

America versus the Environment?
Humanity, Nature, and the Sacred 1973-2014

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Abstract

The relationship between environmental concern and religiosity in the United States is complex and contentious. Analyses of survey research have yielded mixed results. Historical research has indicated that some strands of present-day environmentalism in the U.S. are rooted in specific Protestant attitudes and practices. Conceptual work has suggested that faith-based environmental organizations focus on long-term *ethical* change, rather than issue-based policy reform. It follows that efforts to model the connection between environmental concern and religiosity should account for change over time, which is the aim of this dissertation research. Using data from the 1973-2014 General Social Survey, measures of *stewardship* and *conservation* were regressed on several dimensions of change over time within religious group identities, including cohorts (Chapter 3), upbringing and disaffiliation (Chapter 4), as well as calendar year and age (Chapter 5). Environmental concern in the U.S. increased over time across all groups, but generally increased more quickly on average among members of religious groups with historical pro-environmental stances. Upbringing in a religious group with a historical pro-environmental stance was linked to higher levels of environmental concern in adulthood, though the highest levels of environmental concern were found among those who disaffiliated in adulthood. Younger religious persons were significantly more environmentally concerned than older religious persons in the same religious group. Separating cohorts by gender (Chapter 6), class (Chapter 7), as well as political party affiliation and race (Chapter 8): religious group identity was more salient in predicting changes in environmental concern over time among men; the conditional effect of religious group identity on environmental concern is largely confined to people of average income; and the often-discussed political polarization on environmental concern is largely due to increasing divides among white Protestants. In short, environmental

concern has increased among younger religious adherents relative to older members of the same group. These trends generally take the form of “catching up to” historically higher levels of environmental concern among the unaffiliated. This research offers a relatively novel means by which to approach the religion-environment connection and suggests that religious groups may play a meaningful role in future efforts to address environmental issues.

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Chapter 1. Introduction

God created man in his image; in the divine image he created him; male and female he created them. God blessed them, saying: 'be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that move on the earth.' God also said: 'See, I give you every seed-bearing plant all over the earth and every tree that has seed-bearing fruit on it to be your food; and to all the animals of the land, all the birds of the air, and all the living creatures that crawl on the ground, I give all the green plants for food.' And so it happened. God looked at everything he had made, and he found it very good.

– Genesis 1:27-31, *New American Bible*

In *the Historical Roots of Our Ecological Crisis*, historian Lynn White, Jr. (1967)

provocatively argued: “especially in its Western form, Christianity is the most anthropocentric religion the world has seen” (1205). At first glance, perhaps no nation better exemplifies White’s critical vision than the United States. The U.S. stands alone among wealthy nations in that it is at once highly scientifically literate, technologically developed, and home to a highly religious, majority Christian public (Gao 2015). And while concerns over anthropogenic climate change and the sustainability of the Earth’s ecosystem have mounted (Stocker and Qin 2013), the U.S. remains one of the biggest consumers and polluters, in the world. Over the past three decades, the U.S. has gone from “a leader to a laggard” (Christoff and Eckersley 2013:169) on environmental issues, exemplified most recently in President Trump’s plan to withdraw from the Paris Agreement, a non-binding global resolution to address global warming. The U.S. is currently the only nation on earth to express this intent (Holmes 2017; Meyer 2017).

In the U.S., divisions over environmental issues such as climate change have been entwined with growing political polarization and a related religious rift or schism between the *culturally orthodox* and the *culturally progressive*. Those who are *culturally orthodox* tend to appeal to an external, transcendent moral authority, such as God, or tradition, tend to interpret the Bible literally, and are more likely to be socially conservative. By contrast, *cultural progressives* define morality in terms of Enlightenment scientific rationality or subjective experience and interpret or reinterpret religious texts with changing cultural mores and

knowledge (Hunter 1991:44-5). Hunter (1991) argues that denominational loyalties have waned with the intensification of the “culture wars,” splitting Americans increasingly across cultural fault lines. In this culturally polarized landscape, environmental concern has been championed and condemned as a *culturally progressive* cause. The *culturally orthodox* sometimes decry environmental concern as “the bailiwick of liberal pagan activists,” a distraction from the primary Christian missive of individual salvation if not a threat to the moral fabric of American society (Ellingson 2016:55).

