climate change and their overall actions toward the natural environment places it in the religious framework described above of "caring" for the natural world. When asked about his

awareness of things related to the environment or environmental problems, Neil describes a strongly utilitarian and anthropocentric stance after making reference to the climate change documentary, *An Inconvenient Truth* (REF). He justifies it using his theological interpretation of certain Bible verses.

Have you heard talk that one kind of a social problem that we face now or may face in the future are things related to the environment, often they are talked about as environmental problems. Have you ever heard discussion like that? “Yeah, quite a few of them. I did not go see the Al Gore movie. I didn’t think I needed to, I’ve seen the parts of, little clips of it here and there and you know, I think God in Genesis said subdue the earth, that didn’t mean destroy the earth, subdue the earth.” **And the difference for you...?** “The difference is to subdue it is to **bring it under control**; okay, to **take a wild jungle and turn it into a farm**. To **build a dam so you have irrigation water**, that’s subduing it, that kind of thing” – Neil

Interviews with a few *Deniers* who did not believe human activity contributed to climate change reveal some unexpected religious perspectives. Although some *Deniers* believe a conspiratorial element exists with anthropogenic climate change because of a perceived political agenda among those who claim it is happening, only one participant frames this aspect of her views on the issue in terms of her religious beliefs. While explaining her reasoning at length, she attributes the observed climatic changes and extreme weather events to the effects of a passing star or planet on the basis of her theological interpretation of various Bible texts suggesting it will cause them. Besides the influence of this perceived interstellar force, Brittany also sees the observed climatic changes as natural phenomenon.

They say it's global warming. I don't believe it's global warming anymore. I believe it's this star. Because they say, according to this star, that it's going to cause polarization on our Earth as it comes closer. And it's going to cause earthquakes and all these natural disasters that are going to start to occur. And, you know, like, drought in areas, and rain in other areas. It's just so Biblical, that I think with everything else that's going on, I'm not surprised if that is Wormwood. So I can't say it is. I just...all speculation. I think global warming is a cover up of all these people covering up. Because, um, this is happening and they don't want anyone to panic, they don't want people to know about it. And they've already got their places, what I've read—now this, I don't know about this. But it also says that in the Scriptures that there's a place secured for the rich and for the powerful and the, for the kings. There's a places that they secure themselves. But they don't realize that they they're not going to be safe in their little bunkers that they make. But these kings and presidents and all the wealthy have their little places under the Earth already secured for this planet when it passes.” ‘Cause it's not supposed to hit us. It's supposed to follow, it's supposed to come and wreak all kinds of havoc on it.” **So it's supposed to pass by.** “It's going to pass by and then all of it, like the asteroids will be hitting and killing people. But, I mean, not everyone. But you know, that's Biblical too. ‘Cause a third of the world is supposed to go, you know? You look at the Scriptures, it matches. So, um, I don't believe that there is global warming. I think that it's this planet that's causing it. Plus it's just natural, we're changing.” (Brittany, 123, *Denier*)

Brittany says she rarely shares her perspective with others anymore because of the response she receives. Others who deny anthropogenic climate change is happening occasionally did discuss it with people they knew because of their involvement together in church. Vince believes “global warming is a kind of hoax.” He talks about it “a little bit...probably more in small group” than at church where in those discussions “a lot of it is skeptical of man-made global warming. They pretty much hold my views.”

While Brittany was alone in her belief that an intergalactic object was causing climate change and her theological basis for its ecological effects, another participant gives a singular explanation of a non-physical reason. Fred declares, “I believe that the weather’s unpredictable because God is making it that way. You know, He’s [sic] making it unpredictable. The weather should be fairly benign and fairly predictable. You know, all over the world. And I think it was.” He provides a length and nuanced religious explanation for how this occurred.

Where do you see the line between humans having an effect on the environment and then the point at which they can’t necessarily have an effect? Is there a limit? “Yes. I believe there is. Um. But, in a sense, we’re having an indirect effect on it, because like I say, God’s paying away the blessings. We’re getting these big hurricanes now that are hitting bull’s eyes instead of missing like they used to, uh, years ago. And then, you know, getting these extreme droughts. You know it’s not that they—they say it’s global warming, but it’s not really global warming. The globe is more—it’s just that the weather’s becoming more extreme.” **Okay.** “The hot is hotter. The cold is colder. The wet is wetter. The dry is dry—you know, I mean, uh, where you used to get a gentle rain, like an inch that fell over a large area, well now nine tenths is completely dry and the other tenth is getting 10 inches. You know, it’s—the weather is less gentle. Let’s put it that way. That’s what I believe is happening worldwide, you know, and I think that’s more a sign of God’s disfavor than our actual, physically causing it, you know, through pollution or something.” (Fred, 130, Denier)

Fred did not believe anthropogenic climate change happens directly through the biophysical and ecological mechanisms identified by climate scientists. Instead, he saw non-physical factors responsible for the extreme weather events and climatic changes. For him, the solution is spiritual: “...to me the only thing that’ll save our country is if the population gets down on their knees and begs God, you know, and throws out this separation of church and state and all that, and they beg God to come back into, you know, their lives and to take a place in our country and to bless our country again.” His perception of an indirect relationship between actions and global ecological conditions is based on his religious belief about how God is involved in the world and acts in response to humans. He further believes that those who advocate for anthropogenic climate change are avoiding acknowledging God’s role in causing it.

And the reason is because God is not gonna—He's [sic] taking—you know in my view, He's taking His hand and blessing away from the United States and that's why we're getting hit by killer hurricanes now and droughts and all kinds of ice storms and the weather has gone wild. And I guess this is sort of like with ecology era, branching off on that. You know a lot of people, they like to blame global warming as causing all this, because well, you see, global warming isn't God. If we didn't have global warming, then maybe we'd have to consider the point that well maybe the weather's so bad because God is unhappy. You know what I mean? And God is taking his blessing away from it. But see global warming's a nice [unintelligible 0:18:30] thing. It sounds terrible, but, in a way, it's a comfort to them because it's their way of explaining the unexplainable. Why the weather is becoming so—it's absolutely weird. You know, I mean it explains a lot of things to them so they can get El Niño out or La Niña or, you know, all those. It's a good explanation for why things are happening. You know, why it seems like we're almost cursed." – Fred

Fred's exposition of the religious basis for his views is notable and singular among participants who do not believe human activity contributes to climate change. Whereas others simply suggest or state climate change could happen as part of God's plan or due to God's involvement in the world, he outlines a theological explanation for why and how this occurs.

Fred's religious beliefs provide him with a theory to understand and make sense of the ecological changes he is observing, experiencing, and hearing reports about from others. His confidence in his perception comes from his religious practices and theological understanding. "Well part of it is reading, you know, the Bible and just understanding the nature of man and how God has acted in the past." Again like other participants who did not believe in anthropogenic causes of climate change, however, Fred's theology also provides a foundation for his general environmental ethic. He explains the relationship between his faith and concern for the natural world in another lengthy response when he discusses the environmental problems he hears others talking about.

You know, but if you believe in God, well you know God—God is a God of order. He [sic] likes order. He doesn't like to destroy. He doesn't like to destroy even man's things. You know, but man usually, uh, ticks Him off to the point where, you know, He does bring destruction around, but God likes order. You know and that's one of the things. If you're—if you're a Christian, you know, if you're a believer in God, uh, He wants you to be somebody who doesn't destroy the environment. He wants you to be somebody who takes care—you know you take care of your property. You take care of the environment. You take care of everything. It's sort of, you know, what He's mandated for us to do from the very beginning. So I would think the Christians would be the better environmentalists" – Fred

His theological interpretation of Scripture also yields ecological principles for pro-environmental actions in everyday life activities such as agricultural practices.

But I do believe that man does destroy areas—you know, local areas and stuff like that. Yes. With, like the dust bowl was caused—that was a manmade thing in a certain way because he—

well actually because he violated Biblical principles—I mean plowed fencepost to fencepost.” – Fred

Deniers' religious views also appear in their discussions of scientific knowledge.

Participants express them when they describe who they trust as sources, the criteria they use to recognize information that is legitimate, and their perceptions of bias or an agenda in advocates of anthropogenic climate change and communication about it.

Fred shows how his religious belief about how God is involved in the world informs his general assessment of the capacity of science to reveal knowledge while discussing if the laws of nature apply to humans and the possibility of making the Earth unlivable. Using examples from medical science, he declares, “if God exists, and if He [sic] doesn’t want us to proper, we’re not going to discover anything.”

Brittany, the woman who believes the Wormwood star or planet is causing the observed effects of climate change, feels confident that she can trust someone who shares her view of the Bible to tell her the truth about what is happening in the Earth’s atmosphere and the connection between human activity. “Someone who truly works to live by the word of God. In its entirety, and if they don’t take Scriptures out.” If she perceives “they know everything going on, then I might listen to them.” In the absence of this assurance Brittany admits her current approach is, “So I don’t know really who to go to, other than God. I mean, I’m, for the first time, realizing the power, I mean not the power, but I mean, that He [sic] truly is the one that I go to.”

Brittany is not alone in being uncertain about who to turn to learn more about climate change. After admitting “I really haven’t read that much about global warming to be honest,” Emma says, “it would affect the way I thought about it if I thought we were doing something to deliberately harm the earth.” In her response to being told that some Christians talk about global climate change in relation to their faith, she suggests that learning more about this “could sway [me] from a Christian perspective, I guess...I never really read anything that led me to feel that was a faith-based decision.”

Other Deniers more willingly turn to religious leaders and evangelical Christian elites. Rebecca would consult the conservative Christian organization *Focus on the Family* started by psychologist and religious broadcaster James Dobson to determine if global warming was in “God’s plan” and something she could not do anything about. She also suggests she would consider the views of leaders in her church and even other religious traditions, among others.

Well, actually I probably would listen to what the Catholic Church is doing. And I would probably think about what are some of the top leaders in Christian churches—I mean obviously our denomination has a president, and so if the president of CMA said here's what's going on and what we need to do, then I would probably follow that because I've become a member of Fairhaven and I agree with the tenets of CMA theology. I definitely would listen to some political leaders, too, though.

Kathleen's confidence is in *Focus on the Family* because they share her religious "Creationist" beliefs. She "trusted them implicitly" to tell her how things are compared to information that "came from National Geographic, which has a very evolutionary bent." She cites criteria reflecting various religious beliefs she would use to recognize which scientists to trust and learn from about climate change.

No scientist comes to mind that I can think of. But I would definitely trust somebody who's a creation scientist over somebody who's an evolutionary scientist. Somebody who understands that God created this perfect world, and that sin happened, and that the perfect world did not stay perfect. And also that at one point in one time we did have this cataclysmic Flood which alters everything on the earth versus an evolutionist who believes that, oh, we're just continuing on with what we started at the beginning of time and God never stepped in at any point in time and changed the makeup of the earth." – Kathleen

Fred, like Kathleen, is skeptical of those concerned about environmental problems because "a lot of environmentalists are evolutionists." Another participant, Kenneth, extensively expands in his interview on Kathleen's more succinct response. He discusses at length his views on what is "good" science with respect to climate change. He begins by noting, "I haven't spent much time studying it or looking into it. So I can't speak of global warming itself with any knowledge. But I don't—doesn't, um—I don't know, I'm not really riled by the idea. I don't think it's very scientific." Kenneth then references multiple religious beliefs in his long commentary. He indicates he holds a "young Earth" belief in his discussion of whether humans can know enough about nature to learn to control it. "I think if we'd been around here billions of years, I think we would have thought of this stuff a long time ago, but, you know, four or five thousand years, whatever the case may be. So we've had a lot of time to learn things. We haven't mastered this Earth yet."

After mentioning El Niño and La Niña and observing "they wanna [sic] blame all the weather, and other things—they wanna blame it on global warming", Kenneth explains his religious belief about how God is involved in the world and his Christian worldview help him know the limits of science.

We can hardly handle our own – our own little piece of it, much less the entirety of it – of the planet, umm...So I think the idea that we can actually learn enough about it to...you know, we

don't – we aren't gonna know enough about how God designed it, and especially without accepting that there's a God involved. I mean, I think that's – that's the key right there, is that if you can't accept that God's involved, we're gonna always be trying for what we don't understand anyway. " – Kenneth

He perceives a religiously based, spiritual reason for why humans cannot "figure out how to control cancers and things like that" and limits exist on the influence of humans on the Earth. "Those aren't a God-given thing. It's part of our sin. It's not—that's just how I see it. We can't control the planet."

The linkage between people's religious beliefs about the origins of the Earth and their capacity to interpret correctly scientific information about the natural world is strong for some participants. Darlene felt advocates of environmental problems are:

people who have this agenda to describe ourselves as destructionists and that we're doing all these things to destroy the Earth would like to be God, you know, they don't have—God is not their God. And so they want the control, essentially, ultimately. They don't—I don't think they are aware of that."

She clarifies how not believing in a "young Earth" can bias the perspective of scientists examining climate change.

Do you think it's the case that most scientists who look at global warming are being swayed by other things? "Mm hm. [YES]" **Okay.** "Um. Like, what has popped up in my head is this—scientists who are creationists and scientists who are evolutionists. **Okay.** "Um. But scientists who are creationists—they're basing their views on what can be the evidence." **Yeah. Mm hm.** "The evolutionists come up with an agenda. They cannot, you know, they will not or they cannot or they don't want to fathom the idea of a Creator. And so they start with a flawed, they start out flawed. Their hypothesis is flawed or whatever the term was used. So I think that's—you can almost, I think, categorize people in that way. There are, um... I think that people who are so concerned that we're destroying the Earth are—have started with a flawed, um, they're basing it on flawed information. On this information. And those who, um, don't believe we're in an environmental crisis are simply looking at the evidence." – Darlene

Willard, like Kenneth and Darlene, also mentions his religious beliefs about the age and origins of the earth, but for a different reason.

And I think the problem is that people, instead of saying that we don't have all the answers, they just accept it [global warming] as truth, right? And it's irrefutable. We all came from apes. It's irrefutable. It's taught in schools, and that's the way it is. And, uh, it's just common accepted fact. And that's how we treat the environmental issue. There's global warming and by golly if you're not on board you're just a, you know, you must be greedy, you know, person who just hates the environment and wants everybody to die. " – Willard

Willard believes open, critical debate about climate change is stifled. "We can't even openly disclose where we may be wrong, we only treat something as fact, à la evolution." He sees parallels between discussions by scientists about whether anthropogenic causes exist for climate change and attempts by "young Earth Creationists" to contest evolutionary theory. "I do

think there's a liberal bias in most media. And therefore there's a tendency to draw on the science that supports it. There's equal amount of science that—go to the issue of creationism versus evolution, right? There's, there's plenty of science that can justify an argument for creation.”

Other *Deniers* mention the relationship they see between their religious beliefs and media organizations. Norma thinks FOX News “is pretty reliable” on climate change and has confidence particularly in one of its show hosts, Sean Hannity. She feels “he’s trustworthy and he speaks the truth” because “I know Sean Hannity shares the same faith I do”, even though he identifies as Roman Catholic. Darlene also trusts FOX News “more so than the others” to tell the truth about global warming. She describes her religious based criteria and the approach she uses for trusting or choosing sources of information about climate change:

Again, I think it has to be listened to in light of God’s Word, realizing that none of us know everything. But if there are if there are people who it is their job, it is their lifelong mission to study these things that relate to the elements that would possibly cause global warming, and they say no, it’s not an issue, then I would listen to them before I would listen to people who are talking about global warming whose lives’ mission hasn’t been studying the facts that surround global warming.” – Darlene

Deniers’ Perceptions of Climate Change as Environmental Problem

Deniers’ also draw on their religious knowledge and ideals in assessing whether climate change is an environmental problem.

Religiously informed perceptions of melting polar and glacial ice, and rising sea levels climate scientists associate with climate lead *Deniers’* to not worry about these consequences. When Anthony shares his views on how finite are the Earth’s resources and whether its space is limited he declares that global warming is not “a threat at all.” A belief about the occurrence of environmental change and his theological perspective inform his assessment of climate change’s consequences. A literal interpretation of Bible passages he perceives relevant to the observed ecological conditions gives him assurance that melting ice and rising sea levels do not warrant his concern.

...and speaking of the Earth, not just the humans—umm, I think right now, everything I’ve heard about this global warming—it’s a bunch of hooey. I don’t believe that at all. I think that, uh, the earth will always change, and, uh, is that a threat? I don’t think that’s a threat at all. I just think that’s something—some politician rattling off. Uh, as far as umm...so water is affected—would be affected by that, because the glaciers are melting and creating more water [sic]. We’re not gonna drown, because the Lord said we’d never drown again. Well He said we’d never—never die from a flood. And He had the rainbow to prove that. So that’s another foundation for that.” – Anthony

Rebecca draws on the same Biblical passages as Anthony in her assessment of climate change. She also relies on her theological perspective and religious beliefs about the future (end) of the world and how God is involved in it. Combined with the catastrophic consequences she perceives will occur “if global warming really happens” leads her to not concern herself with it “until somebody comes out and they all agree this is like a problem.”

I mean, in my thinking, if global warming really happens and New York City fell off into the ocean and California and the iceberg thaws and the United States is flooded—to me, that would seem a lot like the “End Times”. And I think that might be what people would be thinking. So I don’t know if God would allow something that major to happen just because people aren’t taking care of the earth in the way He [sic] wanted. You know? I mean He did promise Noah that He would never destroy the earth like that again. So...” **You mean in reference to the [Biblical] Flood?** “To the Flood, Yeah. In the sense of...I mean if something like that happened, that would be pretty catastrophic to life as we know it. So I guess, yeah, until somebody comes out and they all agree that this is like a problem, I probably would not be giving money to it or trying to support it until then.” – Rebecca

Despite media campaigns by national evangelical leaders and environmental activists (REF), most *Deniers*’ indicate little awareness of these religious-framed campaigns for climate protection. Kenneth says, “there’s less Christians that are concerned”, “less concern from the Christian perspective” for it, and I’m—not sure I could think of a prominent person who is in my mind a Christian first, that mentions anything about it ever.” He personally does not “have a long-term worry on [sic] the planet, because my long-term is secure”. Although Kenneth admits “a possibility that people are really naïve”, he feels “what happens in a couple hundred years, or a thousand years to this place doesn’t make a lot of difference to me.” His religious beliefs that he uses to evaluate climate change come from a theological perspective giving him confidence in his future. They include the notion, “that human beings are smaller than the God who made the Earth, designed everything.”

In contrast, Willard recalls hearing of one national evangelical leader speaking to Christians about concern for climate change. “Well, Rick, Rick Warren’s one, right? He’s an advocate for all the great things environmental. He’s—the Christians for Environmental Consciousness or something.” Willard actually confuses Rick Warren, internationally renowned pastor of Saddleback Church in California, with Richard Cizik who was in 2008 a vice president of the National Association of Evangelicals responsible for lobbying evangelicals and politicians on climate change. Willard’s recollection of the purpose of this religious-based environmental activism is “that evangelicals can believe that climate change is this big, major world catastrophe and we should do something about it, basically.” He accepts the argument for a general

environmental concern based on his religious beliefs with some skepticism and a caveat with respect to climate change.

It's becoming the, um, the religiously sexy thing to say. Okay well I'm going to be environmental, as with regard with, um, you know, my worldview. And I think that there is certainly, there certainly is a certain amount of conscientiousness that as Christians we need to give the environment. We shouldn't pollute and be wasteful and, you know, there's all of, there's all the basic attributes of environmentalism that I'm all for, right? " – Willard

Although Willard believes Christians have a responsibility for engaging in certain pro-environmental behaviors, he perceives the increased discussion about this as having a faddish nature. To him, "the issue of global warming goes to an entirely...another echelon of debate."

Vince is pretty sure he has not heard people giving religious reasons for being concerned about global warming. He does see a connection between his faith and actions with certain environmental impacts with respect to his theological understanding of a Biblical injunction to "subdue the Earth." This also provides a value guiding environmental behavior ("we need to be responsible"). Vince sees no relevance and link between his religious beliefs and concern about climate change.

Do you see any connection between the two for yourself? "Well, I think when God says subdue the Earth, you know...I think we need to be responsible. I think we've been irresponsible at times in how we've treated the Earth and damaged it through pollution and things like that. So I think from that standpoint, being responsible in how we treat the Earth and treat animals, I think that's important from a Biblical standpoint. But as far as global warming I don't think it has anything to do with it or Biblical issues or anything." – Vince

Brittany is aware other Christians are concerned about climate change, but does not engage them in conversations about it unless they directly ask her about it. "Well if they're concerned about it I don't really, I don't say anything, I just think they just don't know. They don't know what's coming. They don't know what's going on." Brittany does not share their concern because of the religious beliefs and theological perspective she holds currently lead her to interpret extreme weather events and scientific descriptions of climate change as the effects of the "Wormwood planet or star."

Not everyone who does not believe in anthropogenic climate change directly references religious ideas when asked about their concern about it. Some were surprised to learn that other evangelical Christians were. When asked directly how concerned she is about global warming or climate change, Loraine replied, "I think it's foolish for us not to use the resources we have like recycling" and did not directly reference her religious beliefs. When asked a few moments later if she ever heard other Christians or evangelicals talk about being concerned for

climate change, Loraine laughs and answers “No”, saying it would surprise her to hear this “out here [in Dayton, Ohio]” compared to where she used to live in Colorado.

Some *Deniers* admit minimal to no concern about climate change, but indicate an interest or willingness to reassess their evaluation of it. Sometimes they express this in religious terms or by referencing certain theological beliefs.

Darlene also does not hear other evangelicals talking about being concerned about climate change. She believes, “as a whole, I don’t think the Christian, um, not that Christians are that concerned.” Personally she expresses little worry about it based on what she has learned. “But I’ve just heard programs about it. And so listening to what is presented, I come away with the opinion that it sounds like there is no issue that is—that we need to be concerned about, in terms of global warming.” Her reflection on the issue turns inward as we speak and brings her to a position where she realizes certain religious beliefs and her identity as a Christian may lead her to misjudge the consequences of climate change. She responds to the suggestion that evangelicals be concerned because they are Christians,

I think in that, um, and I’m not trying to say I know everything, because my gosh, I—when I’m hearing myself, and I’m thinking gosh, Aaron’s helping me really think through some of these things that I thought I believed in. But, I think sometimes Christianity and Christians, all of us, the whole of Christianity, as time goes on we are becoming numb to a lot of issues or—we want to just become civil and we don’t really care to rock the boat maybe we put too much trust in the government. Maybe we think, well God’s gunna take care of it all.” – Darlene

During our conversation Ira tells me he hears a lot about “global warming and stuff”, but declares “I’m not too worried about that.” He then says, “No,” later when I suggest Christians are concerned about climate change and ask if he ever hears discussions like this. He responds to the possibility of a connection between his faith and concern for global warming by revealing he is considering posing this question to significant others close to him.

That would be something, um, I would have to...[pause] I don't know, that's...[pause] I'm not sure on that. 'Cause that's actually a very good, good question to ask. Uh, [pause] I don't know whether—I don't know...that's actually something I, I'm actually wanting to ask some of my friends about. 'Cause that's actually a pretty good question to ask.” – Ira

Other *Deniers* distinguish between a general concern for climate change and environmental concerns in their everyday lives. Norma explains how she and a friend are “trying to kind of simplify our lives” because “it’s something God calls you to do.” Norma’s attitude toward global warming is, “I really don’t think [laugh] that I have, I’m kind of like whatever

about it, you know. I mean, I'm concerned about how we're treating our environment and the impact that we have."

Rebecca also is not aware of others concerned about climate change because they are Christian. She does not discuss it with the other mothers she interacts with regularly. Instead, they focus on the health aspects of the food they eat. Rebecca and a close friend are skeptical of their other friends' reasoning because of both her religious based confidence that "God's in control" and a fatalistic view.

You know, I'm probably not in the circles to hear those kinds of discussions and make sense of. I mean one thing that I hear as a mom is a lot of moms doing organic foods and range free meats and that kind of thing. And I've not once, I will say I've never once heard someone say, I think this is what God wants for us. It's always the health reasons. And to me my one, this other friend of mine and I, we always kind of chuckle a little bit, because it's like, you know what, God's in control. So I'm not going to be stupid and go stand in front of a car and get hit because that may be just a really dumb choice. You know, but the bottom line is when it's your time to go, it's your time to go." – Rebecca

Veronica shares Rebecca's sentiments. She has "just a little" concern about global warming and also does not know of Christians who say there should be concern about climate change ("I don't think I have heard that discussion on that"). The religious beliefs underlying her views appear when she describes her perspective on the connection between her faith and global warming or the environment: "I believe He's [God is] in control. So...not that we won't ever have discomfort or suffer something, but it'll be in His [sic] plan."

Veronica's theological understanding of how God is involved in the world give her an assurance that even if unpleasant consequences were to happen from climate change it will be for a spiritual purpose. Her use of these religious beliefs to evaluate it leads her to conclude, "We have to be aware. We have to be aware and we have to be concerned but not overly concerned that you're just freaking out." Naomi also believes it is possible disastrous effects could come from climate change. "I don't know if it will destroy us or if God keeps the cycle going that helps keep us alive." Like Veronica, the counterweight to this possibility is Naomi's belief that God could also intervene.

What this means specifically to Naomi becomes clearer when she discusses the possibility of ecological crises occurring. In her response she mentions examples of local (Dayton, Ohio) and international (Beijing, China) air pollution and observes, "it amazes me that things could be reversed that fast." Her religious beliefs and theological perspective provide her with an explanation for how God is involved in ecological conditions. An additional religious

based understanding of the role and responsibility humans have in acting toward the natural environment appears integrated within it.

But in terms of actually reality, I don't really know. I mean, I think God can do anything. Again, I don't think we should be frivolous. Just because God can change the air doesn't mean we should just mess it up. Do everything we can just to make it dirty just because we know He [sic] can change it. I think that's where the responsibility comes of having received a gift and taking care of the Earth." – Naomi

Barbara has not heard other evangelicals talking about being concerned about climate change because they are Christians. She is aware that others see it as something to deal with because three of her children are in public school and "it's very common for us to sit at the kitchen table and for them to talk about environmental issues like global warming or the use of plastic and recyclable goods." Barbara identifies the general view they describe as, "'We're bad. We're killing the ozone. We're all going to fry. We're destroying the planet for the rest of...for our grandchildren.' And, I don't really go there." Instead, her response to expressions of concern like this about climate change is to focus on herself and children with respect to her perception about how her religious values should guide their behavior as individuals.

How do those conversations go? What's the general tone of those conversations? Are those things that you are concerned about? "[slight pause] *Yes*. And again, in my circle of influence, am I being most responsible with what God has given me...and so as far it's within my ability...Where I direct the conversation is, "what is it that you can do?" Now as far as global warming, I don't even agree that that exists. But as far as recycle, reuse, and the way that we treat the world around us, most definitely. So I try to think what can we do, what can you do in your little circle of influence to make a difference." –Barbara

Deniers' Responses to Addressing Climate Change

Deniers' discuss their views of both themselves responding individually to climate change and on aspects of collectively addressing its causes and effects through public policy.

Role of Religion in Individual Responses to Climate Change

Almost all *Deniers'* (18 participants) say they hardly talk at all about climate change with other Christians or people they regularly interact with at church. Naomi says, "I don't ever have conversations with anyone about the environment." Kelsie's are "very small, almost nil." Kathleen indicates "the closest thing would be gardening" for what she discusses about the environment with others. For Tanya it is, "Not unless there's a local issue. The women don't talk on large, broad ideas. Just our kids and soccer practice, you know?"

Some discuss climate change and environment-related topics a “little bit.” Like Fred though it is usually “not on a regular basis.” Doug sees this is because “It doesn’t seem to be a very prominent or front page item.” Emma says, “we discuss like gas prices, but probably not global warming.” Rebecca is similar, “I mean not right now because it’s not really a topic. Like, obviously oil is a big deal, but it’s more a discussion of how much we’re paying and how the taxes and the price per barrel is just over the top and the control they have right now.” Ira has minimal experience in climate change discussions in religious contexts, “Not at church. I’ve heard a lot of people talk about it at work.”

Similarity of opinions about climate change with significant others is one reason *Deniers* cite for not talking about it. Jared shares, “most of my discussions are with my running buddy...we are both of the same view so we rarely discuss differences.” And while Vince says, “we talk about them a little bit. Probably more in [church] small group. Or one on one. Just mention it now and then”, he indicates, “A lot of it is skeptical of man-made global warming. They pretty much hold my views.”

Only two among those not believing in anthropogenic climate change reveal they discuss it with others. They both express a greater awareness and ecological understanding, along with a stronger general pro-environmental orientation toward the natural world than other *Deniers*’. Norma discloses these conversations happen, “With certain people we know who are a little bit more environmentally maybe kind of leaning or have changed some things like me. We’ve gotten to just, you know, just sharing our lives and like, ‘Oh, we’ve done that, too.’” Bruce indicates his experience in climate change discussions varies depending on who he is talking with. He reveals peoples’ religious judgments about those concerned about the environment (“environmentalists are worshipers of the creation instead of the Creator”) can make them “go fairly badly.”

No *Deniers*’ recall hearing direct discussions of climate change at church or remember hearing church leaders address it. Most (14 participants) indicate specifically this did not happen. A few recall their pastor discussing stewardship as a topic, but not in relation to the environment.

I just never heard it in, uh, any church atmosphere. Not as a house church. Not that I can recall. –
Ira

No, I can't really say I've ever heard him do it. A whole lot of—I mean, I've heard a sermon or two on stewardship itself. Umm, did it lead in to environmental things at all, I don't recall. I don't believe it did. No, I can't say. — Kenneth

No, no, they don't talk about any, anything that's, uh—oh they talk about stewardship but it's in, you know, it's, includes everything.” **Really? So they talk about stewardship of the environment?** “No. Of our lives. Time, money. You know. But I don't, no. They've never gotten into...now, the—and I'm not in the social action committee—but there's a social action committee that, uh, but I don't know whether that's discussing some of the things, and, uh, they were on pornography last Sunday. So, uh. But as far as the environment, I don't think they have gotten into that. — Rosalie

The singular reason *Deniers* identify for lack of discussion about climate change and environmental topics in their churches and by its leaders is avoiding controversial or political issues. Rebecca and Kenneth both describe them as “hot button.” She expects “maybe [James] Dobson” would discuss it. Kenneth wonders that “you might upset some of the big—the parishioners from the congregation.” He also believes this explains “why we hear less and less talk about money in churches” and “not many fire and brimstone type messages from the Christian pulpit” now compared to the past.

Avoiding politicized issues is “consistent” with the “leadership of our church” for Sidney, which “tends to be largely non-political or sort of outside issue oriented [sic].” Emma hears “Probably talk more about, as far as related to politics, probably talk more about the war in Iraq, and things like that.” In Veronica’s view it does not occur because other political topics take precedence over climate change and the environment. “I don't think that that's conversation's come up too much, but like I said, maybe it's just because we've been with the war and with the politics right now, that I think it's become less an issue.”

Some *Deniers* allow these discussions may be appropriate. Kathleen comments, “[pause/sigh] In some venues, yes. Is it, should it be a Sunday sermon? Maybe not.” Naomi gives more detail for her stipulations, describing her theological understanding of stewardship based on a religious belief about the relationship of humans to the natural environment.

I don't know that we need to have discussion groups about it [Christian view on environment] or—I think, to me, it's, I guess, more general. That everything that we do should be done with concern. And that everything that we have in the world should be seen as a gift that we have from God. And so then we shouldn't waste and we shouldn't squander things. But I don't get overly worried about things either.” — Naomi

Participants who do not accept anthropogenic causes exist for climate change and see it as a natural phenomenon discuss various aspects of engaging in individual behaviors to address it. Several religious beliefs, attitudes, and values emerge in their perspectives on this form of

responding to climate change and its consequences. *Deniers'* vary in the degree they view the effectiveness of individuals' actions and in how their theological perspective appears in explanations of them.

Bruce believes individuals can make a difference. He has not decided yet if human activity is a cause, "But I think that it's indisputable that climate change is happening." He thinks, however, that even the theoretical possibility (in his view) warrants responding to its effects by making changes in ones' personal lifestyle. He thinks other Christians' perceptions of this suggestion are a barrier to this happening and that they take this as a radical notion. Bruce disputes this characterization, identifying multiple examples of individual behaviors possible for reducing human impact on the environment, and stating his belief in a "huge cumulative effect" if more people would do them.

And if it's even remotely possible that we're contributing to that, it seems to me that we ought to be willing to make changes in our lives. And, you know, many conservative Christians equate that kind of statement, being willing to make change, as if somehow we have to go back to living in caves and that sort of thing. And that's not what I'm referring to. This, you know—conservative Christians tend to have these huge pendulum swings about what these kinds of things mean. And I'm not saying that at all. I'm talking about, you know, turning off the water tap while you're brushing your teeth. I'm talking about recycling. I'm talking about, you know, not driving to the grocery store five times a day, but, you know, making a list and doing it once. And, you know, those kinds of simple things that really don't cause anybody a great deal of pain, but they are, they have a huge cumulative effect when people at the grassroots level decide to do them. You know, replace your light bulbs with more energy efficient light bulbs. And, um, you know, grow some of your own food. And buy food that's local as opposed to stuff that's coming from, you know, Argentina. And, you know, those kinds of things. So." – Bruce

He offers an extensive, detailed explanation of how his theological perspective informs his evaluation and response to climate change, and the overall ecological impacts of human activity. It includes various religious beliefs and values, along with a perception of other Christians' actions toward the natural environment. Humility and concern for others are two religious based values strongly influencing Bruce's willingness to respond personally to climate. He thinks "we're clearly in a crisis" and his immediate conclusion is "we clearly need to humble ourselves as a people and recognize that and be willing to modify our lifestyles in the simple ways that I described earlier [see above quote] to have a lesser impact on what it is we're doing." He further explains,

One only needs to get outside of one's own culture to see how climate change has affected people in Africa, for instance. You know, and whether or not humans caused that to me is irrelevant. What is relevant is how do we as Christians respond to that. And if there's a chance that what we're doing has caused it, we ought to be humble enough to give up our consumeristic

[sic] ways and do what we can to see if there's a chance that we can change it. Am I willing to do that? Am I willing to do whatever it takes to help the other people of the world? And to me that's, that's a love your neighbor issue." – Bruce

Other theological beliefs and values motivate Bruce to address climate change and its consequences because of his identity as a Christian. These include his belief "God created" Earth, his religious based understanding of the role of humans in the environment, and an aversion toward hypocritical behavior. He directly states,

And it seems to me that the people who scream the loudest about the fact that God is the creator are the ones who care the least about the creation itself. And to me that's a huge hypocritical divide. You know, choose one side or the other. But, you know, if you believe God created it, and I, I don't understand how you can believe that it is somehow our right to abuse it or that we can close our eyes to the fact that, just because today I didn't get impacted, my life wasn't threatened by some ecological crisis today, that that crisis doesn't exist." – Bruce

Loraine offers a similar, but slightly varying, perspective separating her perceptions of climate change from her personal commitment to a "green lifestyle." Although she does not believe it is happening, she still supports ("Yes, absolutely") suggestions for addressing it made by those concerned about it. She explains it by referring to both her perception of a theological expectation of God for human treatment of the environment and the normative ideals of personal responsibility.

And I think it's being responsible. I think that's something honestly God wants us to do. You've got the ability to recycle. You have the ability to heat your household solarly, and [unintelligible 00:55:45] and stick them in your walls for insulation. Like, you have the option of buying an older home and reconstruct it opposed to having, building a brand-new home. And using those resources when the one next to it—some of the resources have already been used. You have the resources. Be smart. I think that's something that you need to do. Doesn't mean—I don't think it is necessarily an acute, like tomorrow we're going to wake up and the ozone layer's going to be gone. I think it's just being resourceful." – Loraine

Although Bruce and Loraine are not typical of *Deniers* in their environmental orientation or how they relate their theological perspectives with it, others discuss similar aspects of individually responding to climate change and other environmental concerns and evidence comparable religious beliefs.

A religious belief about God's expectation of the kind of lifestyle one should live also appears in Rebecca's account of her overall response to addressing climate change. Although she is "kind of like whatever about it", she says, "I'm concerned about how we're treating our environment and the impact that we have." Her view is that "we should, as Christians, take care of where we're living." Rebecca's perception of the way to do this that she discusses with her friend is it is "something God calls you to do, to have a simpler life and try to care of and not be

so greedy.” She recognizes, however, there are factors beyond individuals that make this difficult (“it’s hard, you know, living in the society we do, to do that. So, it seems like there’s more stuff”). However, her theological motivation for making these individual changes in personal lifestyle through this form of reducing human impact on the environment does not apply to climate change. In this case, changing her behavior requires meeting a different criterion: “you have to convince me that something is truly happening to say, well, we need to change the way we’re doing things.” Rebecca currently does not see evidence to warrant this.

Fred agrees with the importance of individual behavior with respect to the environment. The connection he sees between his religious faith and concern for climate change though is completely different from Rebecca’s. For him it is more about a fundamental personal responsibility that comes from “knowing God.” Fred sees an individual spiritual reason for observed negative and harmful ecological conditions. From his perspective, directly addressing this religious cause would have the effect of addressing causes of environmental problems.

...but, um...like I say, you know, just being a responsible person individually, you know, if everybody’s responsible, that’s not gonna [sic] be a problem. The problem is you’ve gotta world full of people who don’t know God, don’t wanna know God, and money’s their God. And they’re gonna do anything, anything to make money. They will destroy it. Like I say, they’ll destroy anybody or anything.” – Fred

An emphasis on individuals’ personal actions in their everyday lives, justified by religious beliefs and expressed in reference to the perceived connection between their theological perspective and humans’ relationship to the natural world, appears in other *Deniers’* accounts.

Although Naomi (121) says, “I’ve never encountered it,” her reaction to the suggestion of being concerned about global warming or climate change for religious reasons reveals her preference for private, individual actions that reduce chemical pollutants in her personal life: “I just have a hand—a human powered push lawn mowers. I don’t use chemicals on my lawn.” She is not inclined to public displays of support for environmental policies (“I don’t know that we have to go stand on the street or march on Washington or anything”). Engaging in these activities, “individually, if we’re careful” reflects her view about religious reasons for environmental concern. Naomi explains, “I think that if we treat it as a gift, then we are doing something about it, because we’re not wasting what we have.”

Health-related concerns also motivate Rebecca’s choice of environmental behavior, although she appears less committed. “Well I kind of switched over to organic milk, because, you know, the idea of all the hormones in it. But I don’t know how long I’m going to do that.

‘Cause it’s like three times as expensive and I don’t know that it really matters.” Religion does not appear a direct role in doing this, but influences her more general evaluation of the relative necessity of these behaviors. In response to whether she feels Christians should be concerned about climate change, she describes her reaction to other mothers she knows that buy “organic foods and range-free meats and that kind of thing” by referencing her belief about God’s involvement in the world. “God’s in control. So I’m not going to be stupid...but the bottom line is when it’s your time to go, it’s your time to go.” She also gives more assurance to regulators of national food safety policy: “I guess it comes back to a certain amount of trust that I have that the United States is a very intelligent nation and that they do have regulations on food.”

Barbara believes the connection between faith, global warming, and the environment is “important”, but expresses a religious belief and theological constraint on her personal willingness to involve herself in actions related to environmental policy. “I do believe that God calls people to lobby...But for me I have, ‘not yet’.” Instead, she limits herself to private, individual actions such as “non-plastic bags”, “save some paper”, and “other conservation things.” Whether an account to explain why she does not perform these more public expressions of environmental concern, or an actual belief influencing her willingness to engage in politically-oriented actions, Barbara’s religious perception God must “call” her reflects another aspect of individually responding to climate change that other *Deniers* discussed in terms of their religious beliefs and theological perspectives.

Deniers discuss in various ways their perceptions of how much control they believe they have to address climate change and respond to its effects. Seven[#{?}] of the eleven[#{?}] participants [Node: Perceived Control] who do not believe anthropogenic causes to climate change exist express multiple religious beliefs and attitudes that reveal how their theological perspectives inform their views.

The degree that *Deniers* believe spiritual forces (God) limit human capacity to address climate change or affect the natural world varies in strength (weak to strong) and scope (narrow individual to broad societal). A recurring theme of this aspect of peoples’ theological perspective that they apply to this large-scale ecological phenomenon and relationship between humans and the environment is their religious belief about God’s involvement in the world.

Kelsie’s response to the suggestion that environmental problems may exist is to offer a reason to address them reflecting her value of inter-generational concern (“we need to be

thinking about our children"). She immediately follows this with a weak expression of her religious belief about God's involvement in the world ("We don't know when Christ will return and the current system will be changed") that she follows with a broad notion about the effect of human activity on the Earth's atmosphere ("I don't know how much we're doing for warming up our planet more that could be prevented").

Barbara's perception of the reach and scope of her own actions appears more clearly and also in a weak, narrow form. When explaining how she responds to environmental problems, while avoiding addressing global warming, in discussions with her children Barbara sees the boundaries of the potential effects of her behavior are close. "So I try to think what can we do, what can you do in your little circle of influence to make a difference." Her religious beliefs about what God expects of her with respect to the natural environment (she feels "called" to simpler living, but not lobbying) combine with her theological perspective on environmental actions: "in my circle of influence, am I being most responsible with what God has given me...and so as far it's within my ability." What this looks like in Barbara's everyday life is doing "something practical like recyclable grocery bags" that she uses when shopping.

The role of the perception of "God's calling" with respect to peoples' actions toward nature and their theological understanding of the relationship and responsibility toward the environment both appear in Kathleen's view of the connection between her faith, global warming, and environmental problems. For her, "if He's [God] called me into that environment, as a job and as a calling, then yes, I need to be doing that. But right now that's not my calling. I have enough to take care of with my family. [laughs]." Her view of the expectations relevant to her for responding to and addressing climate change focus on the effects of her actions in her everyday life and her responsibility to be "caretakers."

Well again it comes back to my point of view that God made man to be caretakers of the world and of the environment, and so yes, my faith does say that I should be a responsible person in taking care of what God has given to me, if it should be our house and our land..." – Kathleen

Darlene's expression of her theological perspective and religious beliefs is more direct, stronger, and broader when she uses them in answering whether humans can affect the Earth's atmosphere. She immediately responds, "No. I don't think God has indicated anywhere that that was something that He [sic] intended to give us power over." She allows large-scale, substantive human impacts on some aquatic ecosystems are possible. "Um. [pause] Well sure. If we would take all of the oil we could and dump it into the ocean constantly, but not in the normal course

of living.” She expresses her disbelief about scientific information describing climate change in broad terms with respect to the entire human species. Her explanation of her views emphasizes how she believes those not sharing her religious faith seek control and power humans do not actually possess.

Yeah. Um, I, I don’t think it’s true. I don’t think what’s being hypothesized there or described—it’s just—it goes along with—they’re just trying to—that group of information comes from that group of people who would like to influence us in a direction that says we, you know, we’re the ones who will be in control. Um. There’s no, there’s no Creator, and we have the power to be—we can be in control. And we need to take control. And it’s up to man to have the power over all these things.” – Darlene

Other *Deniers* express their perception of limits on human action in terms of their religious worldviews or with respect to the notion that belief in God is a necessity for knowing the realistic effects human behavior can have on the environment. After contrasting his Biblically-based worldview with one that is not, Willard concludes that concern about climate change results from an anthropocentric perspective that exaggerates humans’ environmental impact. “And their worldview is consistent. They believe that the environment is controlled by man...It’s another thing to say that by releasing carbon into the air, um, it changes the climate to the extent that I can say that man is the controller of the climate.”

Kenneth directly expresses a strong, broad religious based belief about both limits on human knowledge and constraints on the effects of human action on the natural world. “We can’t control the planet.” Commenting on the fragility of nature and the possibility of humans learning enough to control it, he observes “we don’t spin it [Earth], we don’t control the heat of the sun.” He argues, “Suddenly there’s whole new patterns that, you know, we’ve never heard about before—they wanna blame all the weather, and other things—they wanna blame it on global warming.” Kenneth’s religious beliefs about God’s involvement in the creation of the world lead him to the conclusion that this, along with the magnitude of the Earth, means there are definitive limits on how humans may influence it.

I don’t think we can control, umm—all of it’s not in our hands. You know? I mean, yeah, I can juggle a few tennis balls but I think it’s a little different in size and structure. We can hardly handle our own—our own little piece of it, much less the entirety of it—of the planet, umm...So I think the idea that we can actually learn enough about it to...you know, we don’t—we aren’t gonna know enough about how God designed it, and especially without accepting that there’s a God involved.” – Kenneth

Rebecca provides the starkest expression of how strong religious belief about the extent of God’s involvement in the world informs a person’s perspective of the limits and constraints of

humans' capacity to address climate change. Her beliefs about the future (end) of the world and religious perception of God's expectation for humans' role in the environment ("need to be responsible") also appear. She reiterates,

...if God wants this to happen, He [sic] would allow it to happen, and if He doesn't want it to happen, it's not going to happen...if it's God's plan it's going to happen. If global warming is a thing that brings that about, then it's going to happen whether we want it or not...We need to be responsible but we can't change what God's plan is, and if He wants his people to stay and live on the earth I think that He will make that happen...God is in control of this. We need to be responsible, but He's [God's] really the one that's in charge of what's happening and what's going to happen." – Rebecca

Role of Religion in Societal Responses to Climate Change

A few *Deniers* directly state their view that only responding to climate change's consequences through individuals' personal actions is not effective or insufficient. Doug's view on if individuals' actions can address climate change differs from most other *Deniers*. His immediate response to whether a connection exists between Christian faith and concern about climate change is skepticism about the efficacy of individuals' actions.

Do you think there's anything we can do about it? Not as individuals that's for sure. [laughter] – Doug

Doug believes "You got to go through legislation." When I ask if it is then possible that people could change what is happening with climate change based on changes made at the government level, he replies, "I suppose it's possible, yes, but whether it's probable, I don't know."

Jared reflects both Fred and Doug's perspectives. He shares Fred's conviction of the importance of the responsibilities humans have toward the environment and he expresses these normative expectations in religious terms. "It's the responsible thing to do with what God has entrusted us to protect and that's the Earth that He [sic] created." Jared also recognizes environmental problems have complex causes and solutions. He sees individual ("human") and societal level factors facilitating Amazonian rainforest deforestation and loss of endangered species in Africa.

Is that a human problem or a societal problem then? Not really a difference there is there? Human or an environmental problem. There's problems that human society needs to address to stop that from happening. But the easy thing to do is to look at the problem and scream about it and not look at the complex requirements of the solution." – Jared

His response to ecological conditions associated with climate change is shaped by a perception of the motivation held by climate advocates' calls to address it ("Let's blame it on

people and try and affect their behavior”). He supports “Cleaner air, cleaner gases, more fuel-efficient vehicles, using wind as power” because they are “great things...But I don't support it because we're evil awful people destroying the environment and we need to somehow make up for those things”. Jared ultimately is for “doing what's right and doing what's reasonable...hybrid vehicles, wind power.” However, he does not see engaging in behaviors reducing human impact of Earth's applicable to himself. “I don't support me biking to work every day. I haven't even bought a moped.” In a moment of transparent self-assessment he makes an observation others may ask of him as well.

Am I rationalizing my hypocrisy? Maybe. Maybe a little bit. I think we all do. Easiest thing to do sometimes. I guess my problem is I don't really feel like a hypocrite. I think if I did it would eat at me and bother me and I, I don't.” – Jared

Veronica directly identifies the necessity of a collective, societal response to climate change, and the connection between public policy and efforts to address its effects. “...there has to be somebody involved in politics, for global warming. There has to be somebody that has, uh, more conservative thoughts, and more based on what they feel is right or wrong...” Veronica's theological perspective on God's involvement in the world and her religious beliefs about the spiritual significance of people's vocations inform this recognition. She expresses them in terms of “God's plan”, first in response to if she thinks there ever might come a point where humans affect the Earth's atmosphere.

I think you've gotta say, well, is it in God's plan? As a Christian you think, well this is all in God's plan. Or is it really that the people didn't follow any rules. I think there are people that don't follow any rules. So it is a possibility. Yes. If you look at it that way. And yet then always go back and say what was in His [sic] plan? But is it really? You know? You think of, well, this is an example. Like the Titanic was supposed to be the perfect, but there was one little glitch that they didn't look at, so yes.” – Veronica

Then she responds when I ask if she is more or less willing to do something to address it if global warming were something that is in God's plan:

Then you get into, even if it weren't part of God's plan, it works its way into it. So I would—it wouldn't keep me from at least being involved in researching it out. You can't just sit back and say, well, if the tree's going to fall, it's going to fall. Or, you know, you can't do that. So yes. God uses you in that plan. We need all kinds of people in all kinds of occupations in all kinds of areas.” – Veronica

Besides Veronica, other *Deniers'* religious beliefs influence their willingness to support climate policies and they use their theological perspectives to interpret their necessity and desirability.

Kathleen is not worried about global warming if it is a natural phenomenon. She opposes international treaties for addressing climate change, even if human activity contributed to it. “If it’s something that we can control, I do not think that we should have a treaty on it that says you have to comply with these rules.” Referring to the Kyoto Protocols, she explains why she does not support it by referencing her religious belief about the origins of nations, interpretation of certain passages from the Old Testament, and her theological perspective on signs of the “End Times.”

Oh that’s the Kyoto Protocol? I’m so glad we did not agree because I do not agree with a worldwide treaty.” **And why’s that?** “Because that’s taking away from individual sovereignty of each nation and God set up each nation individually. He did not give us a global—that was part of Babel. They were trying to build this one world society, and thinking that they were better than God. And to go to that would be bad.” – Kathleen

Two *Deniers* both see a role for technology in humans’ relationship with the natural environment and describe their views on it with respect to their religious beliefs and theological perspectives. Loraine views it as unavoidable, inherent to humans’ interaction with nature, and a source of possible solutions for reducing human impact on the environment. She explains her perspective by referencing her religious belief about the relationship of humans to the natural world and theological perspective of humans’ responsibilities in it.

I think part of it’s [sic] being resourceful. Like God gave us nature. Use it. Use it to make gasoline. And use it to maybe heal your sores and your cuts on your leg. There are other things that the environment is there to help us with. So if we’re able to come up with some chemically engineered pharmaceutical way, or engineered way to run your car... I don’t think we’re all going to burn up because the ozone layer is getting thin. No, I don’t think it’s something to be too concerned about. But I think it’s part of our responsibility that God gave us to be resourceful. He gave us everything we need to survive. Even though we have technology these days, use it still, as well with an environment. Use not so much of your non-renewable earth resources.”- Loraine

Rebecca reiterates this perspective, and furthermore sees technology as a potential means through which God will reveal to humans how to address environmental problems. She describes this in terms of her religious belief about God’s involvement in the world.

We need to be responsible but we can’t change what God’s plan is, and if he wants his people to stay and live on the earth I think that he will make that happen, whether that’s through showing somebody through technology how to fix this supposed problem with the ozone.” – Rebecca

The impetus for public and environmental policies for addressing climate change is driven by the wide-spread use of fossil fuels and the reliance of industrial activity on them. One *Denier*, Jared, disputes the scientific assertion this affects the environment. “I don’t think it matters how much fossil fuel we burn until it does.” He follows this with the observation that “If

you believe in a million year old Earth and don't believe in a created Earth", it should be (in his view) more likely one is not concerned about temperature fluctuations and climatic changes. Jared does not view these as a problem, although some effects are regrettable ("It sucks that the polar bears are having trouble killing as many seals as they need to get by as they used to"). Jared thinks, "global warming theorists push good behaviors. We should be working harder to have better fuel sources. We shouldn't be dependent on foreign oil." However, he compares climate change to the issue of "Creatonism being taught in school" and concludes, "I think there's other scientific explanations that aren't explored and don't receive our time because of a political move."

Far fewer people discuss aspects of societal responses to climate change, including examples of public policies for addressing it. Given they see it as a natural phenomenon without anthropogenic causes this is not unexpected.

Like *Believers* and *Deniers* of anthropogenic climate change, those who are uncertain about whether human activity contributes to climate change or if it is a natural phenomenon also rely on their religious knowledge, understanding, and schema to perceive this large-scale ecological condition when considering these same aspects about it.

CHAPTER 7

“WHAT’S VALID? WHAT’S HYPED? WHAT’S TRUE? WHAT’S NOT?”: THE UNCERTAINS

Uncertains

Uncertains’ Climate Change Knowledge

Religious themes also emerge in the accounts of participants’ who are unsure if anthropogenic climate change is happening.

One theme in how participants’ respond to their uncertainty is to turn to their religion for explaining why climate change possibly might occur. Dierdre does not know if anthropogenic causes exist for climate change. In her uncertainty about what to think she considers the possibility of a non-physical, but spiritual, cause. “If there was truly a climate change, I don’t know. Could it be...God? You know? Could it just be...yeah. I don’t know. Does it matter if it’s humans or not? If it’s changing, it’s changing, you know?” She appears more open to the possibility it might be a natural phenomenon—if it is indeed occurring.

If Dierdre’s response attributing the causality of climate change to a spiritual source is concise, Brent’s elaboration of a similar view simultaneously reflects several religious beliefs. While discussing his perception of the possibility of the occurrence of ecological crises he declares, “I don’t think that we are treating the environment just fine.” Brent soon mentions global warming, and then observes that, “if it’s true that the polar icecaps are melting, there’s probably a problem of some sort or there’s a progression that this world is going through that’s real.” During his lengthy explanation Brent stresses the importance of understanding how his religious perspective informs his conception and assessment of the relationship between humans and the natural world:

my world view based on God is going to influence this and so I don’t believe that we’re treating the environment just fine because I don’t believe, I believe that sin and our sin nature affects everything we do. – Brent

Brent, like Dierdre, perceives a spiritual element underlying observed ecological conditions, but instead of directly attributing it to actions of God like her, he sees it a consequence of human choice and a spiritual state described by his theology. A tension also exists in Brent’s commentary between his insistence “I’m not a fatalist, I’m an optimistic person”, his personal commitment to a pro-environmental lifestyle, and his negative, religiously based assessment of future ecological conditions. He closes his comments with a statement

reflecting both his religious belief about how God is involved in the world and his expectation of the future (end) of the world: “I view all of God’s plan as leading up to things are not going to get better before He [sic] takes us home”.

Judie knows “there’s a lot of talk about global warming” and that some religious people do not believe it is happening. She personally is “not totally convinced one way or the other” and is “still evaluating whether I believe that it’s really warming.” She argues she is different from others in how she approaches the issue. “I’m not a Christian who denies that it exists, as a part of my faith. You know, I’m looking at the facts out there. What I see as facts.”

Some Uncertains separate questions about whether anthropogenic climate change is happening from those of how they should act toward the natural environment. While unsure about the former, they are more confident in expressing their views on the latter topic.

When I ask Brent what he personally believes about global warming, he says “it may or may not be happening.” He then immediately follows this by referencing a religious belief and values he sees as relevant to him in the situation by posing a rhetorical question. “What can I do personally to be a good steward of what God’s given me so if I’m knowingly or unknowing contributing to the problem I can change my behavior.” At another point when I again ask Judie to describe the extent she believes something like climate change or global warming is happening, she gives a response similar to Brent’s. In the beginning of her comment Judie makes the same distinction he does between the question I ask and the religious values informing her understanding of how she should act toward the nature world.

It may be happening. I’m willing to say that. Um, [pause] and again based on my Christian faith, I like I say, I feel responsible to take care of the Earth as best as I can. But I personally can’t stop global warming. I can help by not driving as much or something. But these, those may not even be the solutions. And God may like have some overarching plan in this too. It could teach us something or...I don’t know what it would be. But um...and if He’s [sic] warming the Earth then all our little attempts aren’t going to do anything, anyway. So, I believe that it could be happening. I’m not totally convinced.” – Judie

Judie also mentions another religious belief, her theological understanding of the possibility that God is involved in climate change. She expresses it in two ways. One is with the suggestion that if it is occurring, it is a consequence of God’s “plan”, for a purpose (“to teach us something”). Judie then applies the same belief in a second way that emphasizes how God’s involvement would limit human actions to address climate change if God was causing it. When I ask her to explain how she figures out whether this is the case, and therefore there is nothing to

be done about it, she acknowledges a limit to her knowing if this is true. Judie admits, “Well even if God is causing it, I wouldn’t really know that for sure that He’s [sic] causing it get warmer, warmer, warmer forever.” She then immediately follows this with, “I think that we have a responsibility in any case to do what we can.”