However, a narrative that sets Christianity in opposition to environmentalism elides a rich cultural and doctrinal history of *creation care*, an ethic of environmental concern grounded in religious faith and practice (Van Dyke et al. 1996). Religious environmental activists use *creation care* in place of the more politically fraught term *environmentalism* (I will use *environmental concern* throughout this document for consistency). The roots of environmental concern in American Christianity can be traced all the way back to the first Puritan and Calvinist settlers, who viewed heedless exploitation of nature as sinful avarice, and found a testament to the power and glory of God in the sublime beauty of wilderness (Stoll 2015:10-76). Though there is great diversity in environmental beliefs and behaviors in the U.S., two prominent dimensions of environmental concern, *stewardship* and *wilderness conservation*, have historically Christian roots.

Furthermore, studies of church doctrine place the first stirrings of contemporary religious environmental concern among Protestant denominations as early as 1971, beginning with the United Presbyterian Church, as many mainline denominations following suit (Shaiko 1987; Yaple 1982). The Catholic Church explicitly joined these efforts when John Paul II (1979) appointed Saint Francis of Assisi the patron saint of ecology and brought Catholic social

teaching to bear on ecological problems in his (1990) *World Day of Peace* address. Pope Francis' (2015) "climate change" Encyclical letter *Laudato si* may be the most widely discussed event in the history of religion and environmental concern to date. There is also evidence of a shift toward environmental concern among more culturally orthodox religious groups: Southern Baptists have published literature on sacred duties to the environment (Land and Moore 1992), and some evangelical Protestants have begun to embrace environmental concern, though their efforts have met with mixed reactions among religious leaders (Danielsen 2013; Ellingson 2016:55), perhaps due to growing political and cultural polarization near the end of the twentieth century (Hunter 1991; Pogue 2016). In short, there is evidence of historical commitment to environmental concern among the official doctrines of the largest denominations of Baptists, Methodists, Presbyterians, Lutherans, and Episcopalians, as well as Catholics, in the U.S.

By 1997, over 70 Religious Environmental Movement Organizations (henceforth REMOs) existed in the United States. The largest of these are interfaith and ecumenical organizations, but mainline Protestant, Catholic, Evangelical, Jewish, Buddhist, and other "eco-spirituality" groups also exist (Ellingson, Paik, and Woodley 2012). According to Grim and Tucker (2015), ecology and religion, both as a scholarly field of inquiry and a transformative sociocultural project, is approximately two decades old. REMOs tend to prioritize *ethics-based environmentalism*, geared toward long-term shifts in moral attitudes toward environmental concern, over *issue-based environmentalism*, centered on single-issue policy reform (Smith and Pulver 2009:156-59). It is difficult to achieve a systematic understanding of the religion-environment connection because moral shifts are notoriously hard to measure and may take decades to manifest (Smith and Pulver 2009:164-65). For that reason, this research focuses on how and why the link between environmental concern and religious group identity in the U.S.

has changed since 1973. Put succinctly, if religious institutions reach out regarding ecological concern, do adherents listen? Relatedly, are enduring moral shifts on environmental concern taking root in the U.S.? If so, how do they relate to religious identity, belief, and practice in the U.S., and how might these relationships have changed in recent history?

Review of Related Research

Fifteen years ago, a meta-analysis by Dunlap and Jones (2002) noted between 700 and 800 peer-reviewed published studies on environmental concern. The sociological literature on religion and environmental concern in the U.S. is comparatively modest, and findings are mixed. Differing, and sometimes conflicting, findings seem to arise from differing measures of religiosity and environmental concern, as well as from the year(s) in which the study was conducted. Using a mail survey of Washington State residents, Hand and Van Liere (1984) found that Judeo-Christians were more committed to a “mastery over nature” orientation, and this negatively affected environmental concern. However, commitment to this orientation varied greatly by denomination. Shaiko (1987) found evidence of a “middle ground between these two perspectives [unity-with-nature and domination-over nature]” (257) among Judeo-Christians—a *stewardship* orientation—whereas Eckberg and Blocker (1989) found via a telephone survey of Tulsa residents that Biblical belief, and only Biblical belief, negatively correlated with several measures of environmental concern after controlling for background factors. These early efforts were illuminating but did not employ national representative samples or examine changes in environmental concern over time.