Lori holds a similar sentiment that reflects her religious attitude toward the topic. She confesses, “I really don’t know what’s valid, what’s hyped, what’s true, what’s not” about global warming. Her response is that she feels “like I’m at God’s mercy on that. I don’t really know what to do differently.”

Those who are uncertain about if climate change is happening and whether human activity contributes to it also turn to their religious experience for resources to consider these scientific questions. Alexandra immediately describes her recollections of religious-based materials she uses for educating her children at home when I ask her about increasing concentrations of carbon dioxide and warming temperatures in the Earth’s atmosphere.

Well, I guess in some of the readings that we’ve done for homeschooling they’ve talked about, um, viable explanations of an ice age. Like in the [Biblical] Flood and how the whole world’s atmosphere has changed and all of that. And ways to incorporate it with what the Bible says about things that have happened, recorded according to, um, history in the Bible. – Alexandra

These provide her with possible explanations (“The Flood”) for the climatic changes I ask her about. They also suggest to her an approach for using religion to interpret scientific observations of the natural world (“incorporate it with what the Bible says”). Following this description of the potential she sees in using these religious resources to understand what is happening, Alexandra also considers the possibility climate change is a natural phenomenon occurring as a result of interstellar forces (“the way the world spins and the sun in proximity”). Despite these possible interpretations she ends by admitting, “I just feel clueless and like I’m a little dot on it, just watching it all happen and wondering about it all is my feeling, I guess.”

Brent references a Bible-based belief when he also discusses the possibility that climate change is happening because it is a natural phenomenon. While most participants among everyone interviewed who mention a belief “that God created the Earth” also express a “young Earth Creationist” perspective on its age and historical record, Brent does not. For him, the “logical trail” means accepting this religious belief about Earth’s origins is non-binding on “whether you’re Old Earth or New Earth.” Instead, though, holding this belief implies to him the valid possibility that the observed climatic changes are occurring within the cycles of the

planet's natural history. Brent concludes, "you could view this as just another phase that the earth is getting ready to go through."

The perceived relevance of a "Biblical worldview" appears in other *Uncertains'* accounts besides Brent's of both what they think about the possibility of anthropogenic climate change and how they are seeking to understand it. It emerges when participants discuss their perceptions of scientific information about it and their descriptions of the confidence or trust they place in climate science. Chelsea laughs and pauses when I ask who she trusts to get information on something like climate change. Then she responds, "I don't necessarily trust science blindly. I mean, I have lived long enough to see science flip-flop on so many things." After citing a personal example from her family of a reversal in a food's publicized health benefits, she explains how her religious perspective functions to help evaluate scientific information

I keep thinking that we're arrogant. I think there's an arrogance that comes from having a part of the picture and drawing the whole conclusion. And I, and I just am a little bit skeptical of people that do that. So who do I trust? I think I trust, um, probably people that I see have a worldview like I do, which is more of a Biblical worldview. Um, I'm not throwing out science. I said I don't trust science, but I think the science that is proven is very valuable. And I—and to me, they're just discovering God's given laws, and that's important. It's part of my worldview, too." – Chelsea

Lori adopts a similar approach to Chelsea, but describes it more straightforwardly. Although clearly uncertain about what to think about climate change, she allows that "someone like [psychologist and religious broadcaster] James Dobson who was an environmental champion" would be someone who could possibly convince her about climate change.

Judie takes a different tack. The same religious characteristics and sources that give Chelsea and Lori confidence make her reluctant to accept information on climate change from these sources. In the lengthy excerpt below, Judie explains why she is willing to trust even non-Christian scientists, the subjectivity of everyone's perspective, and the reasons she might distrust Christians to tell her the truth about climate change and global warming.

For yourself, how do you figure out who to trust to tell you the truth about something like climate change and global warming? "[pause] That's a good question. [pause] I um, hm, I trust people with PhD credential type things, um, people that seem like they are... [pause] It's hard to say, but that don't have an agenda. But, obviously everyone has an agenda. But that they don't seem to be manipulating with an agenda." **Are there particular indicators or flags for you that show that to you?** "Well if somebody owns a wind farm you know they're going to want you to think you have to do that. [laughs] That's a little too obvious. But I tend to not believe, um, really right wing, um, Christian scientific stuff. I'm sorry that's the truth. So if somebody- I listen to them and I respect them for what they believe. But I generally think it's naïve. Like the Creation Museum, for example. If somebody from there were to come out with a statement, I would

probably write it off.” **So it sounds like to me you’re saying that you generally trust scientists.** “To explain science?” **Yeah.** “Yeah. Yeah, I know there are Christian scientists from various persuasions. So I would want to listen, I would listen respectfully to them.” **Does the fact that someone may be a non-Christian scientist speaking about global warming or climate change influence--?** “I believe all truth is God’s truth. So if, if...I know that it’s difficult to create a study that’s totally objective. But if people that seem to be wise by their credentials, and I don’t know them personally, but, um, have come up with some studies, then it would be nice if someone were a Christian, and I tend to be more sympathetic to them if they were. But sometimes the fact that someone’s a Christian makes me distrust their research.” **Really? Why do you say that?** “Because I think that they have an answer before they do the research. And so they don’t perform all the different steps and different inquiries they could.” – Judie

Uncertains’ Perceptions of Climate Change as Environmental Problem

Religion also informs peoples’ evaluation of climate change as an environmental problem for those who are unsure if anthropogenic causes exist for it or whether it is a natural phenomenon.

One theme evident among *Uncertains* is how their religious values lead them to give lower priority climate change and other environmental concerns. Mindy bluntly explains why she is not concerned about climate change and other environmental problems: “it’s what I care about the least.” This results from the relative priority she gives other social issues and religious goals more highly valued by her theological perspective.

Not as much as AIDS and children and people. But, again, you’re right, the environment’s pollution affects them. But, I mean, when you’ve got reaching people with salvation, you’ve got abuse and poverty and AIDS to think about, then, I don’t know, I mean that’s like a distant competitor to me.

Her response to the suggestion of there being a connection with her faith is to reply, “There should be a connection, but how much of a connection? I mean, how much of your thought and your money should it occupy?” She voices her explanation for lack of climate change concern among Christians in terms characteristic of evangelicals: “we just have different heartbeats, different passions.” This strikes Mindy as “pretty normal” and “doesn’t surprise” her.

Eileen shares Mindy’s priorities of social issue over environmental concerns. Like her, global warming and the environment currently do not come up much in conversations with people she interacts with on a regular basis or at church. Her explanation is three-fold, emphasizing her theological perspective and religious value on evangelism: “people are more important than the environment”, “spiritual needs would be probably your higher priority”, and “our first priority is people have a relationship with God.”

Eileen is more amenable than Mindy for discussions about climate change and the environment to occur at church (“I see it as a perfectly fine topic”). She expresses two concerns, however. One involves the potential for how this might change the focus of her church (“I wouldn't want our church to become just a church of social issues, either. So I think there needs to be a balance in there.”). Another is the relevance of these discussions to her religious experience or faith (“it would depend on how it was framed, because I think it'd have to come back to what the purpose with respect to my faith and my relationship with God”).

Monroe sees a greater danger. While discussing his views of whether anthropogenic causes exist for climate change or if it is a natural phenomenon, he expresses wariness toward people concerned about the environment. His hesitation comes from his perception that they lack a spiritual focus, dispute his theological beliefs, and are antagonistic to his faith. He explains,

That seems to be their only emphasis. From what I gather from the people who went to these conferences, that those people had no concern for the spiritual, but only for the physical earth. And that they would sort of fit in as enemies of the Christian religion, really, and want to try to have people put all their emphasis on the earth and the animal life and plant life and not on the human. Which would make it more like an anti-Christ movement. When they were questioned about their belief in Christ, they didn't believe in him as being son of God, they didn't believe in him as, uh—faith, in the background I've had, faith is all-important.” – Monroe

Another theme among *Uncertains* is to express a willingness to understand climate change better and also demonstrate a generally sympathetic, religiously-based, orientation toward and awareness of the natural environment.

Brent is uncertain about global warming. He is unsure if human activity contributes to it. He is willing to consider that “if it's true that the polar icecaps are melting, there's probably a problem of some sort or, or there's a progression that this world is going through that's real.” His religiously based assumptions about the nature of humanity and humans' relationship to the environment incline him toward possibly seeing climate change as a problem. “I don't believe that we're treating the environment just fine because I don't believe, I believe that sin and our sin nature affects everything we do.” Brent's theological perspective predisposes him to an assumption and default expectation about the ecological consequences of human actions. It is not enough to give him concern for climate change, but it makes him amenable to it.

I think that man will more often than not tear things down. So I think that we are, I think we're not headed towards a world that's better, let's put it that way. I can't tell you specific ecological disasters are, are around the corner.” – Brent

Alexandra describes her attitude toward climate change as “I just feel clueless and like I'm a little dot on it, just watching it all happen and wondering about it all is my feeling, I guess.” Her theological conviction that “we’ve also been given authority in it all” counterbalances this. Her conclusion about climate change is it is “worth studying and it's worth finding out what can be done.”

Lori shares Alexandra’s view and expresses it in religious terms when responding to whether anything related to the environment is an issue or concern for her. Mentioning global warming without prompting from me during our conversation about environmental problems, she says,

I guess I don’t allow myself to be concerned regularly with it. I try to do the things that I know I can do, but let’s take global warming for instance. I really don’t know what’s valid, what’s hyped, what’s true, what’s not. So I’m not going to even lose sleep over it, you know. I kind of feel like I’m at God’s mercy on that. I don’t really know what to do differently. So that’s probably my attitude about that.

Her concern about climate change is “minimal.” She is not aware of other Christians suggesting it is necessary or hearing about it at her church. The environmental impacts of human activity do concern her in general. She perceives their cause is a personal characteristic and flaw that evangelical Christian religious beliefs and theological perspective typically sanction. “I believe that what we have done to the planet in our greed, you know in different ways, I’m sure that it’s affected the planet and affected our lives and I don’t know the details of it, but I do think that’s true.” The lack of discussion about climate change or environmental concern in Lori’s experience does not mean Christians do not care.

I don’t believe that nobody cares. I think there’s definitely people in the church that you can look at and tell that they care maybe more than some...impressions you might have. But I think that if anything people aren’t that educated about it and they don’t really know what to do to change or what they could do that would significantly matter.” – Lori

Lori could be describing Brent. Although he admits, “I’ve not been in tune with...enough” when identifying any environmental problems that currently concern him, he does immediately mention global warming without any prompting. He confides, “in general terms, I feel a budding sense that, that I need to be more in tune with this.” Later in our conversation I directly ask him to describe his concern or how he feels about global warming. Brent responds with a self-assessment based on a theological understanding of his inherent human nature. He identifies a personal, religiously labeled, characteristic as the reason why he

has little concern for climate change, along with a belief about who will be affected by its consequences and when.

I'm probably not as concerned as I should be because at my flesh's core I'm a selfish person. And I think most people are to varying degrees, it will take an internal change of the Holy Spirit to make us not selfish. So, because of that, it takes an effort, a conscious effort from me to really look and say, you know what global warming might be happening but the devastating effects if they are to come are not going to happen in my lifetime, may not happen in my kid's lifetime, and, and I won't you know...So from a selfish perspective I would say unless I make a conscious effort I'm not overly concerned right now. That's just a very honest answer." – Brent

Brent's response to his situation is not to focus on specific questions of what should be done about climate change. Instead, he addresses what he views as a more fundamental spiritual issue: "global warming is really not the issue, it's my obedience to God." The relevance of this to Brent comes from his religious understanding of the responsibilities he has with respect to the natural environment ("you've got to live your life in obedience as a good steward of what God's given you regardless what effects you do or don't see") and his theological belief that "God's got the result in His [sic] hands."

Monroe also recognizes the intergenerational implications of negative human impacts on the natural environment. He has no recollection of discussing climate change or environmental issues with people at church. He offers a general description of his perception of Christians' responsibility toward the natural world. His explanation of it reflects a religious belief and theological interpretation of the future of Earth and its impermanence to believers.

We should be concerned about the earth. So I wouldn't be critical of it without knowing any more than that. [pause] I think, uh, I think Christians have always believed that you should try to help the environment and not hurt it. It just makes good sense. Why destroy your home? At least a temporary home, as we've been taught. When you have children and grandchildren and great-grandchildren, that would be idiotic. If they're going to live long enough and have a life like you've had, you wouldn't want to be deliberately ruining it for them. [pause] I guess that's it on that." – Monroe

Other *Uncertains*, like Brent and Monroe, note the possible inter-generational effects of climate change and distinguish specific concern about it from a religious basis for more general environmental "stewardship." Chelsea is not aware of much talk about why Christians should be concerned about climate change nor does she discuss it much herself with people she interacts with on a regular basis through her church or other Christians. Her perception is that "there's just a momentum building towards global warming. To me that seems more of a, it's taken on a life of its own beyond the facts." In an extended conversation about reasons for her overall

uncertainty about it, she identifies two extreme views on the relationship between humans and the environment that do concern her.

I think both are scary to me, that is to say, um, all our technology is destroying everything in the world. That's scary to me. Saying we're not impacting the world at all is scary to me, too. Either conclusion I'm not real crazy about because I think that we, we need to always think about our, the long-term effect of what we do." – Chelsea

What concerns Chelsea are the overall ecological consequences of human activity, but not specifically climate change. Even so, her theological understanding gives her reason to not worry "so much" about these impacts being disastrous. Her religious beliefs about the return or 2nd coming of Jesus Christ and the future end of history both inform her assessment. She expresses a commitment to the value of inter-generational responsibility, in part, because she is uncertain about the timeline for which these religiously expected events will occur.

Well, we're passing the world on to our kids and our grandkids and to future generations, and I think, going back to a Biblical worldview, I think that Jesus will come back and that we don't have to worry about, um, the world, um, destroying itself in an environmental sense. I don't worry about that so much as I—'cause I think there is an end to the world. I don't think it is going to last forever. But we have no idea how long that is. And I don't want to do damage today that's going to hurt people down the road that aren't even born yet. I feel very strongly about that." – Chelsea

Chelsea does believe her religious beliefs should inform how she views and acts toward the natural world. She distinguishes a difference, however, between her motivation and environmentalists' in response to the suggestion of a connection between being Christian and being concerned about climate change.

I think Christians should be very responsible. I think it should be a part of who we are. But not—I think our motives should be different. I think a lot of environmentalists have taken on environmentalism because they believe that the insects and the animals have the same rights we do. I don't believe that. And that motivates them. I think our motivation is different, but I think we should be right in there. Very concerned about the environment." – Chelsea

Another *Uncertain's* discussion of her perception of climate change as an environmental problem also includes mention of animal rights and reflects a Biblical "dominion" belief in her orientation toward the natural world. Dierdre is not really aware of others who say that Christians should be concerned about global warming, climate change, or the environment. She also says discussion of it does not happen in her church. Her explanation of why includes her theological interpretation of dominion from the Bible she does recall hearing about.

That's interesting. Hm. I don't know. That's a good question. I don't know why they haven't discussed it at church. Maybe they discuss it more on the West Coast than they do in Ohio. The only thing you hear at church is Genesis, that God gave dominion over the animals. Right? That's all you really hear. You don't hear about global warming or...I don't even think they have many

projects that involve the environment. They have building projects. Gardening. But not really like, let's go clean up the...I don't know." – Dierdre

Her understanding of dominion means "Control, Liberty. Steward. If you're asking about animal rights, I don't think animals really—I mean, I love my dog – my children are more important than my dog." Overall, Dierdre's response to this suggestion of a connection between her religion and these environmental issues "makes sense" to her. "I can see that that would be a viewpoint for them. Um, I think you should take care of everything you own. I wonder how that would affect your voting, then? Hm, that'd be interesting."

Judie also remembers hearing minimal discussion from her church leaders about the relationship of religious beliefs to environmental issues. "Just that, that we're stewards. You know, when there's talk about the creation mandate or something like that in the sermon or a Sunday school class." She is aware of evangelical Christians making the connection, referring to her personal copy of Francis Schaeffer's book, Pollution and the Death of Man (REF) on a nearby shelf. Judie's explanation of why more discussion about whether Christians should be concerned about climate change does not happen in her church or with people she knows reflects her perception and experience that it disrupts social relationships.

Well not really. I do remember being surprised about, within the past year, by someone saying something, um, very dismissive and disparaging that, about global warming as an idea and saying it was all some conspiracy. I was very shocked when this person said that. So when I hear things like that—that wasn't a friend, that was more of a fellow church member person—um, when I hear things like that, it tends to make me not bring things up because I don't always agree with people and I'd rather talk about other things with people, than...It's hard because I don't want to have things be divisive but then it is part of who I am. So sometimes I feel a little truncated on, on that." – Judie

Uncertains' Response to Addressing Climate Change

Participants who are uncertain if anthropogenic climate change exists or whether it is a natural phenomenon discuss their views on responding individually to climate change and on aspects of collectively addressing its causes and effects through public policy.

Role of Religion in Individual Responses to Climate Change

Almost all (11 participants) *Uncertains* indicate they did not discuss climate change with Christians or others they interact with regularly at their churches. Ally said in response, "I have a friend that actually, we talk a lot about diet." Ryan replies, "No. I'd say the price of gas is about as deep as most think about the issue."

A few indicate it comes up occasionally. Brent does not discuss it “unless it’s in a political conversation.” Dierdre indicates, “No. Not it Ohio”, but does talk about it with relatives when her family visits them on the West Coast. Lois tried once with a friend whom she exercises with, but stopped when she learned her friend “thought it was a bunch of poppy-cock.” Judie shares a similar experience.

I do remember being surprised about, within the past year, by someone saying something, um, very dismissive and disparaging that, about global warming as an idea and saying it was all some conspiracy. I was very shocked when this person said that. So when I hear things like that—that wasn’t a friend, that was more of a fellow church member person—um, when I hear things like that, it tends to make me not bring things up because I don’t always agree with people and I’d rather talk about other things with people, than...It’s hard because I don’t want to have things be divisive but then it is part of who I am. So sometimes I feel a little truncated on, on that.” – Judie

Uncertains offer several other reasons why discussion of climate change does not occur between them and other Christians they interact with regularly. Mindy straightforwardly admits, “I guess because we don’t care about it as much.” Eileen shares, “Most of my conversations with people at church are about families, because we all have kids about the same age...I don’t think we talk much about environmental issues.” Chelsea indicates environmental issues rank behind religious and everyday life priorities.

Not a lot, not a lot. No, I think it’s, it’s not foremost in people’s minds. I think people are more concerned about, um, spiritual things and just more practical things. I mean not that the environment—I think it’s more disconnected from what, what their focus is.” – Chelsea

Eileen and Chelsea’s explanation pointedly illustrate Ryan’s reasoning for why people are not talking about climate change.

Because to quote a second century theologian named Origen, he said, partly owing to human weakness, and partly due to the necessities of life, very few people are enthusiastic about rational thought. And most people are just busy trying to make a living and trying to feed their families. And they don’t have time to sit around and debate points. I am very curious, and so I make it my business to try and do those things. But I don’t—it doesn’t make me better than anybody else, it probably makes me sadder. So, it is what it is. But when somebody has to fill up their gas tank and it costs them \$4.25 to do so, per gallon, that’s, that’s like, that’s like dorm food or postage. I mean, it’s just something that everybody relates to all at once.” – Ryan

No *Uncertains* recall hearing church leaders address climate change. They also do not remember hearing much discussion about the environment. Monroe observes, “I don’t think that that’s been brought out in sermons.” Chelsea agrees,

I don’t think it’s ever come up. I don’t think there’s ever been a statement on environmental issues. Um...I think that there’s definitely an appreciation for nature, but in terms of our responsibility in protecting it, I don’t think I’ve ever heard it spoken. Not, not that it hasn’t been. – Chelsea

Sarah thinks it may have come up and cites the broad religious rationale for the relationship between humans and the environment that Chelsea references as an example. “Uhh. I don’t...No, I can’t say that I have. Maybe in a general way like God made it and it’s our responsibility to take care of it, but you know, not in a specific way.” Judie is more certain she has heard it before, although hazy on the details and from whom it came from.

Just that, that we’re stewards. You know, when there’s talk about the creation mandate or something like that in the sermon or a Sunday school class. Well my husband is the one I would hear the most talk about it and he pretty much agrees with me, so he would pretty much say what I said only he would say it much more articulately. [laughs]” – Judie

Lori thinks the absence of these discussions do not reflect a lack of interest. “I don’t believe that nobody cares...But I think that if anything people aren’t that educated about it and they don’t really know what to do to change or what they could do that would significantly matter.” Dierdre, who visits family on the West Coast regularly, wonders, “I don’t know why they haven’t discussed it at church. Maybe they discuss it more on the West Coast than they do in Ohio.” She notes a dominion belief comes up, if the relationship between religion and the environment is discussed: “The only thing you hear at church is Genesis, that God gave dominion over the animals. Right? That’s all you really hear.”

Brent’s view on why more people are not talking about climate change and other related environmental issues at church is because, “I think human nature is that you are concerned with the immediate problem at hand.” He further explains his theory of environmental awareness,

It’s you know, you hear on the news that so much of the rainforest is destroyed every day, I don’t live in the rainforest, right? And so we had a power outage a week and a half ago to bring it home, yeah that’s on everybody’s toes. Because that’s affecting us right at this point in time, but in my everyday life, and probably the circles I run in for the most part...Unless there’s a natural disaster, tornado comes through here, that wind, or the power outages. I don’t know that people are seeing massive effect of negativity on the environment. - So it’s, you know people are going to talk about, spend energy on, we’re very in the moment people. So, that’s what I think...” – Brent

Judie confesses, “I guess, I, it sounds, um, like there’s a separation between my faith and practice in one sense.” She personally is not opposed to bringing up climate change in church. Her reluctance stems from her fear that it will change the purpose of why she attends church. Judie identifies possible contexts she is comfortable having those attending church discuss it, and how she hopes it is framed in terms of her theology.

Um, but I don’t like what I see in some of the mainline churches where things like global warming becomes what you do on Sundays, as opposed to worship and learning more about God. So in a

class maybe where there'd be a book or something we could study and discuss with some focus and some purpose. But not just as a topic, as, as a general topic. I would want to see it, in the, in the church I'd want to see it as part of who we are as believers." – Judie

Monroe also is amenable. "I don't see anything wrong with that, on a once in a while basis." He believes it might happen in his church, "with our present pastoral staff, they may be. They're young. It's is first pastorate." Eileen agrees, but reiterates the relative value she gives the general subject ranks behind people and "spiritual needs".

I see it as a perfectly fine topic, but if I had to prioritize topics, I would say the people are more important than the environment. So I think the people issues with respect to, um, needs of people, um, spiritual needs would be probably your higher priority. Um, yeah. - Actually it would, it might be interesting to hear some of those issues. - At the same time you don't want—I wouldn't want our church to become just a church of social issues, either. So I think there needs to be a balance in there." Eileen

Besides personally discussing climate change with other Christians they interact with regularly, or encouraging their church leaders to address it, *Unbelievers* also consider other aspects of engaging in individual behaviors to respond to climate change. Like *Believers* and *Deniers*, religious beliefs, attitudes, and values emerge in their perceptions of this form of environmental concern. *Uncertains* vary in the degree they view the effectiveness of individuals' actions and in how their theological perspective appears in explanations of them.

A few *Uncertains* see no or little connection between their religion and their views on the necessity of addressing climate change or personally responding to it themselves.

Although Jocelyn tries to reduce her environmental impact in her everyday life, it is not for religious reasons. Her reply to whether she reduces her environmental impact for religious reasons is equivocal. "[pause] I guess I haven't thought it out it. It's just the logical thing to do. And it's not a bad thing to do in the long run. And I'm sure I'm doing the right thing. So I guess that's faith."

Ally sees the connection between her faith and the environment has something to do with Genesis but cannot recall what exactly. Her response to whether climate change or global warming is something Christians should be concerned about is cautious. Her perception it is being used for "political purposes" leads her to question climate protection advocates' "motivation." Ally sees limits on human efforts to address it ("well, we can only do so much") even though she perceives a religious basis ("learn to be good stewards") for reducing energy use and to not "live excessively." Concern about the possibility of a "tragedy of the commons"

and the “free-rider” problem, which she explains by telling the story of “the little red hen”, further constrains her motivation to respond personally.

For other *Uncertains* a religious based imperative to act responsibly toward the natural environment compels them to engage in certain pro-environmental behaviors, even if they are not sure whether human activity contributes to climate change or if it is a natural phenomenon.

Despite his uncertainty about anthropogenic climate change, Brent’s response to the observed climatic changes is to ask “what can I do personally to be a good steward of what God’s given me so if I’m knowingly or unknowing contributing to the problem I can change my behavior.” What this means in his everyday life is recycling purchased coffee cups and living by the motto that “simpler is better.” Brent recognizes the complexities of doing this in a modern society such as driving to the interview instead of walking, but seeks to balance those environmental impacts in other areas of his life.

A religious based imperative to address climate change similar to Brent’s also appears in Deirdre’s accounts. She considers herself, “more of a realist.” For her then, “If there’s a change you’ve gotta [sic] do something about it and regardless of who caused it. You’re dealt with the situation and you have to deal with it, you know?” However, Dierdre reflects an inherent tension between this stance and her religious beliefs about the extent of God’s involvement in the world. Even though her theological perspective allows the likelihood God is causing climate change, she still sees it possible and necessary for humans to address it.

So if you, or someone else, were to believe that God was causing climate change, what hope or room does that leave for our ability to fix it? “Oh, good question. If God does it, do you just give up and say, ‘Oh, okay, God’s doing it. Let’s just ignore it. There’s nothing we can do about it ‘cause God did it.’ No, I don’t think so. I don’t think God...I don’t think that...I think there’s always a purpose in what He [sic] does. I think if He did cause the change then I think He’d want us to do something about it.” – Deirdre

Chelsea asserts that “Christians should be very responsible” in response to whether they should be concerned about climate change. Although she hears little discussion about it, she believes it should be integral to “who we are.” However, it is important to her to distinguish how Christians’ motivations for actions should be different from environmentalists.

I think it should be a part of who we are. But not—I think our motives should be different. I think a lot of environmentalists have taken on environmentalism because they, they believe that the insects and the animals have the same rights we do. I don’t believe that. And that motivates them. I think our motivation is different, but I think we should be right in there. Very concerned about the environment.” – Chelsea

Ryan too holds a similar view on the value of reducing human impact on the environment. Even though he self-identifies himself as “agnostic” about whether anthropogenic climate change is happening, he thinks,

the only intelligent view that I understand is to preserve and to treasure the things which God has given us, not to, uh, ruin them. There’s quite enough ruining going on already. But on the other side of that, that does not mean I go through a guilt spasm putting gas in my car. There are clean ways of doing these things, let’s pursue the clean ways.” – Ryan

Uncertains’ theological perspectives and religious beliefs inform how they view the capacity they perceive themselves having to address climate change with their own actions. This sentiment appears even despite peoples’ theological convictions of a religiously mandated “stewardship” responsibility for “caring for the Earth.” Sometimes individuals express them simultaneously.

Judie is “a little cynical about whether we can make a difference.” She does not know if human activity contributes to climate change, if it is a natural phenomenon, or “even if God is causing it.” Regardless, she thinks “we have a responsibility in any case to do what we can” and she considers herself “pretty pragmatic.” Judie recycles “religiously” and “still buy[s] the smaller car, or the smaller home, or the close to work house.” What frustrates her is “most of my neighbors aren’t doing them” and that in her perception, “most people don’t bother with it.”

Her belief in God’s involvement in the world informs her lack of personal willingness to engage in behaviors in response to climate change and view on the efficacy of her actions to have an effect. Combined with her uncertainty about it, Judie’s theological perspective expresses little confidence in the capacity of humans to address it successfully despite her religious based conviction of her responsibility “to take care of the earth as best as I can.”

It may be happening. I’m willing to say that. Um, [pause] and again based on my Christian faith, I like I say, I feel responsible to take care of the earth as best as I can. But I personally can’t stop global warming. I can help by not driving as much or something. But these, those may not even be the solutions. And God may like have some overarching plan in this too. It could teach us something or, something. I don’t know what it would be. But um, and if, and if He’s [sic] warming the earth then all our little attempts aren’t going to do anything, anyway. So, I believe that it could be happening. I’m not totally convinced.” – Judie

Chelsea also is not sure “what it is that I can do that will make that difference” in responding to climate change and its consequences. She strongly views that “we’re passing the world on to our kids and our grandkids and to future generations” and “I don’t want to do damage today that’s going to hurt people down the road that aren’t even born yet.” However, several religious beliefs and her overall theological perspective counter this value motivation for

acting. Chelsea believes “Jesus will come back and we don’t have to worry about the world destroying itself in an environmental sense” because “there is an end to the world.” She also is “very skeptical of a lot of what scientific people say” because they are not “Creationists.” Overall, in terms of addressing climate change and its effects, Chelsea perceives, “to me that seems more of a, it’s taken on a life of its own beyond the facts.”

Finally, two *Uncertains* demonstrate the extensive role religion can play in peoples’ perceptions about their personal ability to address climate change and its consequences.

Lori tries to recycle “plastic things”, “buy things with less packaging”, turn lights off, and save water, but admits she could do better. When it comes to climate change, however, she confesses, “I really don’t have any idea what an average person can do about that.” Her theological perspective of God’s involvement in and control over the world gives her enough confidence to not worry about global warming even though she does not know what to think about it.

I guess I don’t allow myself to be concerned regularly with it. I try to do the things that I know I can do, but let’s take global warming for instance. I really don’t know what’s valid, what’s hyped, what’s true, what’s not. So I’m not going to even lose sleep over it, you know. I kind of feel like I’m at God’s mercy on that. I don’t really know what to do differently. So that’s probably my attitude about that.” – Lori

She wonders if her low inclination to address it and respond is influenced by a perspective she thinks is an attitude among Christians like herself.

I think that it’s present. I don’t know how prevalent it is. But I do think...umm...yeah. Well, you know, and again this is my own perspective as a suburban, middle-class, white person. And I think a lot of people could tend to be like me. ‘It’s not really affecting me right now, my life is just pretty much normal or whatever.’ You don’t have that motivation to change, unless something comes along, you know, you have a crisis of your own or you get some information that shakes you up or whatever.” – Lori

Lori further suggests her personal challenge is “not so much convincing me”, but enabling her to engage in new, different activities. Her perception of the connection between her faith, global warming, and the environment rests on her theological belief “that God created the Earth and that He [sic] wanted man to take care of it.” Lori cites examples of ecological agricultural practices mentioned in the Old Testament and believes “we have abused the Earth.” She feels, however, “for me, myself living here in this neighborhood, I don’t know that many things to do different.” One suggestion she offers that might help her change her behavior is,

...if there was someone like [psychologist and religious broadcaster] James Dobson who was an environmental champion and I started getting little snippets, you know, digestable information in

my e-mail box every so often and you just get more informed and then people give you practical ideas of what you could actually do.” – Lori

When it comes to global warming and doing something about rising temperatures and increasing atmospheric carbon dioxide, Alexandra share’s Lori’s perspective. She admits, “I feel like a little dot on it [Earth], just watching it all happen and wondering about it all is my feeling.” Her immediate reply to whether she feels like there is nothing she can do is to reference a theological belief based on various Bible passages that “we’ve also been given authority in it all.” What this means in relation to climate change for Alexandra is that “it’s worth studying and it’s worth finding out what can be done.” For herself she says, “I tend to let other people worry and do the hard work on some specifics that I don’t have to worry about right now.” She admits “being preoccupied with just surviving childhood of my kids [sic].” She would become more concerned and possibly “make more changes if I personally were suffering.”

Later in our conversation, Alexandra extensively explains how her theological perspective informs her thinking about collectively addressing climate change and personally doing something about it. Multiple religious beliefs appear in her description of the relationship between humans’ capacity (agency) to deal with its consequences and the degree of control God exerts over the situation. Alexandra’s belief about the future of the world (“God is going to judge the Earth”, “Revelation talks about fire at the end”) suggest an inevitability to disruptive ecological conditions such as climate change. Other religious beliefs of hers about God’s involvement in the world for the purpose of evangelism reflect Alexandra’s perception God may constrain humans’ negative environmental impacts.

So God’s involvement would be in—not—it seems essential for God to keep the world in physically good enough shape to be able to allow the people to live, to be able to hear the “Good News” [Christian Gospel message] and respond. If they’re sick and, or destroyed, then they’re not there. And if He’s [sic] going to have an end of judgment, thereby He’s got to sustain it to get it there.” – Alexandra

Alexandra’s conclusion is that God can keep climate change from becoming a problem because “He’d [sic] use people...in spite of themselves.” This includes “people who don’t know God who don’t have any good in them, because they’re created in His [sic] image regardless.” It also includes people like herself based on her theological perception of religious-based expectations for how humans should relate to the environment. “I think God is expecting us as a body to take responsibility for the Earth as well...the body of church, the body of Christ, the Church.” Here though, Alexandra returns to her inaction and sense of helplessness she

expresses earlier. She does not know what this all means for her. Two opposing theological understandings based on different Bible passages exert countervailing influences on her thinking about how she should respond. These leave Alexandra uncertain about her role in addressing climate change and responsibilities toward the natural environment.

And I guess I'm—I guess part of my feeling like a dot is wondering how does God—what does God expect of me as a person? Given I'm just a hand or an eye or an ear, when He [sic] talks about the body of Christ. 'Cause Paul both says earnestly desire all the gifts of the Spirit, and that means having, um, carrying out all the different responsibilities that a Christian has. But also, God only gives certain gifts to certain people, according to other passages. So am I to specialize and concentrate on my gifts, or am I to be responsible for it all?" - Alexandra

Role of Religion in Societal Responses to Climate Change

Few participants who are uncertain if human activity contributes to climate change or whether it is a natural phenomenon directly discuss their views on aspects of collectively responding to it. Even less specifically mention their religious beliefs, attitudes, or values when discussing these aspects of environmental concern for climate change.

Only one person unsure about anthropogenic climate change appears to discuss taking an adaptive approach as a collective response to address it. Dierdre declares, "If there's a change you've gotta do something about it and regardless of who caused it. You're dealt with the situation and you have to deal with it, you know?" Her religious beliefs and theological perspective inform her preferences to the extent she considers it possible God could cause climate change, but would still "want us to do something about it."

No *Uncertains* either specifically discuss ignoring or preventing climate change and its consequences as an overall response, nor does anyone mention adopting a market-based approach for addressing it. No one discusses wind energy as an alternative energy source either. And while Chelsea thinks saying that, "all our technology is destroying the world", and "we're not impacting the world at all" equally are "scary to me", she does not directly mention her religious views with respect to the relationship between technology and climate change.

Only three *Uncertains* specifically mention fossil-fuel use when discussing their perceptions of climate change and either addressing it themselves individually through their behavior or collectively responding to it as a society. None of them reference religious beliefs or theological perspective when doing so.

Only unsure participant mentions religious beliefs when specifically discussing public policy as it relates to energy use and climate change, and it was someone who gave one of the

longest interviews. Ryan's exposition of policy guidelines occurs immediately after he declares his overall orientation toward the environment, "the only intelligent view that I understand is to preserve and to treasure the things which God has given us, not to, uh, ruin them." Ryan's religious belief about the role and relationship of humans with the natural world informs his views on humans' collective responsibilities. After explaining this means he does not feel guilty using gasoline and driving his car, he expresses his support for obtaining alternative fuel sources or "clean ways of doing things." He then explains what this looks like to him as an energy policy.

Let's not, you know, create such a pro—such a restrictive environment these companies cannot, that provide us these things, cannot operate at a profit. Nor let's engage in these peculiar and ridiculous fictions that the oil companies are somehow preventing progress towards alternative fuels. Any company who is able to develop these technologies, whether it is an oil company or an independent company outside that house, is going to be able to make a mint. So since the oil companies are capitalist enterprises, if there is a way for Mister Fission, I'm sure that with the amount of capital they have to invest in it, they could easily—if Mr. Fission is something that could be obtained, would we not use it if ExxonMobil came up with it? What if ExxonMobil came up with Mr. Fission and said we are no longer going to be drilling for oil because frankly it's just not profitable anymore. We can get so much more money off of this, after the—'scuse me, off of the distribution of Mr. Fission units. Where's the loss? So I don't think anybody is...I think there are a lot of motives that are being inappropriately misattributed." – Ryan

CHAPTER 8

DISCUSSION AND REFLECTIONS

This case study addresses significant gaps in the literature regarding the relationship between religion and environmental concern with respect to public perceptions of global environmental problems. Rather than using secondary survey data or, more preferred, original survey data, I conducted in-depth interviews with 52 evangelical Christians in the Dayton, Ohio region to probe the religious bases of their views about global climate change.

In the next section, I discuss the case study findings, focusing on the influence of conservative Protestant theological doctrines on Believers' and Deniers' understandings of scientific knowledge about climate change, their assessments of its risks, and their preferred means for addressing global climate change. I end with a discussion of the findings' implications and the study's contributions to understanding better religion's association with environmentalism.

Discussion of Findings: The Relationship Between Religion and Environmental Concern

The core purpose of this qualitative research project is examining how religious beliefs influence evangelical Christians' (Believers and Deniers) perceptions of climate change with respect to their knowledge about it, evaluation it is a problem, and responses to it. In this section I present six religious themes that describe the ways religion appears in these types of participants' discourse about climate change: Creation beliefs, Sin beliefs, Anti-Evolution, God's Involvement in the World, End Times, and Christian Stewardship.

An intentional arc moving from theory (religious ideas) to praxis (religiously framed action) organizes the six themes I discuss below. The first three reflect individuals' religious beliefs concerning the origins of Earth and humanity to what factors (spiritual) explain its current state to religious opposition against science contradicting these theological perspectives on humanity and biophysical reality. Themes turn more action-oriented with the latter three moving from theological perspectives on God acting in the world to God's intentions for its future and finally to religious framings of the responsibilities humans have toward the natural world, environmental problems, and climate change.

These six themes represent the predominant religious mental schema participants apply to climate change and use to construct their perceptions of it, evaluate its risks, and judge the need to address it. Mental schemata are cultural resources people use to construct perceptions of reality such as beliefs, attitudes, and values available to individuals through their socialization experiences and social location (Sewell Jr. 1992; Swidler 1986). Religion is one significant source of schema or cultural toolkits. Highly religious people such as white conservative Protestants frequently transpose their religious schema to understand social problems such as racial economic inequality (Emerson, Smith, and Sikkink 1999). The white evangelical Christians profiled in this case study transpose and apply their religious mental schema to understand the claims of climate science information and construct their perceptions of climate change as a biophysical and ecological phenomenon.

Reflecting the structure of the overall dissertation (findings Chapters 5 and 6), I consider religion's influence through each theme by describing how it appears within the two contrasting stances individuals' take (Believers and Deniers) on two fundamental scientific beliefs about anthropogenic global climate change: is it happening, and does human activity contribute to it. I identify how evangelical Christians in these two sub-groups of participants use each religious theme to understand climate change, evaluate if it is a problem worth addressing, and if so, how. This discussion highlights the significance of these conservative Protestants' theological doctrines and how participants' apply them in understanding global environmental problems.

Creation beliefs

Creation beliefs are religious-based ideas and theological doctrines that participants express about their perceptions of and beliefs about how the natural world was created, the origins of humans, and ecological or biophysical properties related to environmental change or ecological phenomenon. Direct reference to texts describing the Biblical creation story, specific mention that God created the Earth, and indirect references to either are all cues in participants' discourse about this theme of religious influence on their environmental understanding and concern for climate change. *Believers* draw on Creation beliefs when describing their knowledge about climate change and assessments of the risks they perceive associated with it. *Deniers* use Creation beliefs in both of these aspects of their climate change perceptions, as well as evaluating it as social problem and how to address it.

Believers' Creation beliefs shape their knowledge about anthropogenic global climate change by informing their conceptions of the human-environment relationship and their interpretations of global environmental change. They can reinforce individuals' understanding of ecological principles that human actions result in environmental impacts. *Believers* also cite them for why limits exist on scientific knowledge about ecosystems and climatic processes. And they use literalist interpretations of how God created the world to interpret observed ecological changes or understand why more frequent and disruptive weather events occur. Religion also influences *Believers'* assessments of the risks they associate with anthropogenic global climate change. They use literalist Creation beliefs to explain why concern about the dangers of widespread flooding is unnecessary because of God's promise to not destroy the Earth again this way. How they believe God made the world reduces their concern about climate change's impacts because they perceive God designed it to change and humans to adapt to it.

Deniers' Creation beliefs appear in all three aspects of their climate change perceptions (i.e. knowledge, problem, response). They explain temperature fluctuations as natural (knowledge) because of how God designed the Earth or with literalist interpretations of events (The Flood) described in the Bible. These same religious beliefs also directly inform *Deniers'* risk assessments of climate change's effects. They discount concern about melting ice and rising sea levels based on God's statement in the Bible to never again destroy the earth by flooding. *Deniers'* Creation beliefs inform their perception it is unlikely humans can affect such large ecosystems such as the Earth's atmosphere and climate. They resist becoming alarmed about climate change, or accepting humans are responsible for its consequences, because it contradicts their religious conception of humanity by suggesting humans are destroyers of the environment and personally guilty of harmful impacts on it. *Deniers'* application of these theological Creation doctrines to global climate change reflects a strong individualistic perspective and limits their recognition of its societal or structural causes.

Conservative Protestants' perceptions of ecological conditions as problems influence their willingness to respond personally by engaging in pro-environmental behaviors or supporting environmental policy actions to address them (Sherkat and Ellison 2007). Unlike *Believers'*, *Deniers'* cite Creation beliefs in their evaluations of global climate change as a social problem and their conclusions about if a response is necessary. Unexpectedly, one person applies his belief that God created the Earth as rationale for policies to address climate change

because of its impacts on others, even though he has not decided yet what to think about whether human activity contributes to it. Other *Deniers* however believe anthropogenic climate change cannot be the problem claimed because of how God designed the Earth. Its magnitude, size, and scale dwarf the effects of individuals' actions and the ecological impacts of the current human population. Global climate change cannot be a problem; therefore calls by others to address it with public policies must come from other ulterior motives.

Sin beliefs

Participants' see one of the sources of climate protection activists and scientists' motives is the sin they perceive inherent in humans and the environment. Theologically, for conservative Protestants, sin relates to Creation (the natural world) because it is seen as the cause for why the world exists as it does in its present state. It is a spiritual consequence of the first created humans' choice to not follow God's commands in the world as God originally created it. This spiritual consequence is the reason for what it is identified as humans' present "natural fallen" condition and also affects the natural world. Specific mention by Ohio evangelical Christians' in their climate change discourse to "The Fall", "sin", "sinful or fallen nature" all illustrate direct references to participants' Sin beliefs. More indirect references occur, for example, when individuals discuss the differences between those who "follow" or "know" God, and people who do not. Although Sin beliefs appear less predominantly in individuals' climate change perceptions, both *Believers* and *Deniers* mention them.

Sin beliefs appear in all three aspects of the perceptions examined for Ohio evangelical Christians' who believe anthropogenic global climate change is happening. For *Believers*', their "Sin beliefs" explain why observed environmental changes and ecological disruptions associated with climate change are normal and expected (knowledge). They indirectly appear when individuals explain their view of how concern for climate change (problem) becomes a consuming focus of others' lives like a religion, whereas Christians have different priorities. Those who do not believe in God or are not Christians are susceptible to exaggerating its impacts and unnecessary worry about them. Furthermore, some *Believers* even conclude climate change is not a (social) problem using their Sin beliefs because they see its effects as an outcome of human sin and the Biblical Fall. Within this religious framework, public policies to solve or eliminate this global environmental problem are misguided. Policies for addressing it should instead focus on mitigation and adaptation.

Deniers of anthropogenic climate change do not specifically mention Sin beliefs when assessing its risks, but they do appear in participants' discourse about their understanding (knowledge) of it and their evaluation of it as a (social) problem that needs to be addressed. *Deniers* mention "Sin beliefs" more frequently than *Believers* when describing what they know about climate change, and in similar ways. They also attribute the cause of humans' disruptive impacts on the natural environment directly to spiritual factors (sin). One application of this theological doctrine to climate change perceptions appears in various ways only among *Deniers*. Non-belief in God elicits unnecessary concern about environmental problems such as climate change, distorts interpretations of scientific information about it, overestimates the influence humans have on the environment, and makes people not realize the limits of science. If they acknowledge them, *Deniers*' diagnose the cause of ecological conditions that scientists link with climate change to personal characteristics using their Sin beliefs. The fundamental problem is a spiritual condition in which individuals who do not know God will not be responsible for their actions that have negative impacts on the environment. The corollary to this is that environmental policies are not necessary because the root cause of environmental problems is individuals and their sinful tendencies. *Deniers* believe scientific information demonstrating the impacts of climate change and the necessity to address it comes from non-Christians who do not believe in a Creator, desire control and power, and want to be like God (the original sin). The Ohio evangelical Christians profiled in this case study do not perceive climate change is a problem because they, and the sources of information they trust for information about it, do know God—and they believe anthropogenic global climate change is not happening.

Anti-Evolution

Like participants' mention of their Sin beliefs, an Anti-Evolution theme appears less predominantly, but still informs the views of people who differ in their belief about anthropogenic climate change. Both *Believers* and *Deniers* express these religious-based views about science or scientific information and hold them strongly. Whereas the Creation beliefs theme identified above indirectly reflects them, participants' religious- based Anti-evolution sentiments directly signal their conceptions of the relationship between religion and science. Specific mention of "evolution" and references to the difference between a biblical "worldview" and one that is not represent instances of this theme in participants' discussions. This theme

does not emerge in either *Believers* or *Deniers* assessments of climate change's consequences, but does appear in the other two aspects of their perceptions about it.

Believers express "Anti-Evolution" religious sentiments when identifying who they trust for information about climate change (knowledge). Belief in evolution also is suggested for why non-Christian scientists see climate change is a problem that needs to be addressed and want to "save the earth" (social problem). *Deniers* discount scientific information about anthropogenic climate change with their "Anti-Evolution" religious beliefs and also use them to identify what these participants perceive as valid sources of information. This religious theme does not specifically emerge in *Deniers'* evaluation of whether global climate change is a problem that needs to be addressed.

God's Involvement in the World

The previous three religious themes discussed above emphasize Ohio evangelical Christians' religious beliefs and theological doctrines (theory) about the nature of the world, its origins, and spiritual factors they perceive responsible for humans' present condition and the state of the environment observed today. The remaining three religious themes below also appear in participants' discourse about climate change and emphasize the action of God through direct involvement in events occurring on Earth, the perceived relationship between God's actions and the future (end) of the world, and the kind of religious-based responsibilities (stewardship) these conservative Protestants perceive Christians having with respect to the environment, environmental problems, and climate change. In the remainder of this section I describe how each of these three religious themes appears in the three aspects of participants' climate change perceptions (knowledge, risk, social problem) that I focus on in this discussion.

A core theological doctrine of conservative Protestants is identified by the phrase "sovereignty of God." Its typical religious meaning among them includes individuals' conceptions of the omnipotent power God holds over the natural world and the degree that God is involved in it. Sociologically, this religious belief is conceptualized as peoples' "High Supernatural Belief" or the degree that someone believes God is involved in their everyday life and events that occur in the world. Evidence of this kind of religious influence on participants' climate change perceptions appears directly when they specifically discuss God being involved in the world. Less direct references appear repeatedly in their discourse with reference to "God's plan", "God

being in control”, or statements that “God has a purpose.” Among the six religious themes I identified, this fourth one is one of two most prevalent in Ohio evangelical Christians’ views.

Believers’ View of God’s Involvement in the World

Believers apply their religious doctrines about “God’s Involvement in the World” to all three aspects of climate change perceptions examined in this dissertation. They specifically apply them to understand the significance of climate change’s impacts and consequences (knowledge). These particular religious beliefs assure participants that the observed environmental changes occurring are in God’s control or part of God’s plan, even though they also believe that human activity contributes to or causes them in some degree. *Believers* also use their beliefs about God’s Involvement in the World to assess risks they associate with climate change. Their confidence in it reduces concern about climate change’s impacts. It minimizes perceptions of the severity of its consequences, even as these participants acknowledge human activity can have negative or disruptive impacts on the environment. It is unnecessary to be overly concerned about climate change because God has a plan and a purpose for people on Earth. One *Believer* unexpectedly demonstrated the experiential dimension of this religious influence in a reflective explanation for his lack of personal concern about climate change and its consequences. The individual recounted during the interview that he suddenly realized the reason he did not worry about it was because God had just told him it was because he was selfish (a statement also reflecting the theme of “Sin beliefs”).

Believers’ also apply their theological interpretation of God’s Involvement in the World to gauge how problematic is climate change and how they should respond to it (social problem). It does not motivate them much to address it because their belief that whatever happens on Earth is in God’s plan leads them to view concern about its consequences as faddish or hysteria. *Believers* wonder if God’s involvement in the world is the reason why climate change is happening, why it will not be disastrous, where knowledge for technology required to address it will come from, or why humans will adapt to it is because of God’s salvation and evangelistic purposes for non-Christians. Their religious perception that what happens on Earth is part of God’s plan does not stop some from personally engaging in individual behaviors reducing their environmental impact. This theme about how God is involved in the world appears repeatedly in *Believers’* accounts of their limited personal capacity to address climate change. While these Ohio evangelical Christians think they have a religious responsibility for how they treat the

environment (see Christian stewardship theme below), they do not believe humans are ultimately in control of what happens even though they agree anthropogenic climate change is occurring.

Deniers' View of God's Involvement in the World

Deniers use their beliefs about "God's Involvement in the World" more extensively than *Believers*. This religious theme appears in all three aspects of their climate change perceptions. They apply this doctrine (sovereignty of God) to explain why humans cannot affect the Earth's atmosphere (unless God allows it), identify conditions necessary for climate change to occur (must be in God's plan), explain why severe disruptive weather events happen (God causes them), and understand why scientific knowledge about the natural world is limited (by God). *Deniers* express a version of this theme in their understanding (knowledge) of climate change that *Believers* do not. They believe it is arrogant to think Earth is susceptible to human activity since God actively limits the magnitude and impact of human actions on the natural world.

Deniers belief about God's Involvement in the World also emerges in their assessments of risks associated with global climate change. They downplay concern about its consequences with a fatalist approach based on a belief that God is in control of events, and when they will negatively affect people. The possibility this will happen with climate change is not worrisome because if it does occur it must be a result of whatever is God's plan. God will intervene if necessary if events or conditions deviate from God's purpose. *Deniers'* belief in their personal salvation gives them assurance in their own future, while they are not concerned about climate change and its effects. Although God can intervene directly to solve environmental problems and mitigate harmful ecological conditions this does not mean people should do whatever they choose no matter the impact on the environment.

And *Deniers* express their theological doctrines about God's Involvement in the World in their evaluation of whether climate change is a problem and needs to be addressed. They limit their actions to address environmental problems to what God calls them to do. Engaging in political expressions of support for environmental policy (lobbying) is not necessary unless one is called specifically by God to do this. Overall, *Deniers* believe God limits human capacity to address climate change, other environmental problems, or affect the natural world. Whether present or future ecological conditions associated with climate change are a problem that needs to be addressed depends on if it is part of God's plan. If they are, policy action is pointless, a

waste of resources (especially economic), and imposes unnecessary or unfair sacrifices (primarily on personal finances and individual freedom).

End Times

The fifth religious theme emerging in Ohio evangelical Christians' constructions of their perceptions about anthropogenic global climate change reflects individuals' beliefs about the "End Times" described in the Bible. The range of ideas about the future (end) of the world, the circumstances precipitating them, how humans (Christians and non-Christians) will experience them, and the ultimate fate of the Earth together reflects highly religious individuals' eschatology. Theological perspectives interpret Biblical texts about these matters differently. Both *Believers* and *Deniers*, however, express this religious theme, in almost every aspect of their climate change perceptions. Direct mention of the "end times", the book of Revelation, the second coming or return of Jesus Christ, and apocryphal references such as the destruction of the world in fire all reflect participants' use of this religious theme.

Believers' "End Times" beliefs appear in all three aspects of their perceptions of anthropogenic global climate change. Some cite them as reason for their perceptions of the rate (slowly) that environmental change associated with climate change happens and its eventual outcome (not the end of humanity). They appear in other *Believers'* risk assessments of climate change's consequences to explain why God allows them to occur (also reflecting the theme of God's involvement in the world). Participants also use them to conclude the Bible does not indicate the end of the world will occur through climate change, or that since it makes no mention of it then *Believers* should be agnostic about the case. *Believers* apply this religious theme in a nuanced manner when evaluating if climate change is a problem and serious enough to warrant a response. While believing the End Times described in the Bible will happen, climate change probably is not part of it. Some are willing to assume it may have a specific role in God's plan for Earth and its future. But this cannot be known definitively nor is it possible for humans to affect the timing of the future end of the world based on the impacts of their actions like those observed with climate change. This theological position makes some *Believers* amenable to at least discussing the necessity of addressing it even if in fact they personally are not doing anything themselves about climate change.

Deniers also use their doctrinal interpretations of "End Times" in their perceptions of climate change, specifically with respect to how they understand it and whether it is a problem

(although not about its perceived risks). They apply this religious theme to explain why anthropogenic causes of climate change cannot occur and why other non-human forces are responsible for the ecological changes associated with climate change (knowledge). *Deniers* think that if the identified impacts of climate change occur it would seem like End Times events described in the Bible about the future end of the world. Therefore, if the end times have not begun, then the observed climatic changes occurring must be a consequence of forces not under human control. This religious theme influences participants' willingness to address climate change as a (social) problem. *Deniers* oppose environmental policies for addressing climate change based on theological perspectives that construct each individual nation's sovereignty as established by God and interpret efforts such as international treaties (Kyoto Protocol) as possible signs of the prophesied "one world order." A contrasting religious rationale for addressing environmental problems, although not climate change specifically, that also reflects this theme is some *Deniers'* uncertainty about the timing of the Jesus Christ's return and the possible negative ecological impacts likely to fall on subsequent generations.

A possible prompting effect from the NEP statements offered to participants' could encourage the use of their religious "End Times" beliefs in their perceptions of anthropogenic global climate change. The final open-ended statement taps the facet of individuals' ecological worldview related to their views about the possibility of an ecological catastrophe or crises occurring. After participants respond to this statement, I then refer to it as a transition to moving conversations to a specific discussion of climate change as an example of "one environmental problem that some see as an ecological crisis". Linking these together during interviews may make participants' eschatological views more salient to them and thus more likely to be mentioned during our discussions. Emerging research focuses on the influence of conservative Protestants' eschatology on their environmental concern about climate change and yields conflicting perspectives. One recently published quantitative investigation concludes "belief in the Second Coming [of Jesus] reduces the probability of strongly agreeing that the government should take action [on climate change] by more than 12 percent" (Barker and Bearce 2012:272). An alternative view based on a qualitative approach argues this highly religious segment in U.S. society's "impression that scientists were saying climate change would precipitate an apocalyptic end to the world" encourages them to discount climate science information as a result of both a scientific misunderstanding and their religious beliefs about

how the world ends in the future. This effect may then actually overestimate conservative Christians' apathy about climate change (Veldman 2013)

This also appears possible since some participants reference former vice President Al Gore's climate change documentary, *An Inconvenient Truth*, and the fictional movie depicting sudden climate change, *The Day After Tomorrow*, as examples of unrealistic portrayals of its disastrous consequences that participants' believe unlikely to occur. These specific religious beliefs may continue to be more likely to appear in evangelical Christians' views about this global environmental problem to the extent climate change activists and scientists describe its effects as catastrophic and its consequences as an impending global crisis. In these cases, their religious "end times" beliefs appear to inform these conservative Protestants perceptions about anthropogenic climate change such that they are more likely to construct it not as a problem that needs addressing because they perceive its severity is overestimated.