In one of the earliest assessments of the religion-environmental concern connection based on a nationally representative survey, Greeley (1993) theorized that the relationship between Christianity and anthropocentrism was spurious and explicable in terms of moral and political

conservatism alongside a “harsher system of narrative symbols” (20). Drawing on sociological theories of religion advanced previously (Geertz 1968; Greeley 1989, 1990), Greeley argued that “religion is a symbol system that purports to explain ultimate reality” (20), and that, “Religion is narrative imagery before it is anything else. This imagery, strongly influenced by one’s relationship with parents and parents’ relationships with one another, is the foundation on which all else is superstructure” (21). Thus, more literal, strict interpretations of Scripture were expected to be linked to a worldview which did not prominently feature environmental concern. Interestingly, as he predicted, Greeley’s analysis also found that Catholic identity positively correlated with support for environmental spending, which he linked to a conception of God predicated on love and grace as well as a “less harsh” set of narrative symbols—that is, less metaphorical imagery which commanded religious orthodoxy (21). Critics rejected Greeley’s “harsher narrative symbols” explanation, arguing that “harshness” could catalyze as well as stymie moral exhortation toward greater environmental concern (Kanagy and Nelsen 1995), but recent research indirectly corroborated Greeley’s argument regarding the Catholic conception of God and its impact on issues such as political tolerance (Froese, Bader, and Smith 2008). Additionally, recent research has revealed a “Bible Believers Effect”: literal Bible believers and strong political conservatives who attain higher levels of education are *more* likely to doubt evolution and climate change, respectively, than their less educated counterparts (Reichardt and Saari 2015). The ambivalence and complexities captured by these arguments and findings are a significant reason why earth systems modelers have become increasingly interested in the role of religion in assessing and predicting human impact on the environment (Gerten, Schönfeld, and Schauburger 2018).

Guth, Green, Kellstedt, and Smidt (1995) extended these conceptual and empirical dimensions of the religion-environmental concern by testing the effects of theologically conservative eschatology, End Times thought, and Biblical literalism among clergy, religious activists, political-party contributors, and the public. They found strong and consistent negative correlations between conservative eschatology and environmentalism rivaling political partisanship in explanatory power. Although this study examined eschatology and evangelical identity as predictors, aspects of religiosity such as denominational affiliation and religious acts such as prayer and church attendance were not included. Furthermore, the study excluded Black Protestants because their “beliefs and traditions have quite different impacts on political attitudes” (Guth et al. 1995:371).

Another wave of religion-environment research emerged by the mid-1990s (Dekker et al. 1997; Kanagy and Nelsen 1995; Kanagy and Willits 1993; Naess 1989; Nash 1991; Whitney 1993; Woodrum and Hoban 1994). Kanagy and Nelsen (1993), like Shaiko (1987) before them, found negative correlations between religiosity and environmental concern, but also evidence suggesting the possibility of a moderate form of environmentalism, a *stewardship* orientation. Ultimately, they concluded: negative correlation by region (South in particular) in supporting environmental spending may in part reflect political ideology; *willingness to relax environmental controls* negatively correlated with personal religion, but education likely played a moderating role; and the devoutly religious were no less likely to identify themselves as environmentalists than the less religious, or secular individuals (Kanagy and Nelsen 1993:43). Conceptualizing religiosity across 17 items and environmental concern across five items, Eckberg and Blocker (1996) concluded, *contra* earlier findings, “religious graciousness has little impact on environmental beliefs or actions and religious effects are almost unrelated to general political

views.” Those believers who were most environmentally concerned and active tended to be affiliated with “non-fundamentalist” churches and held to more “liberal” theological and cultural views (353). It is less clear how these “Green Christians” are associated with cultural progressivism, whether and to what extent such political and religious identities complement or clash with one another, and when or how such a “religious left” emerged as an apparent force for environmental concern.

Holland and Carter (2005) offered a new means by which to test the relationship between religiosity and environmental concern by comparing official religious belief with environmental activities—connecting the statements of religious groups to the actions among Presbyterian ministers in Georgia. Despite lack of a nationally or theologically representative sample, this work offers a new insight into the religion-environment connection at the congregational level. This congregation-focused approach was later extended by Djupe and Hunt (2009), who analyzed Episcopal and Evangelical Lutheran clergy and found that environmental concern within the church better predicted parishioner attitudes than broader religious belief or denominational doctrine. Although both studies addressed lacunae in religion-environment research, their approach cannot be conducted at a nationally representative level without incurring infeasible expense and time. It is possible, however, to examine and compare broadly-drawn *religious group identity* effects over time using nationally representative survey data, a central goal of this proposed research.