Christian stewardship

Despite the stereotypes reflected in some secular environmentalists interpretations of Lynn White's argument against highly religious peoples' and conservative Protestants' lack of environmental concern, even he offers a model of Christian environmental stewardship from the life of St. Francis of Assisi. In today's contemporary period of ecological risks generated by modern industrial societies and worldwide environmental problems challenging global human civilization, conservative Protestants increasingly call for greater environmental concern and activism by believers and religiously frame it in terms of "Creation Care" and Christian "stewardship of Creation." Other believers contest what they perceive as redefining or broadening of stewardship's meaning, defining it differently and more narrowly. This final religious theme appearing in Ohio evangelical Christians' perceptions of climate change is the other most extensive application of theological doctrines in participants' accounts of their understandings (knowledge) of this global environmental problem, assessments of its risks, and determinations that it is or is not a problem that requires a response. Both *Believers* and *Deniers* express it when discussing all three aspects of their climate change perceptions. Direct mentions of their religious-based perceptions about being a "steward" and more indirect discussions of their theological interpretations of the role and responsibility of humans and how to treat the environment reflect this theme in participants' discourse.

Believers' Environmental Applications of Christian Stewardship

Believers' mention "Christian stewardship" in their discussions of what they believe climate change is and its relationship to human activity (knowledge). These participants explain their normative expectation of a human responsibility to reduce human impacts on the natural environment overall and in the case of climate change in terms of their theological interpretations of this concept. Despite this, *Believers'* conception of "Christian stewardship" does not make most very concerned about climate change or its consequences in their assessments of its risks. They freely admit holding this religiously framed environmental value, but not reflecting it with their actions; limiting it to other environmental problems and individual pro-environmental behaviors such as recycling; or not personally seeing the normative imperative to be good caretakers of the environment in religious terms or exclusive to Christians. *Believers'* theological understanding of stewardship occasionally motivates them to greater concern about the consequences of climate change because of how they would affect others.

Believers' apply their theological conceptions of Christian stewardship more to other ecological conditions seen as environmental problems, rather than to climate change. It leads them to acknowledge a general human responsibility to reduce their overall personal impact on the environment through individual behaviors even if they do not engage in actions directly oriented to addressing climate change. *Believers'* religious-based construction of their responsibilities with respect to stewardship motivates them to action on environmental conditions if it involves meeting peoples' needs or they perceive it is what a Christian should do. *Believers* see non-Christians making environmentalism a religion for themselves, which leads environmentalists to engage in unacceptable actions such as property destruction and view climate change as an emergency that it is not.

Believers' religious-based construction of what stewardship means influences their views about policy-based responses to climate change. They state a Christian worldview should lead to policies that do not unnecessarily inhibit human action or appear to place other concerns above human needs because of their theological interpretation of what should be the relationship between humans and the environment. Participants apply their perception of a Christian stewardship ethic of "caring for the earth" when discussing their preferences for policies addressing it. They support a policy response that should be adaptive, gradual, support

alternative energy, and not be reactive or coercive. A notable aspect of the relationship between Christian stewardship and concern about climate change and its consequences for these participants is its near complete absence from discussions in *Believers'* churches. No one recalls hearing their pastor or church leaders discuss it. *Believers'* prioritize peoples' spiritual conditions above environmental problems. This reduces their willingness to consider climate change and discuss stewardship's relevance to it or any connections with their faith.

Deniers' Environmental Applications of Christian Stewardship

While *Deniers* also mention "Christian stewardship" they interpret and apply it differently than *Believers*. This religious theme, however, still emerges in participants' discourse about all three aspects of their climate change perceptions. They repeatedly frame it in religious terms while applying it broadly to how humans should relate to the environment and use natural resources with efficient, utilitarian means, and for anthropocentric purposes. Unsurprisingly, it is not applicable to climate change for *Deniers* since they believe it either is not happening or human activity does not contribute to it (knowledge). *Deniers'* conception of Christian stewardship applies to environmental problems such as pollution and the treatment of animals because of their religious understanding of human's role in and responsibility for the environment. But they do not see it applicable to climate change, its associated consequences, and their risk assessments of them (problem).

Finally, since *Deniers'* do not evaluate climate change as a (social) problem needing a response, they apply their conception of Christian stewardship to their own everyday lives out of a generalized concern for the environment and the perception of a religious responsibility to do it. *Deniers* see appropriate use of technology to solve environmental problems as an inherent human capacity, along with a God-given responsibility to be resourceful and use nature. They distinguish religious-based imperatives to engage in individual pro-environmental behaviors that reduce overall impacts on the environment from questions about addressing climate change with various public policy solutions.

Deniers repeatedly emphasize the value of personal responsibility in their religious constructions of stewardship and how they apply to human actions with respect to the environment. Unlike most of these participants, only one specifically noted that other large-scale environmental problems have individual, societal, and ecological factors contributing to them and cited a religiously-based responsibility to protect the Earth God created. His

perception that climate change activists vilify humans tempers his willingness to support climate policy solutions and actions to address it because it conflicts with his religious perception of the role of humans and their relationship to the environment. The evangelical Christians' in this study who do not believe human activity contributes to climate change rarely mention the necessity to address climate change because of its effects on others or justify doing this by referencing their religious-based conception of stewardship. Similar to Believers, no *Deniers* recall specifically hearing stewardship discussed in church contexts with respect to climate change or the environment.

Summary of Findings: Religious Influences on Evangelicals' Climate Change Perceptions

Six themes emerge in Ohio evangelical Christians' constructions of their perceptions of anthropogenic global climate change: Creation beliefs, Sin beliefs, Anti-Evolution, God's Involvement in the World, End Times, and Christian Stewardship. These largely correspond with the only other known investigation of this religious segment's public understanding of climate change. It reveals that of the "five religious beliefs that appear to influence conservative Christians' views on climate change; these beliefs include biblical inerrancy, God's sovereignty, human sinfulness, eschatology, and evangelism" appear in the accounts of 35 Dallas, Texas evangelical pastors, church leaders, and churchgoers (Carr 2010:iii).

These themes appear in three aspects of their climate change discourse as they use them to understand scientific information describing it, assess associated risks to determine if it is a problem, and judging if it requires a response from them personally or collectively as a society through environmental policy. Participants express all of these themes as examples of religious influences on their climate change perceptions regardless of the overall stance (Believers or Deniers) they take toward whether human activity contributes to it. In some instances they differ in how they apply their religious beliefs to climate change; in other cases their theological doctrines appear to play the same role in their perceptions of this global environmental problem.

Believers' accept that anthropogenic global climate change is happening. For most participants, however, this appears the case because their theological understanding of religious beliefs that they hold does *not* negate the possibility of this occurring or the likelihood human actions can affect the Earth's atmosphere and climate. Overall, although most of these participants believe it is happening, their religious beliefs inform their general perceptions that

climate change is not a critical social problem that requires drastic or coercive policy measures to address it. No one believes it can be prevented. *Believers* hold a religious-based conception of their role in the natural world and the responsibilities of humans to the environment. They express it in terms of a Christian stewardship ethic that applies more to how they treat the environment versus the specific issue of global climate change.

Deniers' do not accept that anthropogenic global climate change is occurring. They do not worry about its impacts because they perceive God is in control, involved in events happening in the world for a purpose, and has a plan for it and humanity's future. They perceive this even though they believe it is also possible the consequences of climate change might be severe, although not the result of human actions. *Deniers'* make this assessment about the risks of global climate change on the basis of religious beliefs they express when discussing their evaluations of its impacts. Like *Believers*, they have a Christian stewardship ethic informing their perception of the relationship between humans and the environment. It emphasizes individual responsibility and the necessity of people "knowing God" so they will engage in appropriate behaviors with acceptable impacts on ecosystems. It does not include the use of environmental policy to solve environmental problems, nor to address climate change.

Conclusions and Recommendations

Policymakers tend to avoid definitions of ecological conditions as environmental problems requiring regulation because of the neoliberal assumption that increased environmental regulation contradicts the state priority of facilitating capital accumulation and economic growth (Gould 1993; Schnaiberg and Gould 1994). Regulation policies occur when policymakers feel significant public pressure, typically through public opinion polls of their constituencies, to address worsening ecological conditions (Marshall and Goldstein 2006). The environmental movement works, in various ways, to increase public pressure for environmental regulation. Movement activists promulgate definitions or frames of ecological conditions as social problems to recruit support for environmentalism and increase public concern about environmental problems (Hannigan 1995).

Adherents of religious traditions and members of local churches, parishes, or synagogues are one segment of U.S. society receiving greater attention from environmentalists seeking to broaden their social bases of support (Sierra 2008). Although criticized as a cause of

modern societies' ecological crises during the emergence of the contemporary environmental movement (White 1967), evidence of Christians "caring for creation", advocating for increased environmental protections, and participating in environmentalism all exist (Ridgeway 2008). Understanding the emergence of religious environmentalism and religion's role in environmental concern though remains a perennial challenge to social scientists (Proctor and Berry 2005).

Research findings on the association between religious beliefs and expressions of environmentalism appear complex and contradictory. "Faith-based" activism occurs on various environmental problems and global climate change is an increasing focus, particularly among some conservative Protestants and evangelical Christians. Simultaneously, other believers staunchly deny it is happening and strongly oppose environmental regulations or policies addressing climate change. The role of biblical literalism, "dominion" beliefs, "Christian stewardship", "End Times" eschatology, and theological views of God's involvement in the world is unclear. Some analysts even argue religion does not matter much in religious peoples' environmental concern, being a spurious influence masking more fundamental political and other cultural influences. Current understandings of religion's role in environmental concern, religious peoples' participation in environmentalism, and the association of religious beliefs with public support for environmental policy remain murky.

Quantitative, survey-based approaches provide most evidence for the relationship between religion and environmental concern. Insights about the religious influences on conservative Protestants' concern about environmental problems and support for regulations addressing them reflect this trend. Qualitative inquiries into evangelical Christians' participation in U.S. environmentalism predominantly focus on elites, religious leaders of U.S. evangelicalism and the evangelical environmental movement. Few scholars specifically examine evangelicals' public perceptions of global climate change using quantitative data; even less rely on qualitative research strategies.

Below I outline several implications of this qualitative investigation into Ohio evangelical Christians' climate change perceptions for understanding the religious social bases of public support for environmental policy, analytic efforts to clarify social scientific knowledge about the relationship between religion and environmental concern, and directions for future research in these areas.

Implications for Environmental Policy

Social movement support and participation by citizens increases as activists define or frame social problems in ways congruent with public perceptions (Benford and Snow 2000). Public perceptions of social problems results from “activity by which groups identify ‘problems’ which they claim to be harmful, undesirable, unjust and in need of corrective attention...[a] process of interaction between claimants that is organized by what they claim to be ‘a problem’” (Spector and Kitsuse 1977). The social construction and public acceptance of framings describing conditions as social problems can result in new public policies that address them (Loseke 2008). While definitions of ecological conditions do not change their ontological reality, successful framing of them by activists can transform them into environmental problems in the perceptions of various publics in society and possibly result in environmental policy.

One major implication of this case study is that, for these participants, right (correct) thinking about climate change starts with their theology not scientific information. They will not give climate science information a hearing if their theological doctrines do not give it legitimacy. What religious beliefs influence evangelical Christians’ support for environmental policies to address global environmental problems such as climate change? “Christian environmental stewardship” holds largely similar meanings to these conservative Protestants with respect to global environmental problems, whether they agree anthropogenic global climate change is happening or deny that it is. Overall, *Believers* and *Deniers* infer their conception of stewardship means they should be responsible with the environment and wise in utilizing natural resources that God gives humans. Their expressed perspective is predominantly anthropocentric, utilitarian, and reflects economic ideals based on private property. Overall, conservative Protestants frame stewardship in theological terms, which encourage them to engage primarily in private, individual, pro-environmental behaviors and tend to oppose environmental regulation or climate policy.

Conservative Christians with stronger literalist Biblical interpretations are less likely to engage in public or political expressions of support for environmental policy (Boyd 1999; Greeley 1993; Kanagy, Humphrey, and Firebaugh 1994; Sherkat and Ellison 2007). Participants taking both stances on whether anthropogenic climate change is happening (*Believers* and *Deniers*) express their biblical literalism in various ways. Even *Believers’* say climate change is a non-Christian evolutionist scientists’ agenda and that Christian creationist scientists consider the

evidence. This fits evangelical climate protection advocate, and former N.A.E. vice-president Richard Cizik's assessment that "Historically evangelicals have reasoned like this, scientists believe in evolution. Scientists are telling us climate change is real. Therefore, I won't believe what the scientists are saying" (as cited in Swartz 2008:43). Ironically, the findings from this research suggest the scientific experts (climate scientists) most knowledgeable on this ecological phenomenon are least trusted by case study participants. Climate protection advocates with greater legitimacy to this audience and religious segment of society are required to provide them with scientific information about this global environmental problem and its relationship to human activity.

The use of biblical literalism religious beliefs by Ohio evangelical Christians in their perceptions of climate change parallels other believers like them. In the only other known qualitative investigation of religious beliefs' role in lay conservative Protestants' public understandings of climate change, "the most frequently discussed faith theme...was an emphasis on the bible [sic] as an authoritative source of knowledge." A frequent measure of biblical literalism is peoples' views about its inerrancy. All but one of 36 evangelical Christian interviewees living in the Dallas area "explicitly mentioned believing the bible to be inerrant" (Carr 2010). Participants in the Texas study "said that they looked directly to the bible for information regarding climate change, and roughly came to two different conclusions" (Carr 2010). In one version, people cited Noah and The Biblical Flood as an example of climate change. Nearly verbatim to one Ohio evangelical in this study, a Dallas evangelical stated "her belief in the great flood story in the Bible...precludes her from believing in scientific predictions about the consequences of climate change today because God promises in Genesis 9:11-15 not to flood the earth again" (Carr 2010:132).

A "Fundamentalist" or "dispensationalist" orientation toward the world dampens environmentalism by highly religious persons holding these conservative Protestant theological frameworks (Dietz, Stern, and Guagnano 1998). Previous studies show this religious influence corresponds with stronger opposition to environmental policy (Greeley 1993; Guth, Kellstedt, Smidt, and Green 1993). Participants' in this case study express two of its typical doctrinal components ("End Times" and "High Supernatural" beliefs) through their repeated accounts of their belief in God's involvement in the world when discussing aspects of their perceptions of climate change. This suggests a theological barrier for generating greater public support for

climate policy and environmental regulation among individuals like these Ohio evangelical Christians and in this religious segment of U.S. society.

Another important implication from this research for environmental policy has less to do with the immediate influence of specific religious beliefs and more with their effect on participants' motivation for action to address environmental problems. Many religions limit human agency because of emphasis on personal responsibility. Mobilization can't occur unless individuals view the problem as a social, rather than personal, problem. The impetus for someone to act is facilitated or restrained by a person's available cultural resources and existing structural constraints (Sewell Jr. 1992; Swidler 1986). Nationally representative samples of conservative Protestants show "their instinctual individualistic approach, transposed from the theological realm, prevents them from promoting anything but a bottom-up approach. Thus, structural solutions such as green legislation are generally not supported by evangelicals who, whether or not they are concerned about environmental issues, tend to attribute responsibility for social problems to individuals rather than institutions—if they engage them at all" (Swartz 2008:16).

In this case study, participants' religious beliefs about God's involvement in the world challenge the environmental movement's efforts to generate public support for environmental policy to address climate change among conservative Protestants—even when they believe anthropogenic climate change is happening. These Ohio evangelical Christians' theology reduces peoples' perceptions of the efficacy of individual action for responding to problematic ecological conditions and their support for environmental policies proposed for addressing its structural or societal causes and ecological impacts. With respect to this specific global environmental problem, religion limits human agency, public policy, and social change required to meet ecological challenges and risks emerging as consequences to modern societies' reliance on fossil-fuel based production. These findings illustrate a barrier identified previously among a nationally representative sample of individuals representing U.S. evangelicalism. "Even as evangelicals grow more concerned about climate change, they remain unwilling to marshal government resources to ameliorate what they see as a manufactured problem" (Swartz 2008:44).

The collective assessment of these Ohio evangelical Christians, even among Believers who agree human activity contributes to it, that climate change is not a serious problem

compounds the inertia participants feel about their limited capacity to address it as a global ecological phenomenon. Public willingness to support and be involved in political or policy oriented activities of environmentalism depends on individuals' definitions of environmental problems and their evaluations of perceived dangers (Cable and Cable 1994). Others specifically examining the association of religion with conservative Protestants' environmental concerns and evangelical Christians' perceptions of climate change find "political conservatism in turn dampens political environmental activity and drives other environmental attitudes through the perceptions of problems seriousness that it creates" (Swartz 2008:5). Sherkat and Ellison's (2007) analysis of conservative Protestants' environmental concern based on GGS data affirms that the less these highly religious individuals' see ecological conditions as environmental problems, the lower their willingness to personally address them in even with individual pro-environmental behaviors let alone supporting government regulations to address them.

A third implication for environmental policy these findings suggest is that conservative Protestants' religious experience in local churches and everyday life social interactions with significant others and Christians they see regularly at church may not facilitate environmentalists' efforts, religious or secular, to increase environmental concern. Sowing and nurturing greater concern for climate change and support for environmental policy to address it among conservative Protestants is limited by the silence of church leaders about it and absence or reluctance of churchgoers to discuss it with others. When lay evangelicals hear from their religious leaders that their concern for climate change comes as a consequence of familiar religious practices (thoughtful prayer), "evangelicals increase their support for addressing global warming" (Djupe and Gwiasda 2010).

Local religious social contexts can be rocky ground for increasing public environmental concern among segments of U.S. society who contest definitions of large-scale ecological conditions as environmental problems. Djupe and Hunt (2009) find "social sources of information" shape U.S. churchgoers' religious beliefs and environmental attitudes more strongly than doctrinal beliefs or religiosity through how congregations serve as social networks that convey and reinforce political ideas. Ohio evangelical Christians' accounts in this case study of the extent their church leaders do *not* discuss climate change and environmental issues reflect this. *Deniers* do not talk about it except with those who share their skepticism. And *Believers* do not discuss climate change with other Christians who they regularly interact with at

church. In the case of climate change, pastors who spoke more frequently about it facilitated churchgoers' perceptions of it as an environmental problem and increased their willingness to support policies to address it (Djupe and Olson 2010). Environmental movement activists and climate protection advocates may find pulpits of local churches the fulcrum point for changing conservative Protestants perceptions of climate change as an environmental problem and increasing public support for policies to address it among this religious segment of U.S. society.

A final implication from this case study for environmental policy highlights opportunities for increasing religious-based concern about climate change by returning to how participants' express and frame their theological conceptions of Christian stewardship. Religion also offers opportunity for increasing individuals' pro-environmental behaviors that have impacts on large-scale ecosystems even if they do not perceive them as environmental problems. The path toward this possibility lies through how many conservative Protestants construct their perception of what "stewardship" means with respect to the natural world using their religious beliefs. Ohio evangelical Christians' conception of "Christian stewardship" emphasizes personal responsibility and encompasses support for certain private individual actions (waste reduction, energy efficiency, reducing personal fossil-fueled transportation use) that do reduce effects of human activity on Earth's atmosphere and climate. Even the Presbyterian ministers of historian Lynn White's denomination nearly unanimously identify as "stewards of the Earth rather than dominions" when provided written explanations of each (REF).

Participants expressing both stances (Believers and Deniers) on climate change also characterize their relationship with the natural world and the theological expectations they perceive God has for how humans treat it in terms of having been "given" or "received" Earth as a "gift." Pro-environmental behaviors might increase to the extent this conception can be leveraged to increase normative influences toward an orientation or stance of "caring" for gifts. However, using this cultural framing likely leads to further challenges since giving gifts to others conveys ownership to recipients for what is received in a modern society in which most gift giving entails commodification of the environment and consumption of objects. Previous quantitative investigations of evangelical Christians' perceptions of climate change suggest that "Given their propensity to focus on private behavior, it is indeed possible that evangelicals might reject government action on behalf of the environment, but see personal activism as very important" (Swartz 2008:26). The Ohio evangelicals profiled in this case study demonstrate this

through their distinctions between personally engaging in various pro-environmental behaviors, reluctance to support addressing climate change with environmental policy, and their theological conception of Christian environmental stewardship emphasizing personal responsibility. Others surmise that in the case of climate change as an environmental problem, conservative Protestants' "reluctance toward government regulation makes sense when seen through an evangelical lens that distinguishes between private belief and public action" (Swartz 2008:39).

The lay conservative Protestant believers profiled in this case study predominantly construct and describe their perception of the role and responsibilities of humans with respect to the natural environment in terms of "stewardship" using their religious beliefs. However, certain elites within evangelicalism and leaders of the evangelical environmental movement increasingly frame their calls to lay believers for greater concern about environmental problems and climate change in terms of "creation care." The most prominent social movement organization within U.S. evangelicalism has issued multiple declarations about the spiritual importance of evangelical Christians' to "care for creation" with respect to environmental problems and climate change (N.A.E. 2004; N.A.E. 2007). Also, at more local levels, "evangelical clergy are addressing environmental issues in ways that are not typically tied to the environmental movement, but with justifications that are uniquely evangelical" (Djupe and Gwiasda 2010). They continue their tradition of leveraging new forms of media communication to convey their religiously-framed message of concern for the environment (Merritt 2013; Northland 2013). They visibly exhort followers to prevent environmental degradation and support environmental sustainability with justifications "grounded in spiritual morality" rather than "arguments based on scientific evidence" (Djupe and Gwiasda 2010).

Conservative Protestant adherents to this religious tradition among the U.S. general public, in contrast, exhibit more inertia to adopting this greater environmental concern. Lay "evangelicals who view global warming as unimportant are more than likely making a theological statement that environmental concerns are beneath them and detract from core concerns" (Djupe and Gwiasda 2010). Case study participants, whether categorized as Believers or Deniers on the basis of their knowledge beliefs ("Is anthropogenic climate change happening?"), express these sentiments in their evaluation of it as not a serious problem and less important than meeting peoples' needs or evangelizing. For the most part, there is little

evidence that the Ohio evangelical Christians I interviewed are aware of or convinced by theological arguments for “creation care” presented in terms of religious beliefs familiar to them. They do not yet seem willing to join with other believers like themselves to stand in a “middle ground” (Wilkinson 2012) with more moderate evangelical Christians between secular environmentalists and their more conservative Protestant counterparts with respect to the environmental problem of climate change and the challenges it presents to human society and ecosystems. While the potential of Western Christian ecotheology remains a possibility, as even Lynn White (1967) argues, for fostering greater environmental concern and support for policy regulations (Hitzhusen 2007) or even climate education (Hitzhusen 2011) among the U.S. public, work to transform the hearts, minds, and actions of these believers in these directions still remains.

This case study profiles self-identified evangelical Christians living in the greater Dayton, Ohio area and examines their concern about global environmental problems. Although findings are not statistically generalizable because of its qualitative research strategy, they offer deep insights about how religious beliefs inform their views on anthropogenic global climate change. The case study’s findings extend current understandings about the relationship between religion and environmental concern. These insights are relevant to other highly religious people and conservative Protestants to the extent case study participant share structural characteristics in common with others similar to themselves. Comparing participants’ social and demographic characteristics to previous studies’ samples, Ohio, and national sub-populations of evangelical Christians and political conservatives is one means for assessing this.

The portrait of highly religious peoples’ public environmental concern about climate change this case study depicts (see Table 3.1. for details) reflects the views of slightly more women (54%) than men. They almost exclusively identify as white. They represent older adults or generations of conservative Protestants, with a majority (56%) 35 to 54 years old and an approximately third more (35%) 55 years and older. Although emergent adults are absent disproportionately compared to overall U.S. society, evangelicals younger than 30 years are not significantly underrepresented (see below). Participants are highly educated and generally receive middle to upper class incomes. Politically, they overwhelmingly identify as conservative or Republican, and nearly all voted for Republican presidential candidate George W. Bush in the

2000 and 2004 U.S. elections. In terms of religious affiliation, nearly three-quarters attend one of two large evangelical “mega-”churches in the Dayton, Ohio area.

Nearly one quarter (23%) of all members of U.S. evangelical Protestant churches reside in the Midwest, including Ohio (Pew 2007). In a 2000 religious census 22 percent of Ohio respondents identified as evangelical Protestant, which “also roughly resembles the nation” (Djupe and Olson 2010). What is the political and religious context in which case study participants reside with respect to the statewide population of Ohio evangelical Christians and political conservatives? In 2008, 35 percent of Ohio adult residents declared themselves Republican or leaning Republican; 39 percent also identified as conservative. Sixty-eight percent described themselves as very or moderately religious, and 58 percent identified as Protestant (Gallup 2013).

Earlier analyses examining the intersection of religion and politics in the Ohio Moral Majority find its self-identifying evangelical and fundamentalist supporters share “nearly identical demographic profiles” (Wilcox 1986). “More than 75 percent had attended college, and nearly half had professional occupations” and “respondents were not the lower SES [socioeconomic status] typically reported by media. Almost all (98%) voted in 1980 (Wilcox 1988). Politically, both “are heavily Republican, and conservative on most issues.” The most significant factor influencing the differences (in degree of conservatism) observed between them is the extent fundamentalists see their religious and political beliefs are interconnected. Both types of self-identifying conservative Christians express their religiosity (faith) in similar ways with 80 percent of each group attending church at least once a week and 94 percent taking a literal interpretation of the Bible (Wilcox 1986).

How participants compare with evangelical Christians nationally depends on where analysts’ draw the group membership boundaries of this social movement (evangelicalism). Two predominant strategies for labeling respondents in survey research on public opinion on environmental issues include a religious affiliation or organizational approach based on self-identification or church attendance (Pew and Gallup), and a methodological approach based on religious beliefs (The Barna Group). Different approaches to establishing in-/out-group membership significantly change the size of this religious sub-group. “Asking people if they consider themselves to be evangelicals produces a comparatively large number: 38% of the population accepts that label” (Barna 2007). In contrast, “categorizing people as evangelicals

whether they consider themselves accurately described by that label or not” based on their religious beliefs yields “a much smaller figure: just 8% of the adult population in 2006 fit this criteria” (Barna 2007). The two approaches for identifying these conservative Protestants translate into estimations ranging from 84 million adults to 18 million in U.S. society. The religious belief-based approach largely identifies the same individuals included in the religious affiliation or organizational self-identification method. Nearly 9 in 10 (86 percent) categorized by their religious beliefs also self-identify as evangelicals, while “just one out of every five self-proclaimed evangelicals (19%)” qualify as evangelical based on their expressed agreement with traditional theological tenets of U.S. evangelical Christian (Barna 2007).

These variable definitions of evangelicals within U.S. society inform the political significance of the identified religious bases of public support for environmental policy. The religious affiliation or self-report approach encompasses a larger proportion of potential and likely voters. Although the religious belief approach yields a much smaller contingent, it tends to include more politically active evangelical Christians and those who actually vote at higher rates. These are the highly religious conservative Protestant citizens described as “The Base” that elected, and re-elected, Republican candidate George W. Bush in the 2000 and 2004 U.S. presidential elections. Participants in this case study illustrate the dynamics of religion’s role in public environmental concern about climate change within this highly religious, politically active, social group to the extent they are similar to other members of U.S. evangelicalism.

The Pew Forum on Religion & Public Life offers a national social and demographic portrait of people attending evangelical churches through its Religious Landscape Survey based on the religious affiliation and self-report approach (Pew 2007). Overall, case study participants reflect the structural characteristics of others among the general U.S. population attending evangelical churches except in their educational backgrounds, income distribution, and political party affiliation. A slight majority (53%) of all U.S. evangelical church members are female. More than 8 in 10 (81%) identify as non-Hispanic whites. Nationally, 17 percent are emergent adults or younger than 30 years old compared to the 10 percent of case study participants 34 years and younger. Nearly 4 in 10 (39 percent) of all members of evangelical churches are 30 to 49 years and almost half (45%) are 50 years and older (Pew 2008a).

The starkest difference between Ohio evangelical Christians interviewed in this case study and the national U.S. population of evangelical church members appears in their

educational backgrounds. Nationally, only 20 percent are college graduates or have post-graduate education compared to the 85 percent of participants' with similar backgrounds. Overall income distribution also is reversed with a majority (58%) of all members of evangelical Protestant churches having incomes less than \$50,000 (Pew 2008a). Nationally, only 50 percent of members of evangelical churches declare their political party affiliation as Republican or leaning Republican. Nearly the same number (52%) identifies their political views and ideology as conservative. Slightly more than a third (35%) of all members of U.S. evangelical churches believe "stricter environmental laws and regulations cost too many jobs and hurt the economy", while 54 percent think they "are worth the cost" (Pew 2008b).