Other lines of research related to understanding the moral and social-psychological aspects of the religion-environment connection have emerged. More recently, experimental researchers have examined how religiosity might underpin how individuals make sustainability decisions (Djupe and Gwiasda 2010; Leary, Minton, and Mittelstaedt 2016) as well as the role

that “heroes” and cultural narratives play in understanding climate change (Jones 2014). Recent research has also examined change over time regarding trust in science. Testing Mooney’s (2005) claim that conservative Americans are increasingly at odds with science, Gauchat (2012) found that between 1974 and 2010, public trust in science declined sharply among political conservatives. In the same study, higher levels of religious service attendance were inversely correlated with trust in science. “Overall, this study points to a growing political polarization of science, even though the source of this polarization remains empirically undetermined” (Gauchat 2012:184).

Building toward an explanation, John Evans (2013) found growing objections from Biblical literalist, conservative Protestants to scientists’ involvement in public moral debates. However, Michael Evans (2014) found no religious group significantly differed from the nonreligious in their interest in science except on a few issues which explicitly contradicted their theological views. Chaves (2011) noted growing polarization among religious believers over the same period, as religiosity became more tightly linked to political conservatism. Evidence suggests that this link between political conservatism and religiosity may be global (Norris and Inglehart 2011:196-212). Understanding how the religion-environment connection has changed over time will help specify the complex relationship between trust in science, morality, and ideology.

Increasingly sophisticated secondary data analyses have continued to suggest that Christians remain less ecologically engaged than other religious groups and unaffiliated people in the United States, but not on all measures (Clements, Xiao, and McCright 2014; Sherkat and Ellison 2007; Truelove and Joireman 2009). Sherkat and Ellison (2007) found that although religiosity, particularly in its more fundamentalist incarnations, is negatively correlated with

environmental concern and activism, stewardship beliefs exhibit a positive effect on both environmental concern and willingness to sacrifice for the environment (80). Future studies, they noted, would benefit from more attention to how religious groups frame environmental issues and more comprehensive measures of both religiosity and political ideology (83). Using structural equation modeling and 2010 General Social Survey (henceforth GSS) data, Clements, McCright, and Xiao (2014) found that religiosity *positively* correlated with pro-environmental behaviors but was negatively associated with environmental concern. The authors concluded: “Perhaps most important, scholars should explicitly investigate the complex relationships among religion, political ideology, cultural values, and environmental concern” (97).

Recent qualitative research has explored REMOs through a social movement lens (Ellingson, Woodley, and Paik 2012; Ellingson 2016; Stock 2015; Stock 2009), the complex role that intersectionality plays in REMOs (Baugh 2017), and REMO networks’ relation to ritual and religious identity (Nita 2016). However, historical research strongly indicates the prominent role that religiosity played in shaping environmental concern in American culture. According to historian Mark R. Stoll (2015), the roots of environmental concern in the U.S. can be traced to the first Puritan and Calvinist settlers, who viewed heedless exploitation of nature as sinful avarice, and found a testament to divine power and glory in the sublime beauty of wilderness (10-76). Conservation and stewardship efforts dating back to the Progressive movement of the early twentieth century were also driven in part by religious conviction (277-82).

Based on existing research, two noteworthy dimensions of religiously-grounded environmental concern that animate this research are: (1) a *stewardship ethic*, a vision of the environment as inextricably connected to human wellbeing and responsibility, to be cultivated by human labor for human benefit as well as protected for the sake of future generations, and (2) a

conservation ethic arising in part out of a vision of nature as “preacher,” in which every aspect of the natural world can be seen as a testament to divine power and sublimity (Stoll 2015:37-40).

Both have deep roots in American theological and denominational developments as well as social movements (see Ellingson 2016; Ellingson, Paik, and Woodley 2014; Francis 2015; Stoll 2015; Yaple 1982).

This project makes at least three specific contributions to the literature on the religion-environment connection:

- (1) The large sample size and consistent measures in the General Social Survey (GSS) also allow for the systematic study of long-term trends over time. Changes can be placed in historical context. This research design better aligns with Smith and Pulver’s (2009) contention that the principal goal of religious environmental concern is to catalyze long-term ethical changes in environmental concern, whereas cross-sectional research using variegated measures cannot as readily capture such long-term changes.
- (2) The GSS has been conducted since 1972 (Smith et al. 2015), and environmental concern has been operationalized using specific measures since 1973. This permits an unprecedented level of statistical power in religion-environment research to date in terms of the total number of respondents across all pooled data from 1973-2014, such that differences in environmental concern across multiple distinct religious groups can be compared using nationally representative data.
- (3) The use of multilevel modeling techniques (see Hoffman 2015; Chapter 5) permits examining specific denominational, regional, and sociocultural effects as they vary over time, both *within* and *between* persons and religious groups.