The Barna Group also provides another national demographic and political profile of evangelicals (Barna 2007). Individuals categorized as evangelicals using their religious belief approach are predominantly white (76%) and 31 percent are 60 years and older. Almost 4 in 10 (39%) have graduated from college and they have an average income just over \$49,000. Politically, 65 percent of belief-defined evangelicals say they mostly are conservative on social and political matters. A majority (51%) are registered to vote as Republican. Religiously, individuals categorized with this approach are 27 percent more likely than self-identified evangelicals to agree the Bible is totally accurate in all its teachings, 60 percent more likely to believe that Satan is real, 42 percent more likely to cite their faith in God as the top priority in their life, and 46 percent more likely to say they have a personal responsibility to share their religious beliefs with others. Belief-defined evangelicals also are 40 percent more likely to read their Bible during the week and 31 percent more likely to attend church during a typical week (Barna 2007). Case study participants largely mirror individuals categorized as evangelical with this approach, including in their religious beliefs and behaviors. The Ohio evangelical Christians this research describes are more likely to be white, have a college degree, and vote Republican.

Signs that participants' profiled in this dissertation are not anomalies among Ohio residents identified as evangelicals appear in other studies of environmental concern and religion that focus on support for increased regulations with regards to environmental problems and climate change. In an investigation revealing a mixed influence of religion on peoples' concern for animal welfare, 17 percent of respondents in both state and national samples were identified as evangelical Protestant by their indicated religious preference and denomination. These individuals who more frequently attend church are least concerned about and give less

importance to animal welfare in comparison with other religious and non-religious subgroups, and are least supportive of new regulations to improve them in the food production industry (Deemer and Lobao 2011).

The opposition of these Ohio religious conservatives to environmental regulations extends to climate policy. Relying on national-level data describing self-identified Protestants from the 2000 Religion and Politics Survey (Wuthnow 2000) for state-level comparisons, and using a survey case study of Ohio evangelical Protestant clergy, Djupe and Olsen (2010) find evangelical Protestant religious denominations and local churches “are vast communication networks that can promote policy diffusion, but typically do not” with respect to environmental issues. They assess the extent national religious organizations and their localized contexts foster public support for public policy for environmental problems such as climate change. “Those with higher educational attainment are less likely to hear [an environmental] sermon when they live in areas with high concentrations of evangelicals” (Djupe and Olson 2010). As I present in this dissertation, participants (Ohio evangelicals living in the greater Dayton area) are highly educated, committed Republicans, who overall do not see their local church as a place for discussions of climate change and the environment. They reflect both the observed national tendency “that Protestant adherents essentially do not support more political advocacy efforts in their state” by their religious denominations on environmental protection, and that statewide Ohio respondents in Protestant denominations are among the second least supportive of more state-level and environmental activity (Djupe and Olson 2010).

The findings in this case study reflect Djupe and Olson’s observation of the “tendency for more educated, and hence more Republican, citizens to attend more conservative churches (other factors equal)...in evangelical states, where highly educated citizens are much more likely to attend conservative churches and where environmental activism is less likely in the first place.” Hardly any participants report hearing their pastors or church leaders discuss the environment or climate change, the relationship of their faith (religious beliefs) to it, and political or policy positions on these topics. Among those attending religious services at least a few times a year and members of their place of worship, this near zero report rate compares to the between 19 and 23 percent of Ohio residents who report hearing a sermon on the environment, regardless of its focus and pro- or anti-environmental stance (Djupe and Olson 2010). Nationally, 59 percent of Protestants (such as Baptist, Methodist, Presbyterian,

Lutheran), 63 percent of Republicans, 60 percent of those attending church more than once a week, and 59 percent of college graduates report not hearing a sermon about the environment at their place of worship (Wuthnow 2000).

This silence in participants' local churches appears despite the N.A.E.'s highly publicized statements on the environment, climate change, and the spiritual importance of evangelical Christians' to "care for creation" (N.A.E. 2004; N.A.E. 2007). Participants' pastors may hold views similar to other Ohio evangelical Protestant clergy who do not think global warming is a vitally important political issue (59%), believe it is not a real problem because it is a hoax (41%), do not support the government devoting more resources to combat it (71%), believe it is not an appropriate problem for congregations to address (35%), do not believe it is an important component of "creation care" (59%), are not familiar with the N.A.E.'s statements addressing global warming (76%), and do not think their denomination has taken a position on it and environmental stewardship (87%). Overall, "evangelicals are less likely to speak out on the environment in Ohio." With respect to actual behavior related to environmental concern or climate change based on participants' reports, their church leaders stand with other Ohio evangelical Protestant pastors—none of whom say they hosted a show or movie screening about global warming nor spoke (very often or often) on global warming and environmental stewardship in Fall 2006 (Djupe and Olson 2010).

Participants in this case study are also comparable with respondents in another Djupe study on evangelical Christians and climate change communication based on national sample. Djupe and Gwiasada (2010) examine the influence that social identity and group-relevant decision-making process cues (thoughtful prayer, Scriptural reflection) from evangelical elites have on lay members of the public's agreement that "The U.S. government needs to do more to address the issue of global warming." They specifically examine its effect with white evangelicals' identified using a self-report religious affiliation method that does not distinguish between "born again" and evangelical Christians (a distinction The Barna Group considers consequential). In their experimental design, they explore the variability of individuals' responses to varying degrees of information about former NAE vice-President Reverend Richard Cizik's change of mind about the spiritual imperative (religious belief basis) for being concerned about climate change. "By themselves, receiving either the source or process cue leads to lower support for addressing global warming. But, when receiving both together (e.g. Mr. Cizik is an

evangelical who has engaged in thoughtful prayer with others), evangelicals increase their support for addressing global warming.” Despite these signs of shifting public environmental concern about climate change among conservative Protestant religious segments of U.S. society, however, “there is a portion of the evangelical community that may be resistant to these efforts—those who deny the importance of environmental problems and those who only receive a sound bite from evangelical leaders on the issue, not to mention those who receive messages directly antagonistic to a pro-environmental message” (Djupe and Gwiasda 2010). Case study participants, to a large extent, appear comrades with these believers based on their expressed evaluations that the effects of climate change are not a concern of much importance to them or something they feel necessary to respond to—even when they believe it is happening and human activity contributes to it.

The closest example of existing research demographically similar by comparison to the Ohio evangelical Christians participating in this case study comes from a previous investigation into conservative Christians’ views on climate change who live in the Dallas, Texas area (Carr 2010). It includes fewer non-pastor or church leader participants (27 respondents) attending varying sized evangelical Protestant churches. Among all Texas conservative Christians, including pastors (36 total respondents), they spanned a similar age range with roughly similar distribution to the Ohio participants profiled in this case study. Texas respondents had similar educational attainment with 86 percent graduating college or having further advanced degrees. They are not as uniform in political ideology and behavior as Ohio participants, though they predominantly affiliate with the Republican Party (75%) and identify as conservative (75%). Carr identifies five different stances toward climate change among the Texas respondents he interviews: skepticism it exists at all; and overall beliefs that it is a natural phenomenon; that it is happening and humans “are driving these changes”; that it “exists and humans have a limited impact”; or that climate change is happening and “humans play some role”, but respondents are “unwilling to say how much impact humans have” (Carr 2010).

Among the Texas conservative Christians, 11 percent (4 individuals) “were doubtful climate change was occurring at all.” Another 33 percent (12 respondents) “expressed some variation of the opinion that cycles in the earth’s climate do exist, are completely natural, and are not impacted by humans.” Eleven percent (4 respondents) “were undecided, stating they were unsure if climate change was happening and if so whether or not humans were playing any

role.” Contrasting these respondents, and similar to Ohio evangelicals described as Believers in this case study, 39 percent (14 respondents) “said climate change is most likely happening, and humans most likely have some impacts, but the exact relationship is unclear.” Finally, only Texas two respondents “felt certain that climate change was happening and that humans were completely responsible for the phenomenon” (Carr 2010). One key methodological difference likely accounts for the different proportions of Texas and Ohio conservative Protestants’ who believe, deny, or are unsure about whether anthropogenic climate change is happening. In this case study I use purposive sampling to recruit self-identified evangelical Christians without regard to their overall stance toward climate change. Carr (2010) adopts this sampling technique “to capture the range of views that exists within the designated population with regards to climate by intentionally including diverse participants from various points along the theological conservatism spectrum.”

Two national level survey projects further contextualize this case study of evangelical Christians’ perceptions of climate change. The Pew Research Center for the People and the Press tracks longitudinal variations in the U.S. public’s climate change beliefs, concerns, or related aspects and reports them with respect to standard demographic characteristics (social bases) such as political affiliation, race, and religion. This includes white evangelicals, essentially the religious segment of U.S. society this case study profiles. Pew assesses respondents’ basic scientific beliefs about anthropogenic global climate change. In the April 2008 assessment closest to, and preceding, when I interviewed Ohio participants, 18 percent of all Americans believed there was solid evidence the earth was warming because of natural patterns and an additional 21 percent did not believe any solid evidence existed for global warming. In terms of various aspects of case study participants’ demographic profile, 16 and 33 percent of white evangelical Protestants; 26 and 25 percent of those attending church more than once a week; 16 and 42 percent of self-identified Republicans; and 15 and 25 percent of those living in the Midwest, respectively, expressed these same views. Among Republican college graduates, 21 percent believe there is solid evidence warming temperatures are naturally caused and 43 percent believe there is no solid evidence the earth is warming (Pew 2009b).

Pew also gauges U.S. citizens’ evaluation of how serious a problem is climate change. In April 2008, a total of 24 percent of Americans felt global warming was not too serious a problem (13%) or not a problem at all (11%). This compares nationally to 38 percent of self-identified

white evangelical Protestants who expressed the same attitude (19% and 19% respectively). Among all Americans, those attending church more than once a week (18% and 14%) and living in the Midwest (15% and 13%) were less likely to express minimal to no concern. Nationally, a majority (54%) of self-identified conservative Republicans were the most likely among sub-groups in U.S. society to say global warming was not to serious a problem (27%) or not one at all (27%). Republican-identifying men (54%), women (40%), 18 to 49 year olds (48%), those 50 years and older (46%), and college graduates (46%) are on average, two to five times more likely to not be as concerned about global warming as Independents or Democrats (Pew 2009b).

Another ongoing national assessment of U.S. public understanding and opinion about anthropogenic climate change offers further comparison to this case study's Ohio evangelical Christian participants (Yale 2013). The Yale Project on Climate Change Communication (YPCCC) categorizes respondents into six audience segments or ideal types through four distinct constructs assessing individuals' global warming beliefs, involvement with it, public policy preferences, and behaviors. One of YPCCC's first reports applying this approach to U.S. public concern about climate change came from a nationally representative survey conducted in September and October of 2008 (Leiserowitz, Maibach, and Roser-Renouf 2009). YPCCC's audience segmentation approach distinguishes American adults into six groups (Alarmed, Concerned, Cautious, Disengaged, Doubtful, and Dismissive) based on statistical analysis of respondents' climate change beliefs, expressed concern about it, and motivation for responding to it. The Fall 2008 survey identifies the 30 percent of respondents with the lowest belief in global warming, least concern about it, and least motivated to address it as Disengaged (12%), Doubtful (11%), and Dismissive (7%) (Leiserowitz, Maibach, and Roser-Renouf 2009). Below I briefly offer details for the demographic and social characteristics of the least concerned segments of U.S. society identified by YPCCC that specifically relate to the predominant profile of this case study's Ohio participants: white, conservative Republican, evangelical Christians. Overall, "The less concerned segments are more politically conservative, hold anti-egalitarian and strongly individualistic values, and are more likely to be evangelical with strongly traditional religious beliefs" (Leiserowitz, Maibach, and Roser-Renouf 2009).

The Dismissive (7% of American adults) are "more likely than average to be high income, well-educated, white men"; "much more likely to be very conservative Republicans"; "hold strongly traditional religious beliefs, and are the segment most likely to be evangelical Christian.

They strongly endorse individualistic values, opposing any form of government intervention, anti-egalitarian, and almost universally prefer economic growth over environmental protection.” A majority (52%) of Dismissive’ “earn over \$60K annually” and “88 percent believe that people should be allowed to make as much money they can.” They include the “highest proportion (95%) of registered voters of the six segments.” With respect to Protestant conservative Christian religious beliefs, fewer than 1 in 4 (23%) Dismissive believe in human evolution and “almost two-thirds believe the world was created in six days (62%).” In terms of religious affiliation and participation, they “report by far the highest rate of religious attendance: over half attend services weekly or more often”; “over half describe themselves as ‘born again’ or Evangelical (55%)”; and “they are most likely to be Protestant (25%) or Baptist (26%).”

The Dismissive “do not trust most sources of information on global warming, including the mainstream news media, and they are more likely than average to turn to conservative news commentators and the Internet.” This highly religious, politically conservative, segment of U.S. society indicates “the least need for more information on global warming of any of the segments”, saying they “do not need any more information (73%), and another 14 percent saying they only need a little more information.” The Dismissive “strongly distrust most sources of information on global warming. Their most trusted sources of information are their family and friends.” Scientists “are strongly trusted by a mere 8%, while twice as many (16%) say they strongly distrust them.” Almost all Dismissive strongly distrust Al Gore (89%), the mainstream news media (84%), and environmental groups (84%)” (Leiserowitz, Maibach, and Roser-Renouf 2009).

The Doubtful (11% of American adults) are “more likely than average to be male, older, better educated, higher income, and white [and] tend to be Republicans.” They “hold strongly individualistic values, are more likely than average to say they are “born again” or evangelical Christians, and are very likely to prefer economic growth over environmental protection.” Half (50%) “earn \$60K or more annually (compared to the national average of 40%).” “The Doubtful hold moderately high individualistic values, although considerably less so than the Dismissive. Nearly half (47%) strongly believe that people should be allowed to make as much money as they can.” In terms of religious beliefs, “less than a third (31%) believe in human evolution, while 62 percent agree that the world was literally created in six days.” In terms of religious affiliation and participation, “The Doubtful report the second highest rate of religious

attendance (weekly or more). They are also more likely than average to describe themselves as “born again” or evangelical (39%).” With respect to scientific information, “about one-third say they need additional information about global warming before they can firmly make up their minds” and the Doubtful “are also much less likely to trust scientists as sources of information.” However, these members of the public are also “the segment least likely to pay attention to information about global warming: only 1 percent say they pay ‘a lot’ of attention and only 8 percent pay ‘some’ attention.” The Doubtful “are most likely (63%) to trust their own family and friends, or scientists (61%)”, with 9 and 5 percent strongly trusting them, respectively. In contrast, like the Dismissive, they strongly distrust Al Gore (87%), the mainstream news media (84%), and environmental groups (78%)” (Leiserowitz, Maibach, and Roser-Renouf 2009).

Finally, these various national-level portrayals of the structural features of reduced concern among certain segments of American society, and the few qualitative portraits like this case study of the religious dynamics of evangelical Christians’ perceptions of it, correspond with a multi-year analysis (2000 to 2008) of nationally representative data of the social bases of climate change knowledge, concern, and policy support in the U.S. general public (McCright 2009). For the primary social and demographic characteristics that these case study participants most represent, they reflect to varying extents who previous research identify as least likely to associate greater environmental risks with climate change: whites and those with more educational attainment. Case study participants (Ohio evangelical Christians) do not clearly reflect the observed trend that women more likely perceive risks to global warming, and men are less likely. Nor do they contradict the finding that climate change denial is strongest among conservative white males in the U.S. (McCright and Dunlap 2011a) because the selection of case study participants was purposeful (from my researcher perspective) and self-selecting (from the perspective of individuals choosing to participate).

Overall, participants do reflect McCright’s (2009) finding that “respondents with greater education and income report less concern about global warming.” In terms of religious affiliation as evidenced by the single religiosity measure (frequency of church attendance) included in his multiyear analysis, the Ohio evangelical Christians I interviewed also reflect that “more religious adults not only report less climate change concern than their less religious counterparts but they also hold less scientifically accurate beliefs.” Specifically with respect to political identification as measured by political ideology and party affiliation, “greater reported

self-understanding [about global warming] translates into...decreased knowledge and concern for conservatives and Republicans.” The significance and implications of this case study with respect to environmental policy come in part for how they embody the converse of McCright’s analysis of the social bases of public support for climate policy proposals: “greater climate change knowledge and greater climate change concern increases support” for climate policy proposals (McCright 2009).

Implications for Examining Environmental Concern & Religion

Overall, this case study contributes empirically and methodologically to the larger literature on environmental concern and religion through participants’ demographics and its investigation of environmentalism’s social bases among a specific religious segment of U.S. society. It expands work on the role of religious beliefs in conservative Protestants’ perceptions of global environmental problems and their views about environmental policy by profiling evangelical Christians’ views on climate change among the general public. Instead of examining elites’ perspectives (evangelical religious leaders and leaders of the evangelical environmental movement) like previous studies (Goodyear 2011; Kearns 1996; Kearns 1997; Larsen 2001; Nagle 2008; Wardekker, Petersen, and van der Sluijs 2009; Womersley 2002), it explores lay church members’ views on climate change.

This research complements previous quantitative investigations of lay evangelical Christians’ public perceptions of climate change (Swartz 2008) by adopting a qualitative research strategy. It increases more than three-fold the qualitative data describing the views of these conservative Christian believers from the pews (non-pastors) about this environmental problem with 52 participants compared to 27 respondents (Carr 2010). Other similar studies taking qualitative approaches with lay evangelical Protestant believers and non-elite members of the public largely rely on focus groups (Veldman 2013; Wilkinson 2010; Wilkinson 2012), making it difficult to isolate the influences of similar others in small group settings and increasing possible social desirability bias in individuals’ responses. This study avoids or reduces these possible social influences by employing in-depth, one-on-one interviews with participants.

This case study also broadens the geographic scope of qualitative evidence into a Midwestern region by presenting Ohio evangelical Christians for comparison to similar religious adherents in Texas (Carr 2010), Florida (Veldman 2013), the Southeast U.S (Wilkinson 2012), and nationally (Swartz 2008). It also features a sub-group (nearly three-quarters of participants) who

attend large, mega-churches. Other methodologically similar qualitative studies based on face-to-face interviews include a broad range of orientations toward climate change and lay conservative Christians' responses to it (Carr 2010). This study features a narrower focus, deeply exploring the views of evangelicals' who overall are less concerned about this environmental problem and perceive less of a need to respond personally or collectively address it. It extensively describes how they use religious beliefs when constructing their perceptions of this global ecological condition, whether they believe anthropogenic climate change is happening or not.

Human perception of ecological conditions is contingent proximally on the interaction of a person's understanding of biophysical properties and the structural or cultural forces impinging on that understanding. Individuals act in the world based on the meanings emerging, relevant, and available to them from this interaction (Berger and Luckmann 1966; Schutz 1967). How do individuals come to perceive of an environmental condition as a crucial problem, particularly ecological phenomenon such as global climate change that are ambiguous in nature and susceptible to conflicting interpretations? Public understandings about them "have their being in a process of collective definition...[that] determines whether social problems will arise, whether they become legitimated..how they come to be addressed in official policy, and how they are reconstituted in putting planned action into effect" (Blumer 1971). What knowledge or cultural resources do religious people use when constructing perceptions of global environmental problems?

When assessing social and environmental problems, people rely on salient cultural resources (Emerson, Smith, and Sikkink 1999) and knowledge they deem relevant (Kempton, Boster, and Hartley 1996). The NEP scale is a frequent measure of individuals' environmental concern its assumed cultural foundations. Designed to assess five "facets" of individuals' ecological paradigms, it includes multiple measures that tap peoples' conception of the inherent nature of Earth and its ecosystems, the relationship between humans and the environment, and the significance of the impacts of human activity on the natural world. "Mental schema" are cultural resources or sets of beliefs obtained in one knowledge domain that people transpose and apply to understand phenomena in another knowledge domain (REF Sewell).

Among the Ohio evangelical Christians profiled in this case study, religion informs participants' beliefs about these aspects of an ecological paradigm. In most cases, their

descriptions of what they believe reflect literalist theological interpretations, whether they believe anthropogenic global climate change is happening or they deny it. Analysts frequently use biblical literalism as both proxy for “dominion” beliefs or a direct measure of religion when examining its influence on environmental concern. Findings on its association however, are mixed and inconclusive. This is partly a methodological artifact resulting from not distinguishing environmental behaviors from corresponding beliefs, attitudes, or intentions. In this case study of evangelical Christians’ perceptions of climate change, participants’ expressions of their religious beliefs reflect examples of literalist interpretations of the Bible. Would a Biblical Environmental Paradigm (BEP) scale improve assessment of religion’s influence on conservative Protestants’ environmental concern? How would it correspond to assessments of evangelical Christians’ NEP?

Implications of Findings for Future Research

The findings from this research highlight three important intersections of religion with environmental concern, environmental policy, and environmental problems arising in modern societies. The first major intersection highlights how religion manifests in the environmental concern of conservative Protestants about large-scale ecological conditions. Four of the six religious themes identified (Creation beliefs, Sin beliefs, Anti-evolution, End Times) in Ohio evangelical Christians’ perceptions of anthropogenic climate change reflect their literalist interpretations of Biblical texts. The emergence of these themes in the way participants’ express them in their constructions of their climate change knowledge, evaluation of it as a problem, and views about responding to it suggest biblical literalism plays a role in their perceptions and concern for climate change. It appears a significant religious mental schema they use to make sense of large-scale ecological phenomena, and especially so with a global environmental problem such as climate change. This finding suggests the murky, conflicting, sometimes spurious evidence for biblical literalism in highly religious peoples’ environmental concern may stem in part from how its relevance to and use by conservative Protestants varies according to the environmental problem they are considering.

The second important consideration highlighted by case study findings is the intersection between religion and environmental policy, specifically with respect to the concept of stewardship. Whether promoted solely as biblical stewardship of natural resources or within a framework of “creation care”, non-religious elements appear in participants’ discussion of

their religious rationale and understanding of it. These elements are both barriers and potential “bridges” to efforts at expanding its application to climate change among conservative Protestants. One barrier is the anthropocentric and utilitarian values underlying participants’ constructions of what stewardship means to them. Another more significant barrier is their preferential application of it primarily to personal pro-environmental behaviors in their everyday lives that reflects white conservative Protestants’ strong individualistic, anti-structuralist disposition. In contrast, two other non-religious elements may function as potential cultural pathways for expanding their religious-based environmental concern for global environmental problems. Although superficially perceived as a barrier, the repeated emphasis by participants on personal responsibility could serve this function with respect to climate change to the extent engaging in individual actions for addressing it highlight this. Another possible “bridge” is the less frequent constructions by participants of the Earth as a “gift”.

What is apparent in these Ohio evangelical Christians’ discussions of climate change is that religion functions in complicated ways often missed by quantitative investigations. Few have recognized or reconciled how competing religious influences inform public support for, or opposition to, environmental policy among highly religious segments of U.S. society, particularly among conservative Protestants. Yet, participants demonstrate their religious construction of stewardship of the natural environment fosters some expressions of environmental concern and inhibits others. Previous work reveals white conservative Protestants’ environmental concern is mediated by non-religious factors such as distrust in government (political) or science, but quantitative inquiries are limited in explaining how or why this occurs. For example, among this case study’s participants their expressed lack of confidence in scientists among evangelical Christians appears an indirect result of their biblical literalism, a religious belief.

A starker paradox, and more direct role of religion emerges when comparing participants’ beliefs about anthropogenic climate change with their perceptions of it as a (not very concerning) environmental problem. Both individuals categorized as Believers and Deniers express this assessment. What is intriguing are those who believe climate change is happening, that human activity contributes to it, but then conclude it is not a serious environmental problem. Whereas most others who are not religious or political conservatives reach a different conclusion based on the same perceptions and beliefs, certain factors short-circuit this scientific reasoning among the Ohio evangelicals I interviewed. Previous quantitative statistical analysis

demonstrates stronger conservative political identification by white Protestants reduces their perceived seriousness of environmental problems (Sherkat and Ellison 2007). This is relevant in this case study as almost all participants express a conservative political identification. However, individuals' discussion of how and why they reason toward not being very concerned about climate change, even when they believe it is happening and human activity contributes to it reveals a religious influence. Their explanations show how they use religious beliefs that they apply to their conception of human action and perceptions of personal control with respect to the Earth's atmosphere and climate. Investigating further how both religious and non-religious factors influence the cultural and mental dynamics of conservative Protestants' perceptions of the seriousness of environmental problems is necessary because of their import for individuals' engagement in pro-environmental behaviors and willingness to support environmental policy for addressing them.

The third important highlight from this case study's findings lies at the confluence of religion, public understanding of environmental problems, and social change in modern industrialized societies. Two perennial questions relevant to this case study that nag our reflective species like splinters in our minds are why (and how) do people change their minds about their definitions of reality and what limits exist on human action? These are multidisciplinary questions that philosophers, theologians, and scholars in the natural and social sciences all engage. Sociologists and social theorists also examine them with theoretical concepts such as ideology, alienation, and agency. The two other major religious themes emerging from participants' discussion of their understanding of anthropogenic climate change, their evaluation of it as an environmental problem, and their views about responding to it amplify this aspect of religion's role. Individuals' religious beliefs about God's involvement in the world (sovereignty) and the "end times" (eschatology) both inform their environmental knowledge. They apply these religious beliefs in their constructions about how ecosystems function and the relationship of humans to them. They also appear in participants' perceptions of the control or efficacy of human action in the natural environment and the effects of their actions in these biophysical contexts.

Closely examining the social influences on the inner dynamics of the perspectives of individual actors such as these Ohio evangelical Christians' about climate change in the spirit of the *verstehen* espoused by Max Weber suggests a metaphor closer to their reality than the

socially constructed distinctions facilitated by quantitative conceptualizations. When the findings from this case study are combined with previous related research, a cultural matrix comprised of elements including non-scientific knowledge, hyper-individualism, and a reduced perception of human agency appears an apt description or heuristic device to understand religion's role in this instance of environmental concern among these conservative Protestants.

Several lines of further research emerge when these major findings from this case study focused on evangelical Christians' perceptions of climate change are combined with prior research on conservative Protestants' inclinations toward the natural world or environmental policy and the larger literature on religion and public environmental concern.

Public "perceptions of climate change are complex, socially constructed phenomena, not straightforward interpretations of scientific findings" (Carr 2010:7; Lowe and Lorenzoni 2007). Another line of ongoing inquiry needed is identifying the specific ways highly religious individuals do use scientific-based knowledge when constructing their perceptions of global environmental problems. This is ongoing in existing interdisciplinary efforts examining public understanding of climate change. Past investigations show U.S. citizens who hold religious values do use pre-existing scientific understandings of other large-scale ecological conditions such as air pollution, ozone depletion, and others to make sense of what climate change is and its relationship to human activity (Kempton et al.). Determining how conservative Protestants' science-based perceptions compare with the general U.S. population would identify what environmental knowledge barriers exist. Specifically, what pre-existing, scientific mental models and schema of previously understood environmental problems do evangelical Christians rely on in their constructions of climate change? Evidence from this case study suggests participants may not differ significantly in the gap between their public understandings and climate scientists'.

When assessing social and ecological conditions as potential problems and the issues appear ambiguous, people tend to turn to *similar* others to aid interpretation. "Subjective norms are positively related to both [information-]seeking and avoidance, which suggests that one's social environment has the potential to strongly influence the way he or she handles climate change information" (Yang and Kahlor 2013). This case study reveals the Ohio evangelical Christians profiled here discuss climate change very infrequently with other Christians and people they interact with regularly in their everyday lives. And none indicate they hear their

pastors or church leaders addressing it. Yet many participants cite they trust certain religious leaders of evangelicalism (James Dobson), conservative media commentators, and use belief in evolution as a litmus test for who to trust for information about climate change. Almost all participants discuss extensively their reasons for the perceptions of climate change, offering religious, political, and other rationales for their views based on knowledge gained from their everyday life experiences. What are the structural, social, and cultural origins of these conservative Protestants' constructions of their climate change perceptions?