Hypotheses and General Plan of This Dissertation

Given what is already known about the religion-environment connection and the cultural milieu of the U.S., past and present, I examine several specific possibilities regarding the religion-environmental concern connection, and how it is changed over time. Given Lynn White's work as well as related existing literature, I expect a generally negative relationship between Christian religious groups and environmental concern relative to the religiously unaffiliated and other religious groups. However, I also expect this relationship to vary between religious groups as a function of the official positions they have taken regarding environmental concern. Certain religious groups have issued official statements on environmental concern, and others have not. Some issued them as early as the 1970s, in the years directly before the earliest data to be included in this analysis was first collected (e.g., Yapple 1982). Thus, whether and when denominations made official statements on environmental concern is likely to affect the levels of environmental concern among adherents. These hypotheses are not mutually exclusive. It is possible, for example, that Christians have lower levels of environmental concern on average per the Lynn White thesis. It could be simultaneously true that Christian groups that speak out on environmental issues have higher average levels of environmental concern than those that do not. Given the historical dimension of this research, it is also possible that groups with initially low levels of environmental concern come to engender higher levels of environmental concern as ethical shifts occur over time.

This dissertation is divided into two parts. In short, given that conceptually, religiously-grounded environmental concern aims for ethical change over time rather than single-issue policy reform, part one of this dissertation is focused on how environmental concern across two dimensions—*stewardship* and *conservation*—may have changed over time in the U.S. Measuring

change over time is a complex affair, as is addressed in the methods sections contained in Chapter 2. More than one effort has been made to measure “change” in the context of this dissertation. The first part of this dissertation (Chapters 3-5) directly measures change in three distinct ways. The second part of this dissertation tests for non-spuriousness of religious group identity by dividing the data by gender (Chapter 6), income (Chapter 7), and political party identity, with conditional effects of race (Chapter 8). The conclusion examines the results as a function of the hypotheses tested, addresses limitations of this study at length, and offers some conceptual and theoretical avenues by which to better understand the relationship between religion and environmental concern, as well as some of the assumptions that underpin the efforts to make such a connection.

Part One of this Dissertation

In the first part, three differing dynamics are addressed. Chapter 3 addresses trends in environmental concern as a function of religious group identity and birth cohort. Chapter 4 addresses environmental concern as a function of religious upbringing and religious (dis)affiliation in adulthood. Chapter 5 addresses differing levels of environmental concern by age and calendar year as a function of religious group identity.

Chapter 3: cohort analysis

The most straightforward means by which to test how the relationship between religious group identity and environmental concern has changed over time is with cohort analysis, in which the data are divided based on birth cohorts, and the conditional effect of religious group identity is examined as a function of changes across birth cohort. If religiously-grounded environmental concern is a function of fostering long-term ethical change over time (see Smith

and Pulver 2009), then this change may be measured across several decades of birth cohorts.

Several hypotheses are dealt with specifically in Chapter 3:

H₁: Christian affiliation is negatively associated with environmental concern

(Lynn White thesis).

H₂: Groups with pro-environmental stances experience increasingly positive

levels of environmental concern when compared to those that do not.

In a sense, the rest of the dissertation is built around addressing the limitations that inhere in the use of cohort analysis in Chapter 3. Because it is assumed that there is something specifically theoretically meaningful anchored in the period in which one is *born* as a function of both religious group identity and environmental concern, it remains possible that (1) upbringing rather than adult affiliation may explain differences in environmental concern between those who identify as members of specific religious groups versus the unaffiliated, and (2) that effects of succeeding birth cohorts may mask the role of changes by age (older people are less environmentally concerned than younger people across cohorts) or calendar year (environmental concern may fluctuate based on cultural and political shifts over calendar years rather than as a function of birth cohorts). These possibilities are tested in Chapter 4 and Chapter 5, respectively.

Chapter 4: upbringing and disaffiliation

A related question involves whether and to what extent specific religious groups foster *pro-environmental cultures*. To this end, I suspect children who were raised in groups that have specific doctrinal stances on environmental concern will have higher levels of environmental concern as adults than those who were not *even if they disaffiliated in adulthood*. It is possible that measures of religious upbringing will be associated with environmental concern in ways that differ from adult affiliation. These possibilities are tested in Chapter 4.