Individuals' vary in their capacity to define biophysical reality as an environmental problem. Social actors' power to construct definitions of reality and disseminate meanings of present or future ecological conditions comes from the cultural significance of their structural positions in society (Freudenburg 2005). Public understanding of social and environmental problems, and subsequent citizen participation in movements addressing them, reflect forms of ideologically, and religiously, structured social action (Zald 2000). In the absence of discussion about it by church leaders or with other Christians they interact with regularly, where do highly religious people and conservative Protestants like participants in this case study obtain their understandings and mental models or schema that they use their religious beliefs to construct? Hints of possible sources appear in participants' identification of the trust they give certain religious elites in evangelicalism, politically commentators in conservative media, wide disdain climate protection advocate and former Vice-President Al Gore receives, and the disregard given to scientific understandings provided by climate scientists.

One further direction of research into evangelical Christians' perceptions of climate change is not toward clarifying the demographic boundaries of its social bases. Instead, a deeper exploration of the structural and cultural supports of conservative Protestants' constructions of climate change independent of their religious framing would reveal linkages between their public understandings and the constructions of climate change generated and disbursed by skeptic think tanks, business, and industrial interests opposing environmental regulations and climate policy to address it. What is the extent that conservative Protestants' perceptions of this global environmental problem mirror fossil-fuel corporations' constructions, even if these highly religious individuals personally frame and describe them with their theological doctrines? Examining this kind of research question about the human dimensions of climate change and

cultural foundations of global environmental problems requires continuing reliance qualitative research strategies and a social constructionist approach to social problems.

Finally, locating the original source of climate change denial remains a holy grail for scholars and environmental activists alike. Searching for this reflects the core conundrum and challenge facing the modern risk society and efforts to use public policy to solve the social and environmental problems it generates. A question of this importance with consequences as significant as they are in the case of anthropogenic global climate change requires applying the full array of sociological perspectives to examining it. Some highlight how the origins of climate denial are social, structural, and the outcome of obfuscation by powerful social actors that mediate how individuals' and the general public understands this global ecological phenomenon (Williams and Frey). Critical theory and other critical-realist approaches offer other potential insights on climate change denial's possible interactional and biophysical origins. Both social phenomenological and evolutionary barriers may exist to meaningful social change for addressing environmental problems with effective policy solutions (Schutz 1964; Williams 1998; Williams 2003; Williams and Parkman 2003). To the extent this is true, social theories of society-environment interactions should account for and examine them further.

Broadening social constructionism's theoretical focus on social problems includes increasing analytic "practices that link public interpretative structures to aspects of everyday realities" (Holstein and Miller 1993:152). A wider heuristic theoretical framework could account for these multiple analytic levels (biophysical, interactional, structural). It would map influences on individuals' perceptions of ecological phenomenon ranging from internal to external forces. Such a venture could offer a possible means to synchronize and integrate the increasing multi-disciplinary social scientific understandings emerging as partial, tentative answers to questions about the human dimensions of what many take as the greatest potential threat to anthropological and non-human species' life on Earth.

This dissertation moves further in this direction. It examines the role of religion in the milieu of U.S. society and its influence within the cultural matrices of conservative Protestants with respect to public environmental concern using the theoretical framework of an applied sociology of knowledge (Berger 1967; Berger and Luckmann 1966; Hirschman 1991; Mannheim 2002). The case study's purpose was exploring the extent Ohio evangelical Christians' religious beliefs inform their constructions of their perceptions of large-scale ecological conditions. The

goal was to understand better the structural constraints religion places on public support for policy addressing global environmental problems, specifically with respect to the interaction between human perception and the agency required to respond to them.

I accomplish this by describing the predominant ways in which participants' apply their religious cultural resources or mental schema (Sewell Jr. 1992; Swidler 1986) to describe their knowledge about, evaluation of, and response toward anthropogenic climate change. The case study findings offer several insights to those interested in these aspects of the human dimensions of this global environmental problem. They contribute to scholarship on environmental concern and religion by offering a rich description of how highly religious people such as these participants draw on and apply non-scientific knowledge (theology) to understand scientific phenomenon. Specifically, for example, it demonstrates that while quantitative analyses find biblical literalism intermittently associated with various expressions of conservative Protestants' environmental concern, it appears highly relevant to these white, Republican, Ohio evangelical Christians' perceptions of large-scale ecological conditions such as global climate change.

Case study findings also reveal a potential dynamic religious influence on these conservative Protestants' inclination toward supporting environmental policy for mitigating human impacts on the Earth's atmosphere. Participants' religious-based construction of stewardship appears to give preference only to individual, personal pro-environmental behaviors. The predominance of the value of personal responsibility may offer common ground for expanding the social bases of public support for individuals taking action in their everyday lives to the extent these highly religious people perceive its necessity and opportunities for doing so with respect to climate change.

This possibility, however, is counter-balanced by another insight for those who communicate or interact with this highly religious segment of U.S. society about this global environmental problem. Another significant religious influence attenuates participants' evaluation of climate change as an environmental problem and their willingness to respond to it besides various non-religious elements (political conservatism, distrust in government and science). Ohio evangelical Christians' religious beliefs about how God is involved in their everyday lives, in control of events on Earth, and has a plan for the future (end) of the world reduces their attitudinal concern (worry) about climate change's impacts and constrains their

perceptions of their personal capacities to address it. This reflects a core conservative Christian religious belief about the sovereignty of God that may impede acceptance of even theological or spiritual calls to greater “creation care” among these conservative Protestants.

In sum, this case study provides a rich description of the ways these white, politically conservative (Republican), highly educated, and comparatively middle to upper-income Ohio evangelical Christians rely on and use their religious beliefs to construct their perceptions of anthropogenic global climate change. It deepens understanding for why they express their views in the survey data identifying them. It brings balance to other qualitative investigations of evangelical religious and environmental movement leaders’ perspectives on environmental concern and climate change. And it augments and further contextualizes others’ quantitative analyses of lay evangelical Christians’ understanding, concern, and response to this global environmental problem.

Combined with the strictures imposed on modern societies from the “glass cage” of the alienation wrought on individuals that reduces the likelihood of public policy successfully solving problems challenging human society (Dahms 2005), having more social scientifically obtained insights like these is necessary to increase the imaginative possibilities for human agency—even if the immediate path forward remains unknown. Examining the intersection of religion, human agency, and environmental action in terms of its religious constraints and individuals’ reliance on pragmatic, non-rational knowledge obtained from their everyday life experiences is one concrete step toward addressing a contemporary challenge like anthropogenic global climate change.

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APPENDIX

Appendix 2.1: Summary of Studies on Religion and Environmental Concern

Study	Sample	Religion Measures	Environmental Concern Measures
Biel & Nilsson 2005	Sweden (ISSP 2000)	Affiliation-religious, Belief in God, Religious status	Environmental hazard and risk beliefs
Black 1997	Australia (World Values Survey 1996)	Affiliation-denomination, Attitude toward Bible, Church attendance, Church member, Confidence in church, Importance of God in life (salience), Religious beliefs	Confidence in Green movement, Mastery-over-nature orientation, Environmental group member, Behaviors
Boyd 1999	U.S. (General Social Survey 1993)	Biblical literalism, Belief in God, Church attendance, Fundamentalist tradition, Graceful image of God, Prayer frequency	Environmental hazard attitudes, Willingness to spend money for environment, Behaviors
Brehm & Eisenhaur 2006	U.S. (Utah & Wyoming)	Affiliation-religious	Environmental quality attitudes, Environmental protection policy, Local use and environmental issue beliefs, Population growth, Natural landscape attitude
Carr 2010 (PhD)	U.S. (Dallas, TX, QUAL)	Biblical inerrancy, End Times beliefs, Evangelism, Affiliation-religious (denomination), Self-identification-religious, Sin, Sovereignty of God, Stewardship	Climate change cause beliefs, Climate change concern
Deemer & Lobao 2011	U.S. (Ohio)	Church attendance, Influence of religious beliefs on animal welfare views, Religious preference (tradition)	Animal agricultural concern, Consumer behavior preferences, Dominion orientation, Farm-animal welfare attitude, Human welfare concern, Livestock practices
Dekker, Ester & Nas 1997	19 nation, multi-continent (ISSP 1993)	Denomination-Christian adherents, Definition of nature	Need economic growth for environmental protection, Postmaterialist value orientation, Science will solve environmental problems belief, Willingness to pay for environment

Study	Sample	Religion Measures	Environmental Concern Measures
Dietz, Stern & Guagnano 1998	U.S (General Social Survey 1993)	Denomination-religious , Self-identified religiosity strength	Consequences of environmental problems beliefs, Economic growth vs. environment, Fragility of nature, Postmaterialism, Willingness to sacrifice for environmental quality, Behavior-consumer, Behavior-political or collective
Djupe & Gwiasda 2010	U.S. (Knowledge Networks panel)	Evangelical source of NAE global warming position, Evangelical process for taking NAE global warming position, Feelings toward and Self-identity as Evangelical	Global warming importance, Need to address global warming, Self-identify as environmentalist
Djupe & Olson 2010	U.S. (Religion & Politics survey 2000) & OH and SC	Church attendance, Religious tradition, Self-identify religious conservatism (ideology), State religious tradition adherence	Heard environmental sermon
Djupe & Hunt 2009	U.S. Clergy & congregation members(Deemer and Lobao 2011; Djupe and Olson 2010)	Biblical literalism, Church attendance, Denomination loyalty, Prayer, Religious salience, Religious TV use, Religious participation, Sectarianism, Social sources of information in church	Church adult environmental education, Clergy environmental speech, Economy vs. environmental protection, Importance of environmental problems, Perceived clergy environmental speech, Opinion distance from clergy environmental speech
Eckberg & Blocker 1996	U.S. (General Social Survey 1993)	Common religiosity, Religious participation, Sectarianism (Belief in Bible, Belief God controls important life events, Enjoy gospel music, Evolution belief, Fundamentalist, Moral rigidity, Oppose banning school prayer, Religious graciousness)	Culturally green, Human actions hurt nature, Humans take precedence over environment, Nature sacred, Pollution concern, Supports animal rights, Support government regulation to protect environment, Willing to pay for environment, Behaviors
Eckberg & Blocker 1989	U.S. (Tulsa, OK)	Affiliation-religious, Biblical literalism, Importance of religion	Economy vs. environment, Pollution concern (air, water, waste disposal), Protect environment

Study	Sample	Religion Measures	Environmental Concern Measures
Feldman & Moseley 2003	U.S. (Appalachia region)	Religious environmental ethic	Environmental reform goals and strategies
Foltz 2000	U.S. (Utah & West region)	Religious environmental values	Environmental discourse, ethic, and actions
Greeley 1993	U.S. (General Social survey 1988)	Affiliation-religious, Belief in God, Church attendance, Biblical literalism, Graceful image of God, Moral Rigidity, Religious tradition	Willingness to spend money on environment
Guth, Green, Kellstedt & Smidt 1995	U.S. (multi-sample)	Born Again, Church attendance, Conservative eschatology (Biblical literalism, End Times, Read Bible), Religious salience, Religious tradition	Economy vs. environment, Environmental protection priority, Environmental spending, Proximity to Sierra Club
Guth, Kellstedt, Smidt & Green 1993	U.S. (Religious Activists)	Born Again, Christian orthodoxy, Church attendance, Fundamentalism (Biblical literalism, End Times, Religious separatism,), Fundamentalist, Religious involvement, Religious tradition, Revivalism, Religion importance, Spiritual life	Environment most important problem, Environmental protection priority, More environment protection needed, Postmaterialist Values
Hand & Van Liere 1984	U.S. (Washington State)	Commitment to Judeo-Christian denomination (Church attendance), Religious preference (major tradition)	Environmental beliefs (Pollution control, Population control, Resource conservation), Increase environmental spending, Mastery-over-nature orientation (NEP, Dominion beliefs), Support for environmental regulation
Hayes & Marangudakis 2001	Great Britain (BSAS 1993)	Dominion beliefs, Religious tradition, Theological conviction	Attitude towards Nature
Hayes & Marangudakis 2000	U.S., Canada, Great Britain, New Zealand (ISSP 1993)	Religious commitment (Belief in God, Church attendance), Religious tradition	Human negative impact on nature, Willingness to pay for environmental protection, Behavior

Study	Sample	Religion Measures	Environmental Concern Measures
Holland & Carter 2005	U.S. (Georgia) church ministers	Dominion or Stewardship view, Knowledge of denominational environmental statement, Preach environmental topic, Use environmental materials to teach congregation, Use denomination environmental resource packet	Church members belong to environmental organization, Church youth environmental programs, Congregation recycles, Minister personal environmental activism (Environmental organization member)
Hornsby-Smith & Procter 1995	14 European countries (EVS 1990)	Religiosity, Roman Catholic identity, Roman Catholic national context	Environmental issue concern, Environmental approval, Willingness to pay for environmental protection
Hunter & Toney 2005	U.S (General Social Survey 1993) & Utah (1998)	Self-identification Mormon	Economic growth harms environment, Environmental organization member, Personal environmental commitment, Willing to pay more for environmental protection, Worry about future of environment, Behavior-political environmental activism
Kanagy & Nelsen 1995	U.S. (Gallup/LA Times 1987)	Born again, Church attendance, Personal religious experience, Religious tradition	Economy vs. environment, Increase government spending on environment, Self-identification as environmentalist
Kanagy & Firebaugh 1994	U.S (General Social Survey 1988, 1990)	Church attendance, Fundamentalism, Religion raised in	Spending on improving and protecting environment
Kanagy & Willits 1993	U.S (Pennsylvania)	Church attendance, Affiliation-religious (tradition)	NEP: Balance of nature, Economy vs. environment, Human-environment relationship, Behavior
Kearns 1997	U.S. Religious Env. Groups (QUAL)	Stewardship, Eco-justice, Creation spirituality	Ecological ethics and values
Kearns 1996	U.S. Religious Env. Groups (QUAL)	Stewardship, Eco-justice, Creation spirituality	Ecological ethics and values
Lieberman 2004 (MS)	U.S. Oregon (Eugene-Springfield, QUAL)	Congregational faith-based environmentalism	Environmentalism

Study	Sample	Religion Measures	Environmental Concern Measures
Nooney, et al. 2003	U.S. (North Carolina)	Religious fundamentalism (Affiliation-denomination)	Environmental worldview beliefs (NEP): Man over nature, Limits to growth, Balance of nature; Behavior (Political and personal)
Peterson & Liu 2008	U.S. (Teton Vally, Wyoming)	Affiliation-religious, Religiosity (Church attendance, Prayer, Read Bible)	Environmental worldview (NEP)
Schultz, et al. 2000	14 Western Hemisphere countries	Biblical literalism, Religion importance	Anthropocentric vs. ecocentric worldview, Environmental attitudes (NEP), Behavior
Shaiko 1987	U.S. (Env. Group members)	Affiliation-religious (major tradition)	Mastery-over-Nature orientation
Sherkat & Ellison 2007	U.S. (General Social Survey 1993)	Biblical inerrancy, Biblical literalism, Church attendance, Affiliation-Conservative Protestant, Stewardship	Environmental problem seriousness beliefs, Willingness to sacrifice for environment, Behaviors-private environmental, Behavior-political environmental activism
Shibley & Wiggins 1997	U.S. (NRPE)	Stewardship, Eco-justice	Environmental ethics, Environmental action programs
Smith 2006 (MA)	U.S. (Faith-Based Env. Groups, QUAL)	Faith-based environmental groups	Environmental ethics vs. issue work, Environmental policy advocacy, Secular environmental group collaboration
Smith & Johnson 2010	U.S. (Baylor Religion Survey 2007)	Affiliation-denomination, Self-Identification as Evangelical	Climate change disastrous effects, Environmental beliefs (NEP), Exhaust fossil fuels, Humans will destroy plant and animal life
Swartz 2008 (MA)	U.S. (General Social Survey 2006)	Biblical literalism, Born Again, Church attendance, Evangelism, Religious tradition (Affiliation-denomination)	Climate change effect attitudes, Confidence in science, Informed about global warming belief, Government regulation of industry for environment belief, Willingness to sacrifice for environmental regulations
Tarakeshwar, et al. 2001	U.S. (Clergy, elders & members)	Christian orthodox beliefs, Individual church status, Self-identified theological conservatism, View of Bible belief	Environmental beliefs (Human actions hurt nature, Humans take precedence over environment), Sanctification of nature beliefs, Willingness to sacrifice for environment, Behavior

Study	Sample	Religion Measures	Environmental Concern Measures
Wolkomir, Futreal, et al 1997	U.S. (General public)	Biblical literalism, Dominion belief, Religious salience	Environmental beliefs (Economy vs. environment, Env. crisis exaggerated, Modify environment seldom causes problems), Behavior
Wolkomir, Woodrum, et al. 1997	U.S. (General public)	Biblical literalism, Dominion belief, Religious denomination, Religious salience	Environmental attitudes (Economy vs. environment, Env. crisis exaggerated, Modify environment seldom causes problems), Behavior
Womersley 2002 (PhD)	U.S. (NRPE, QUAL)	Religious environmental group, Self-identity religious, Stewardship	Environmental policy impact
Woodrum & Hoban 1994	U.S (North Carolina)	Biblical literalism, Church attendance, Dominion belief, Religious salience, Support teaching Creationism	Environmental information (knowledge), Concern about nuclear power, Support for government environmental programs
Woodrum & Wolkomir 1997	U.S (General Social Survey 1993)	Affiliation-religious (Salience), Church attendance, Fundamentalism (Denomination)	Concern for environmental risk attitudes, Willingness to pay higher taxes for environmental protection, Behavior-individual env., Behavior-political environmental

Appendix 3.1: Participant Recruitment Materials

Potential Participant Correspondence - First Contact, Invitation to Participate and Refer Others

(via print and electronic e-mail communication)

Greetings,

My name is Aaron Routhe and I am a Ph.D. candidate at the University of Tennessee. As part of my degree requirement, I am interviewing Evangelical Christians living in Dayton, OH about current events. Given the media's interest in Evangelicals, I understand from experience how important differences often exist between what is reported in the news and what people actually believe.

Today many are talking about environmental issues, their possible effects, and what we should do about them. In fact, Evangelical leaders in America debate about what people attending church think about these things. And while the media reports on pastors' and politicians' opinions, few take the time to hear the views of people sitting in the pews.

An information sheet further describing the study and the benefits of your involvement is attached. Your willingness to talk with me is all that is necessary. Special knowledge or strong opinion is not required.

All information you provide is confidential. Your participation is completely voluntary and you may stop at any time

A referral form also is included. Whether you may participate or not, would you be willing to suggest someone else who could help? Please suggest people from different households that: 1) you know well and see on a regular basis, AND 2) who attends an Evangelical church in the Dayton, Ohio area. All participants must be adults 18 years or older.

All contact information is confidential and will only be used to make people aware of this opportunity and determine their interest. You may also pass on the attached forms yourself if you wish.

Please contact me at arouthe@utk.edu or by calling ###-###-#### to schedule a time convenient for you to talk or if you have any questions.

I appreciate your willingness to help. You already devote much time to your family, work, and other personal responsibilities.

I hope you will join with me and help our leaders and policymakers understand the public's views on some of these important issues of our times. I look forward to hearing from you.

Kind regards,

Aaron Routhe
Ph.D Candidate, University of Tennessee

Potential Participant - First E-mail Contact with Interested Individuals

Hi, [NAME],
Thanks for responding!

I'm not sure if [REFERRING PERSON] passed along the information and consent form for the study to you so they are attached. A referral form that you can use to suggest other people who are willing to speak with me is also included. For this study, I am speaking with Evangelical Christians who attend local churches in the Dayton area.

Currently, I am scheduling interviews from Thursday, 14 August through Thursday, 21 August. I will need to interview you in person so I may digitally record our conversation. It will likely take from 1 to 2 hours.

Is there a date and time when you are available on or between these dates? I am available in the mornings, afternoons, and evenings. Possible starting times that are ideal for me are: 9am, 1pm, 4pm, or 6.30pm on any of those days.

We can meet in your home or a quiet room in a public library or cafe. I'm also investigating the possibility of meeting people in select local churches.

Thanks for your willingness to help with this project. I realize you already give much of your time to many other things. I look forward to hearing from you.

Kind regards,
Aaron

Aaron Routhe
PhD Candidate, University of Tennessee

PS. If you would like, you may make your referrals by directly replying to this message and providing the following information. Please suggest people from different households that: 1) you know well and see on a regular basis, AND 2) who attend an Evangelical church in the Dayton, Ohio area. All participants must be adults 18 years or older.

Referral #1: Name, Home phone, Cell phone, E-mail

Potential Participant Correspondence – First E-mail Contact with a Blind Referral

Hi, [NAME]

[REFERRING PERSON] recently gave me your name after we spoke together recently. [S/HE] suggested you may be willing to help me with the work that I'm doing and that I could better understand the things I am interested in by speaking with you.

Here is some information about the research project I am working on to complete my dissertation and fulfill the requirements of my doctoral program with the University of Tennessee. It would be great if you are able to help out. There are two ways you may do this. I've attached two documents with further details.

The first way is to participate in the study. I am interviewing Evangelical Christians living in Dayton, OH about current events reported in the news and discussed by our leaders. Today many are talking about social and environmental issues, and what we should do about them. In fact, Evangelical leaders in America debate about what people attending church think about these things. And while the media reports on pastors' and politicians' opinions, few take the time to hear the views of people sitting in the pews.

An information sheet further describing the study and the benefits of your involvement is attached. Your willingness to talk with me is all that is necessary. Special knowledge or strong opinion is not required.

All information you provide is confidential. Your participation is completely voluntary and you may stop at any time.

Currently, I am scheduling interviews from Saturday, September 20 through Saturday, September 27. I will need to speak with you in person so I may digitally record our conversation. It will likely take from 1-2 hours. If you are willing to speak with me, is there a date and time when you are available on or between these dates? I am available in the mornings, afternoons, and evenings. Possible starting times include: 9am, 1pm, 4pm, or 6.30pm.

We can meet in your home or a quiet room in a public library or cafe such as Panera Bread or Saxby's Coffee shop. Another option could be to meet at your church.

A second way to help with this research is by sharing this opportunity with others. Besides speaking with people like yourself, I am also interested in talking with others in your church who may have different views. A study referral form is attached.

Whether you participate or not, would you be willing to suggest someone else who could help? Please suggest people from different households that: 1) you know well and see on a regular basis, AND 2) who attends an Evangelical church in the Dayton, Ohio area. All participants must be adults 18 years or older.

All contact information is confidential and will only be used to make people aware of this opportunity and determine their interest. You may also pass on the attached forms yourself if you wish.

Please contact me at arouthe@utk.edu or by calling ###-###-#### (office) and ###-###-#### (cell) to schedule a time convenient for you or if you have any questions.

I appreciate your willingness to help. You already devote much time to your family, work, and other personal responsibilities.

I hope you will join with me and help our leaders and policymakers understand the public's views on some of these important issues of our times. I look forward to hearing from you.

Kind regards,
Aaron

Aaron Routhe
Ph.D Candidate, University of Tennessee
###-###-#### (cell)

PS. If you would like, you may make your referrals by directly replying to this message and providing the following information. Please suggest people from different households that: 1) you know well and see on a regular basis, AND 2) who attend an Evangelical church in the Dayton, Ohio area. All participants must be adults 18 years or older.

Referral #1: Name, Home phone, Cell phone, E-mail

Actual Participant Correspondence – Interview Follow Up: Thanks and Request for Referrals
(via electronic e-mail communication)

Hi, [NAME]

Thank you for speaking with me. I appreciate the time you took out of your busy schedule for our meeting. I enjoyed the chance to learn more about you and hear your views. In the past two weeks, I've moved and begun teaching at Houghton College, a Christian college in western New York. I apologize for the delay in following up with you after our conversation.

Please feel free to continue letting others you know who go to local Evangelical churches, and are 18 years or older, aware of this opportunity. I need to speak with at least 25 more people. **I'm currently scheduling interviews from Saturday, Sept. 20 through Saturday, Sept. 27.**

Besides talking with people who may have views similar to your own, I also am interested in hearing from other Evangelical Christians that you interact with on a regular basis who may have different views.

As I mentioned, **the primary qualification for participating is that individuals simply be willing to speak with me.** They do not need to be interested in the topics, know a lot about the subject, or feel they have strong opinions.

Attached are copies of the study information sheet and referral form. Please let me know if you wish me to contact your referrals directly about their interest. Feel free to contact me if you have any additional questions. **Please note my contact phone number listed in earlier information sent to you recently changed.** I can now be reached at the numbers listed below.

Best regards,
Aaron

Aaron Routhe
PhD Candidate, University of Tennessee
###-###-#### (cell)
###-###-#### (office)

Appendix 3.2: Study Information Sheet and Consent Form

Ohio Survey of Evangelicals & Environment

Study Information Sheet

Dear Participant,

My name is Aaron Routhe and I am a Ph.D. candidate at the University of Tennessee. As part of my degree requirement, I am interviewing Christians living in Dayton, OH about current events. Given the media's interest in American Evangelicals, I understand from experience how there is often an important difference between what is reported in the news and what people actually believe.

Today many are talking about environmental issues, their possible effects, and what we should do about them. In fact, Evangelical leaders in America debate about what people attending church think about these things. And while the media reports on pastors' and politicians' opinions, few take the time to hear the views of people sitting in the pews.

I invite you to participate in this study and help me complete my dissertation research. This is an opportunity for churchgoers and citizens to express their own views instead of having others speak for them. Please contact me if you are an adult 18 years or older and are willing to talk with me.

All information you provide is confidential. No reference linking you to the study will be made in verbal or written reports. A pseudonym or number will replace your name. Our conversation will be digitally voice-recorded; you do not need to say anything that you do not want recorded. Various measures also protect your personal information. Written, audio, and electronic files are stored in locked file cabinets or are password-protected. There is no known risk from participating in this study.

Your willingness to talk is all that is necessary. Your personal responses are what are most important. Special knowledge or strong opinion is not required. During our conversation, I will ask about your views and opinions on current events and environmental topics being discussed by others and reported in the news. Interviews average from one to two hours and are scheduled at a time and location convenient to you. This could be your home or a quiet room in a public library or café.

One benefit of this project is that it gives you a voice. Some people have misconceptions about how Christians view environmental topics. Careful study reveals people's opinions are more complex than the stereotypes portrayed in the media. Your help with this study will clearly show religious leaders, politicians, and journalists what Evangelicals in America—in their own words—think about these important matters.

Your **participation is completely voluntary** and you may stop at any time. You may decline to answer any questions you choose during the interview. If you withdraw from the study, any information you provided will be destroyed on your request. The informed consent form you will be asked to sign before we begin the interview is included with this information sheet.

Please **contact me** at arouthe@utk.edu and by calling ###-###-#### (office) or ###-###-#### (cell) to schedule an interview or ask any questions. If you would like to speak with my colleague Dr. Sherry Cable at the University of Tennessee, Knoxville, I will gladly put you in touch with her.

I appreciate your willingness to help. You already devote much time to your family, work, and other personal responsibilities. I hope you will join with me and take this opportunity to help our leaders and policymakers understand the public's views on some of these important issues of our times. I look forward to hearing from you.

Kind regards,

Aaron Routhe
Ph.D Candidate, University of Tennessee

Ohio Survey of Evangelicals & Environment

Participant Informed Consent Form

It is my understanding that by agreeing to participate in the *Ohio Study of Evangelicals and Environment* my rights, welfare, and privacy will be maintained in the following ways:

- ✓ I have had the details of the research project explained to me by the project investigator.
- ✓ I understand the procedures to be used in this study and have been made aware of any possible risk involved.
- ✓ All responses that I give to questions will be kept confidential and made accessible only to the project investigator and faculty advisor.
- ✓ Should the results of this project be published, I will be referred to only by a research pseudonym assigned by the project investigator.
- ✓ In signing this consent form, I have not waived any of my legal rights nor have I released this institution/agency from liability for negligence.

I have been informed of this information in the following forms by the project investigator or an approved representative:

(a) written form _____ [Respondent's initials] AND/OR

(b) verbal form _____ [Respondent's initials]

By signing this form I acknowledge all of my questions were answered to my satisfaction.

If I have further questions or concerns about this study, I may contact the project investigator, Aaron Routhe, by e-mail (arouthe@utk.edu) or by phone 585-567-9478 (office) or ###-###-#### (cell). I may also contact the faculty advisor of this research, Dr. Sherry Cable, at (865) 974-6021 (University of Tennessee office).

I freely and voluntarily agree to participate in this research.

Signature of Volunteer

Date

Signature of Witness

Date

University Research Study

Participant Referral Form

Thank you for making people aware of this chance to share Evangelical Christians' views on important current events and issues reported in the news and discussed by our leaders and politicians. We need your help finding people living in Dayton, OH willing to help finish this study.

There are **only TWO criteria for participating**. Please suggest someone:

1. You know well and see on a regular basis, AND
2. Who attends an Evangelical church in Dayton, Ohio

Instructions

Please provide the name and contact details for one or two people from different households to tell about this opportunity. All participants must be adults age 18 years or older. Use the additional spaces if you would like to suggest others. Please return this form by e-mail to Aaron Routhe (arouthe@utk.edu) or call ###- ###-#### (office) or ###- ###-#### (cell). He will contact your referrals to confirm their willingness to be interviewed and answer any additional questions. You may also share the study consent form with potential participants yourself as well.

Referral #1: Name, Home phone, Cell phone, E-mail

Referral #2: Name, Home phone, Cell phone, E-mail

Referral #3: Name, Home phone, Cell phone, E-mail

Referral #4: Name, Home phone, Cell phone, E-mail

Information for Frequently Asked Questions

- All personal information and interview responses are kept **confidential**.
- Participation in the study is completely **voluntary** and may be stopped at any time.
- Your personal responses to questions during an interview are the most important part of this project. No special knowledge is necessary to successfully contribute to this study.

- Interviews average from one to two hours and are scheduled at your convenience. They may occur in your home or a quiet room in a public library or café.
- This research specifically gives people who attend local churches a voice in the debate about what Evangelicals in America believe about current issues, how they may affect us, and how we should respond to them as individuals and a society.

Questions?

Please contact Aaron Routhe by e-mail (arouthe@utk.edu) or phone ~~###- ###-####~~ (office) or ~~###- ###-####~~ (cell) to schedule an interview or for more information.

Appendix 3.3: Interview Guide Materials
Ohio Survey of Evangelicals & Environment

Interview Guide

A. Role of faith and religion in life (church attend, denomination, involvement, roles, overall religious views)

involvement in politics (Bauer, Dobson, Land, Cizik, etc).

B. Biographical information (year born, ethnicity, occupation/job responsibility, education level, children, Pres. votes, political views, background, outdoor experiences)

C. Direction society and country is headed (social problems)

D. Example of social problems = environmental problems (NEP responses)

E. Example of environmental problem = rising temperatures & increasing carbon dioxide in Earth's atmosphere (global climate change)

New Ecological Paradigm (NEP) Questions

1. Some people say the earth has plenty of natural resources if we just learn how to develop them, while other say it has very limited room and resources?
2. Some people say humans have rights to the natural environment; others say that plants and animals have rights too?
3. Some people say that nature is fragile; others say that the 'balance of nature' humans can withstand humans interfering' with it.
4. Some people say that soon we'll know enough about how nature works to be able to control it; others claim that the 'laws of nature' apply to humans and that soon we will make the earth unlivable.
5. Some people say that we are facing an 'ecological crisis' now, others believe that if things continue on their present course, we will soon experience a major ecological catastrophe, and others think that we are treating the environment just fine.

Income Category Question

In which group did your total family income, from all sources, fall last year before taxes?

- A ☐ UNDER 14999
- B ☐ \$15000 TO 19999
- C ☐ \$20000 TO 24999
- D ☐ \$25000 TO 29999
- E ☐ \$30000 TO 34999
- F ☐ \$35000 TO 39999
- G ☐ \$40000 TO 49999
- H ☐ \$50000 TO 59999
- I ☐ \$60000 TO 74999
- J ☐ \$75000 TO \$89999
- K ☐ \$90000 - \$109999
- L ☐ \$110000 OR OVER

Appendix 5.1: Summary of Participant Characteristics by Pseudonym

Alan (#124) is a retired automobile corporation general manager with an annual household income of \$50K - \$90K. He is 70, white, with a masters business degree, and is married with two children (none living at home). Alan attends Fairhaven Christian Missionary Alliance Church, politically identifies with the Republican Party, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Alan belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Alan from Kettering, Ohio mid-afternoon at home in his living room on Thursday, August 21, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Alexandra (#102) is a homemaker with an annual household income greater than \$90K. She is 37, white, with a 4-year degree in fine arts, and is married with four young children (all living at home). She attends Fairhaven Christian Missionary Alliance Church, is a registered Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Alexandra belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Alexandra from Kettering, Ohio in the afternoon at home in her living room on Thursday, August 14, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Ally (#113) is a homemaker with an undisclosed (refused) annual household income. She is 60, white, with a masters degree in education, and is married with two adult children (none living at home), including currently serving in the U.S. Navy. She attends Fairhaven Christian Missionary Alliance Church, would not identify herself politically, and voted for the Republican candidate in both the 2000 and 2004 presidential elections besides also voting for Reagan. Ally belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Ally from Beavercreek, Ohio in the afternoon at home in her living room on Monday, August 18, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Anthony (#108) is a retired chief financial officer of a financial services company with an annual household income less than \$50K. He is 76, white, with a masters degree in finance and certified planner accreditation, and is married with two adult children (none living at home). He attends Fairhaven Christian Missionary Alliance Church, hints he is registered Republican, and says he votes for Republican candidates in local elections and in both the 2000 and 2004 presidential elections. Anthony belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Anthony from Centerville, Ohio at noon at his home on Saturday, August 16, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Barbara (#138) is a teacher who works with at-risk high schoolers with an annual household income of \$50K - \$90K. She is 40, white, with a 4-year degree, and is married with four children (all living at home). Barbara attends Dayton Vineyard Church, politically identifies as a conservative Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Barbara belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Barbara from Kettering, Ohio in the afternoon at a co-informant's home in her downstairs basement living room on Wednesday, September 24, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Brent (#136) is a manager at an information services company with an annual household income of \$50K - \$90K. He is 45, white, with a 4-year degree in business administration, and is married with three children (all living at home). He attends Apex Community Church, politically identifies as Republican but is re-examining this, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Brent belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Brent from Springborough, Ohio in the morning at his office (at his

church) on Wednesday, September 24, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Brittany (#123) is a homemaker with an annual household income greater than \$90K. She is 49, white, with a 4-year degree, and is married with four children (all living at home). She attends Fairhaven Christian Missionary Alliance Church, does not politically identify with either major political party because she views them as conspiring together to establish a "new world order", and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Brittany belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Brittany from Dayton, Ohio in the afternoon in a public meeting room at a coffee shop on Thursday, August 21, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Bruce (#101) owns a strategic marketing consulting business specializing in new product development and intellectual property rights, with an annual household income greater than \$90K. Bruce is 48, white, holds a masters degree, and is married (SPOUSE OCCUPATION POSSIBLE MENTION) with no children. He attends Apex Community Church, votes Democratic in local elections because of his concern about local environmental quality, and so far prefers Republicans in national elections such as the 2000 and 2004 presidential elections. Bruce belongs to Group 3A Believers in Climate Change: No Anthropogenic Cause. Interview with Bruce from Spring Valley, Ohio in the morning in the coffee reception area at his church on Thursday, August 14, 2008 before the dry hurricane and widely-publicized October 2008 financial crisis began.

Candace (#126) is a homemaker with an annual household income of \$50K - \$90K. She is 59, white, completed community college, and is married with two children (none living at home). Candace attends Patterson Park Church, politically identifies as Republican more to the conservative side, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Candace belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Candace from Miamisburg, Ohio in the afternoon at home in her dining room on Saturday, September 20, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Chelsea (#141) is an administrative assistant (secretary) at a medical services provider with an annual household income greater than \$90K. She is 52, white, with a professional nursing degree and college coursework, and is married with four children (none living at home). She attends Centerville Community Church, politically identifies as conservative and Republican with prompting by the interviewer, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Chelsea belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Chelsea from Dayton, Ohio in the morning at home in her living room on Thursday, September 25, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Clark (#142) works as a retail store sales associate, earning an annual household income less than \$50K. He is 47, white, high school graduate who also completed trade school, and is single with no children. Clark attends Premier Christian Fellowship, and politically identifies mostly the Republican Party (no data for 2000 and 2004 presidential election votes). Clark belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Clark from Centerville, Ohio at noon in the public conference room of a coffee shop on Thursday, September 25, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Collin (#105) is a teacher working as a special education intervention specialist with an annual household income of \$50K - \$90K. He is 37, white, holds a masters degree, and is married with no children. He attends Apex Community Church, politically identifies with the Republican Party, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Collin

belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Collin from Kettering, Ohio in the early afternoon at home in his dining room on Friday, August 15, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Crystal (#103) works as a water conservation environmental educator and trainer and has an annual household income greater than \$90K. She is 43, white, and holds a 4-year degree with some additional post-graduate education. Crystal is married with no children currently, although she and her husband are in the final stages of an adoption process (spouse was present in same room during interview). She attends Fairhaven Christian Missionary Alliance Church, is a registered Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Crystal belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Crystal from Dayton, Ohio in the late afternoon at home in her living room on Thursday, August 14, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Darlene (#139) is a homemaker with an annual household income greater than \$90K. She is 56, white, with a masters degree in early childhood education, and is married with two children (all living at home). Darlene attends Fairhaven Christian Missionary Alliance Church, is a registered Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Darlene belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Darlene from Centerville, Ohio in the late afternoon at home in her living room on Wednesday, September 24, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Darren (#144) works as a facility operations manager earning an annual household income of \$50K - \$90K. He is 43, white, with a 4-year degree and some post-graduate education, and is married with two children (both living at home). Trevor attends First Church of God, politically identifies as Republican since becoming a Christian, and he voted for a third-party candidate (Nader) in the 2000 and the Republican candidate in the 2004 presidential elections. Darren belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Darren from Miamisburg, Ohio in the evening at home in his living room on Thursday, September 24, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Deirdre (#119) is a pharmaceutical sales representative with an annual household income less than \$50K. She is 43, the only Chinese-American interviewed, with a masters business degree, and is married with two children (all living at home). She attends Fairhaven Christian Missionary Alliance Church, does not politically identify with established political parties, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Deirdre belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Deirdre from Dayton, Ohio in the afternoon at home in her living room on Wednesday, August 20, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Doug (#116) is a retired manufacturing engineer with an undisclosed (refused) annual household income. He is 84, white, with a 4-year degree and some post-graduate education, and is married with two adult children (none living at home). He attends Fairhaven Christian Missionary Alliance Church, says he was "never heavily involved in politics" when asked to describe his political views or politically identify himself, and voted for Republican candidates in both the 2000 and 2004 presidential elections. Doug belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Doug from Kettering, Ohio in late morning at home in his dining room on Tuesday, August 19, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Earnest (#106) works as a computer software engineer developing internet technology with an annual household income of \$50K - \$90K. He is 62, white, holds a 4-year degree in biblical studies, and is married with six children (none living at home). He attends Grace Christian Center, politically identifies as a Republican and conservative, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Earnest belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Earnest from Kettering, Ohio in the evening at home in his living room on Friday, August 15, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Edward (#150) works as a general sales manager in manufacturing earning an annual household income greater than \$90K. He is 43, white, with a masters business degree, and is married with two children (both living at home). Edward attends Fairhaven Christian Missionary Alliance Church, politically identifies as a conservative who mostly voted Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Edward belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Edward from Centerville, Ohio at noon in a large public meeting room of informant's church on Saturday, September 27, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Eileen (#140) is a psychology professor with an annual household income of \$50K - \$90K. She is 46, white, holds a doctorate in psychology, and is married with two children (all living at home). She attends Fairhaven Christian Missionary Alliance Church, politically identifies generally as Republican with some Libertarian and independent leanings, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Eileen belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Eileen from Centerville, Ohio in the evening in small meeting room at coffee shop on Wednesday, September 24, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Eleanor (#128) works as an independent medical services consultant and adjunct professor, earning an annual household income of \$50K - \$90K. She is 48, white, and holds two masters degrees. She is single and does not have any children. Eleanor attends Christ United Methodist Church, politically identifies more with the Republican Party, and voted for the Republican candidate in the 2004 presidential elections. Eleanor belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Eleanor from Kettering, Ohio in the late morning at home on her back patio on Monday, September 22, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Emma (#111) is an operations manager for a health care services company with an annual household income greater than \$90K. She is 35, white, with a 4-year degree, and is married with two young children (all living at home). She attends Epiphany Lutheran Church, politically identifies as pretty much Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Emma belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Emma from Kettering, Ohio in the afternoon at her parent's home in the downstairs living room on Sunday, August 17, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Fred (#130) earns less than \$50K annually working as a research and development technician for a camera manufacturing company. Fred is 55, white, holds an associate's degree, and is single with no children. He attends Fairhaven Christian Missionary Alliance Church, politically identifies himself as a conservative, and voted for a third-party candidate (Buchanan) in the 2000 and Republican candidate in the 2004 presidential elections. Fred belongs to Group 3A Believers in Climate Change: No Anthropogenic Cause. Interview with Fred from Kettering, Ohio at dinner

time in the office of another informant's home on Monday, September 22, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Grant (#110) is a medical professional (dermatologist) with an annual household income greater than \$90K. He is 58, white, a medical school graduate, and is married with three children living at home. Grant attends Apex Community Church (serving as an elder), politically identifies almost always with the Republican Party, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Grant belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Grant from Bellbrook, Ohio in the morning at his work office on Sunday, August 17, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Ira (#145) is a customer service representative for an Internet service provider with an annual household income less than \$50K. He is 34, white, with a 4-year degree. He is divorced with two children (none living with him). Ira attends Apex Community Church, politically identifies with a general inclination toward Republican, and voted for Republican candidates in both the 2000 and 2004 presidential elections. Ira belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Ira from Centerville, Ohio in the morning in public meeting room of coffee shop on Friday, September 26, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Jared (#131) is a U.S. military officer and earns more than \$90K annually. He is 37, white, holds a masters degree, and is married with three children living at home. Jared attends Patterson Park Church, politically identifies himself as a compassionate conservative, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Jared belongs to Group 3A Believers in Climate Change: No Anthropogenic Cause. Interview with Jared from Centerville, Ohio in the evening and dining room of informant's home on Monday, September 22, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Jocelyn (#104) is a homemaker with an annual household income of \$50K - \$90K. She is 65, white, with a 4-year degree, and is married with three adult children (none living at home). She attends Fairhaven Christian Missionary Alliance Church, is a registered Republican and political identifies as a conservative, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Jocelyn belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Jocelyn from Kettering, Ohio in the morning at home in her dining room on Friday, August 15, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Jonathon (#153) works as an independent computer software programmer consultant earning an annual household income greater than \$90K. He is 44, white, with a 4-year degree and some post-graduate education, and is married with three children (all living at home). Jonathon attends Fairhaven Christian Missionary Alliance Church, politically identifies as a conservative who votes Republican most of the time, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Jonathon belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Jonathon from Dayton, Ohio in the evening at home in his dining room on Saturday, September 27, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Judie (#152) is a university college librarian with an annual household income greater than \$90K. She is 57, white, with a 4-year degree, and is married with three children (none living at home). She attends South Dayton Presbyterian Church, politically identifies as conservative and is a registered Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Judie belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Judie from Kettering, Ohio in the evening at home in her living room on Saturday,

September 27, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Kathleen (#129) is a homemaker with an annual household income greater than \$90K. She is 43, white, with a 4-year degree, and is married with five children (all living at home). Kathleen attends Fairhaven Christian Missionary Alliance Church, politically identifies as conservative who is usually Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Kathleen belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Kathleen from Bellbrook, Ohio in the afternoon at a co-informant's home in her downstairs basement living room on Monday, September 22, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Kelsie (#107) worked most recently as a secretary in higher education, and currently has an annual household income less than \$50K. Kelsie is 69, white, holds a 4-year degree, and is married with children (spouse at home but not present in room during interview). She attends Fairhaven Christian Missionary Alliance Church, identifies as a Republican, and voted Republican in both the 2000 and 2004 presidential elections. Kelsie belongs to Group 3A Believers in Climate Change: No Anthropogenic Cause. Interview with Kelsie from Centerville, Ohio in the morning at the kitchen table of her home on Saturday, August 16, 2008 before the dry hurricane and widely-publicized October 2008 financial crisis began.

Kenneth (#148) is a human resources manager for a manufacturing company with an annual household income of \$50K - \$90K. He is 35, white, with professional training and some college. He is married with three children (all living with him). Kenneth attends Fairhaven Christian Missionary Alliance Church, politically identifies as pretty moderate Republican, mildly right-wing, and voted for Republican candidates in both the 2000 and 2004 presidential elections. Kenneth belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Kenneth from Centerville, Ohio in the early evening in public meeting room of coffee shop on Friday, September 26, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Logan (#114) is a business professor with an annual household income of \$50K - \$90K. He is 48, white, with a doctorate. Logan is married with two children (one living currently at home) and attends Fairhaven Christian Missionary Alliance Church. Unlike every other informant, Logan is a Canadian with a green card, and therefore does not vote nor associate himself with a U.S. political party. Logan belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Logan from Oakwood, Ohio in the evening at home in his dining room on Monday, August 18, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Loraine (#146) is a registered nurse working in the emergency room at a hospital with an annual household income of \$50K - \$90K. She is 26, white, with a 4-year degree, and is single with no children. Loraine attends Apex Community Church, says she is Republican on her voter's ballot, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Loraine belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Loraine from Dayton, Ohio in the afternoon at home in her living room on Friday, September 26, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Lori (#135) is a homemaker with an annual household income less than \$50K. She is 35, white, with a 4-year degree, and is married with four children (all living at home). She attends Church of the Messiah, politically identifies as conservative, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Lori belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Lori from Xenia, Ohio in the evening at home in her dining room on

Tuesday, September 23, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Margaret (#132) is a homemaker with an annual household income less than \$50K. She is 34, white, with a 4-year education degree, and is married with three children (all living at home). Margaret attends Patterson Park Church, politically identifies as a conservative and Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Margaret belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Margaret from Waynesville, Ohio in the morning at home in her living room on Tuesday, September 23, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Mindy (#109) is a secretary for a religious para-church non-profit conducting relief work in a Caribbean developing country, with an annual household income less than \$50K. She is 37, white, with a 4-year degree, and is single with no children. She attends Fairhaven Christian Missionary Alliance Church, politically identifies as Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Mindy belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Mindy from Kettering, Ohio in the afternoon in the public meeting room of a coffee shop on Saturday, August 16, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Monroe (#115) is a shuttle driver for a retail automotive business with an annual household income of \$50K - \$90K. He is 75, white, with a 4-year degree, and is married with four adult children (none living at home). He attends Kettering (First) Church (of God), usually votes Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Monroe belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Monroe from Kettering, Ohio in the morning at home in his living room on Tuesday, August 19, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Naomi (#121) works as accountant for a local minor league sports team, earning less than \$50K for an annual household income. Naomi is 55, African-American (only one interviewed), holds a 4-year degree, and is single with no children. She attends Christ (Community) Church, identifies her political affiliation as a registered Democrat, but voted for the Republican candidate in both the 2000 and 2004 presidential elections. Naomi belongs to Group 3A Believers in Climate Change: No Anthropogenic Cause. Interview with Naomi from Dayton, Ohio in the evening on the outdoor patio at a local coffee shop on Wednesday, August 20, 2008 before the dry hurricane and widely-publicized October 2008 financial crisis began.

Neil (#143) earns more than \$90K annually working as a computer systems analyst at a medical services provider. Neil is 56, white, holds an associate's degree, and is divorced with one child not living permanently with him. He attends Fairhaven Christian Missionary Alliance Church, politically identifies himself as a conservative and registered Republican, and voted for the Republican candidate in the 2004 presidential elections. Neil belongs to Group 3A Believers in Climate Change: No Anthropogenic Cause. Interview with Neil from Kettering, Ohio in the late afternoon at his work office on Thursday, September 24, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Norma (#147) is a home-maker and part-time reading tutor with an annual household income of \$50K - \$90K. She is 35, white, with a 4-year degree, and is married with three children (all living at home). Norma attends Fairhaven Christian Missionary Alliance Church, politically identifies as conservative Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Norma belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Norma from Kettering, Ohio in the late afternoon at home in her living room on

Friday, September 26, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Rebecca (#151) is a small-business owner of a graphics design company with an annual household income greater than \$90K. She is 37, white, with a 4-year degree, and is married with two children (all living at home). Rebecca attends Fairhaven Christian Missionary Alliance Church, politically identifies as conservative and definitely Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Rebecca belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Rebecca from Springborough, Ohio in the late afternoon at home in her dining room on Saturday, September 27, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Rosalie (#117) is a retired church receptionist with an annual household income less than \$50K. She is 80, white, a high school graduate, and is married with three adult children (none living at home). She attends Fairhaven Christian Missionary Alliance Church, is a Republican Party precinct captain, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Rosalie belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Rosalie from Dayton, Ohio in the afternoon at home in her living room on Tuesday, August 19, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Ryan (#118) is a financial investment planner with an annual household income of \$50K - \$90K. He is 46, white, with a 4-year degree and some post-graduate education, and is married with four children (all living at home). He attends Apex Community Church, politically identifies as conservative, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Ryan belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Ryan from Dayton, Ohio in the morning at home in his living room on Wednesday, August 20, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Sarah (#112) is a homemaker and was a secretary for an insurance company in her most recent occupation before retiring (data missing for annual household income). She is 78, white, with a 4-year degree, and is married with two adult children (none living at home). She attends Fairhaven Christian Missionary Alliance Church, politically identifies as conservative and Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Sarah belongs to Group 2 Don't Know: If Climate Change Is Happening. Interview with Sarah from Centerville, Ohio in the morning at home in her living room on Monday, August 18, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Sharra (#134) is a homemaker with an annual household income of \$50K - \$90K. She is 34, white, and has a 4-year degree with some additional education certification coursework. She is married with three children (all living at home). Sharra attends Fairhaven Christian Missionary Alliance Church, politically identifies with the Republican Party, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Sharra belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Sharra from Dayton, Ohio in the late afternoon at home in her dining room on Tuesday, September 23, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Sidney (#149) is a video producer earning of \$50K - \$90K annually. He is 44, white, holds a bachelors degree, and is married with one child living at home. Sidney attends Christ (Community) Church, politically identifies himself as a conservative and Republican, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Sidney belongs to Group 3A Believers in Climate Change: No Anthropogenic Cause. Interview with Sidney from Spring Valley, Ohio in the morning in the public conference room of a local coffee shop on

Saturday, September 27, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Tanya (#120) is a homemaker with an annual household income greater than \$90K. She is 52, white, with a 4-year degree, and is married with two adult children (none living at home). She attends Fairhaven Christian Missionary Alliance Church, politically identifies as conservative, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Tanya belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Tanya from Centerville, Ohio in the afternoon at home in her living room on Wednesday, August 20, 2008 before the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Trevor (#125) works as a computer hardware developer, earning an annual household income greater than \$90K. He is 55, white, with a doctorate in physics, and is married with three children (none living at home). Trevor attends Fairhaven Christian Missionary Alliance Church, politically identifies with the Republican Party, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Trevor belongs to Group 3B Believers in Climate Change: Anthropogenic Cause. Interview with Trevor from Kettering, Ohio in the morning at home in his dining room on Saturday, September 20, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Veronica (#137) is a registered nurse working at a hospital with an annual household income greater than \$90K. She is 65, white, with a professional nursing degree and some college coursework, and is married with two children (none living at home). Veronica attends Fairhaven Christian Missionary Alliance Church, says she is open to either political party, focuses on the values of individual political candidates, and voted for the Republican candidate in both the 2000 and 2004 presidential elections. Veronica belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Veronica from Kettering, Ohio in the morning at home in her living room on Wednesday, September 24, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Vince (#127) is a salesperson for a large-equipment automotive manufacturer with an annual household income of \$50K - \$90K. He is 52, white, with a 4-year degree, and is married with three children (none living at home). Vince attends Fairhaven Christian Missionary Alliance Church, politically identifies as conservative Republican, and voted for Republican candidates in both the 2000 and 2004 presidential elections. Vince belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Vince from Kettering, Ohio in the afternoon at home in his dining room on Sunday, September 21, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Willard (#133) is a financial analyst for an electrical utility company with an annual household income greater than \$90K. He is 32, white, with a master business degree and a certified financial analyst program in progress. He is married with two children (all living at home). Willard attends Patterson Park Church, politically identifies as a social and fiscal conservative, is a registered Republican, and voted for Republican candidates in both the 2000 and 2004 presidential elections. Willard belongs to Group 1 Non-Believers: If Climate Change Is Happening. Interview with Willard from Kettering, Ohio in the afternoon at home in his dining room on Tuesday, September 23, 2008 after the dry hurricane occurred and widely-publicized mortgage housing financial crisis began.

Appendix 5.2: Participant Pseudonyms by Interview Case Number

Case#	Pseudonym	Sex	Case#	Pseudonym	Sex	Case#	Pseudonym	Sex
01	Bruce	M	18	Ryan	M	36	Brent	M
02	Alexandra	F	19	Deidre	F	37	Veronica	F
03	Crystal	F	20	Tanya	F	38	Barbara	F
04	Jocelyn	F	21	Naomi	F	39	Darlene	F
05	Collin	M	22	<i>Withdrew</i>	<i>N/A</i>	40	Eileen	F
06	Earnest	M	23	Brittany	F	41	Chelsea	F
07	Kelsie	F	24	Phillip	M	42	Clark	M
08	Anthony	M	25	Trevor	M	43	Neil	M
09	Mindy	F	26	Candace	F	44	Darren	M
10	Grant	M	27	Vince	M	45	Ira	M
11	Emma	F	28	Eleanor	F	46	Loraine	F
12	Sarah	F	29	Kathleen	F	47	Norma	F
13	Ally	F	30	Fred	M	48	Kenneth	M
14	Logan	M	31	Jared	M	49	Sidney	M
15	Monroe	M	32	Margaret	F	50	Edward	M
16	Doug	M	33	Willard	M	51	Rebecca	F
16	Doug	M	34	Sharra	F	52	Judie	F
17	Rosalie	F	35	Lori	F	53	Jonathon	M

Participant pseudonym names obtained from: <http://listofrandomnames.com/>

VITA

Aaron S. Routhe is a native of Minnesota and New Hampshire, graduating from Spaulding High School in Rochester, New Hampshire. He attended Houghton College, a Christian liberal arts school in western New York, graduating with a Bachelor's of Science in environmental biology and ecological science. His senior seminar thesis explored potential linkages between environmental ethics framed within Protestant Christianity religious traditions with Native American Central Plains tribal worldviews. After graduating college, Aaron worked as director of experiential education programs at Camp El Har in Dallas, Texas before returning to more traditional classrooms for further graduate education. Aaron obtained a Masters of Arts degree in environmental sociology at The University of Tennessee-Knoxville, with a thesis examining the attitudinal bases of public support for meeting water supply needs. During this time he held teaching assistantships and participated for multiple years in the Graduate School's Graduate Teaching Mentoring Program, as well as holding a 3 year research assistantship with the Southeast Water Policy Initiative. With the completion of his master's, Aaron then pursued a doctoral degree through the Department of Sociology. After completing coursework and comprehensive exams, he took a position as academic and program director of the South Pacific Creation Care Study Program, an experiential, place-based, interdisciplinary social justice and environmental studies college study abroad program based in New Zealand and Samoa. Following this, Aaron held a tenure-track position as assistant professor of sociology, development, and environmental studies in the Department of Psychology and Sociology at Houghton College. While there he taught courses on environmental sociology; race, gender, and environment; development; social science research methods; social problems, sociological theory, senior capstone seminar; introduction to sociology, and other topics. He received the degree of Doctor of Philosophy in sociology with a concentration in environmental sociology in 2013 based on research exploring the use of religious beliefs by evangelical Christians to construct their perceptions of anthropogenic global climate change. His research interests include religion and environmental concern; public understanding of science; climate change communication; human dimensions of natural resources; environmental movements; and religion and race. His analysis and publication of findings from the Ohio Survey of Evangelicals and Environment is ongoing.