Research at the intersection of religion and the life course indicates that the strongest predictor of adult religiosity is religious upbringing (Pearce and Denton 2011:23-4; Smith and Denton 2005; Smith and Snell 2009:246-48). Even among academic scientists, who are perhaps the least religious sub-set of the U.S. population, religious upbringing is a strong predictor of adult religiosity (Barry and Abo-Zena 2014:9; Ecklund and Park 2009; Ecklund and Scheitle 2007; Gross and Simmons 2009). With Bourdieu (1977), it may be theorized that religious affiliation is in part a form of *habitus*, an identity established through early childhood socialization (Jenkins 1992; Bourdieu 1993:5) which habituates adaptation to a surrounding cultural milieu (Shepherd 2010:150-51; Webb, Schirato, and Danaher 2002). The most straightforward working definition of *habitus* is a “feel for the game” which “is the result of a long process of inculcation, beginning in early childhood, which becomes a ‘second sense’ or second nature” (Bourdieu 1993:5). If religious identity is in large part a function of childhood socialization, and religious environmental advocacy is predicated on fostering long-term ethical change (Smith and Pulver 2009), then closer attention to religious upbringing may aid in clarifying mixed findings at the religion-environment intersection.

Of course, identity is not entirely determined by childhood social context. This may be nowhere better reflected than in the extent to which people have become less religious than their parents over time, particularly in wealthier nations (Norris and Inglehart 2011:33-79). These changes likely relate to intergenerational changes in parental values toward fostering greater autonomy and choice in children, such that parents may place a lower priority on transmitting their religious views to their children over time (Voas 2014:29). It may be helpful at this juncture, then, to shift from Bourdieu’s *habitus* to Giddens’ (1991) and Beck’s (1992) conception of *reflexivity*, which involves the organization of a person’s identity as, increasingly,

a function of knowledge-seeking agency as a response to the risk that inheres in late modernity. Theorists have shown how these theoretical lenses may be combined (Adams 2006:513; Sweetman 2003; Shepherd 2010:150-55), implying in this context that habitus established via religious upbringing may be embraced, modified, contested, and/or rejected during the path from childhood to adulthood as a function of personal agency. Thus, “successful transmission of religion requires youth to become agents of their own religion, not merely followers of their family’s traditions” (Warner and Williams 2010:163). To put it another way, if habitus may be thought of as a feel for the game, then reflexivity may be thought of as the extent to which childhood habitus is internalized—or rejected, in emerging adults.

In this context, existing negative associations between religiosity and environmental concern may obscure how historically “greener” faiths inculcate a childhood habitus which includes environmental concern. Higher levels of environmental concern among the disaffiliated also elide the possible extent to which reflexive agents may disaffiliate in part due to a complex of knowledge and culture which stands in tension with the complex of habitus learned in said faiths. In other words, people who are more likely to become “greener” in their outlooks during adolescence or adulthood (due to education, changes in social networks, etc.) may also be more likely to question the tenets of a religious upbringing which stands in tension with higher levels of environmental concern.

There are many distinct lines of research which attempt to ascertain who disaffiliates, and why. At the micro-level, the unaffiliated differ from the religiously affiliated in terms of personality, cognitive styles, and ideological frameworks, and these distinctions may correspond in part to early childhood environments or even heritable traits (Galen 2014). From a life course perspective, disaffiliation is more likely to occur over time among those who are less religiously

engaged and/or have less religiously engaged social networks in early adolescence (Pearce and Denton 2011; Smith and Snell 2009). Religious groups and identities may facilitate social ties, but they may also foster social exclusion (Barry and Abo-Zena 2014:33-4) and the attendant adverse interpersonal and social consequences, including cognitive dissonance, disaffiliation, and suspicion toward organized religion more broadly (Mattis 2014:180; Stoppa, Espinosa-Hernandez, and Gillen 2014; Ream and Rodrigues 2014). Reflexive conflicts surrounding moral teachings occasionally result in young adults disaffiliating from religious traditions (Galen 2014:243; Public Religion Research Institute 2012). Additionally, perspectives rooted in market theory indicate that stricter churches may be better able to retain membership (Chaves 2011; Finke and Stark 2007; Jones 2016; Roof and McKinney, 1992), due in part to an identity which emerges reflexively in the context of greater social network homogeneity (Collins 2016; Greil and Rudy 1984; Szrot and Collins 2019). Controlling for disaffiliation in adulthood, in conjunction with examining the effects of religious upbringing, should improve understanding of the religion-environment connection.

Put succinctly, controlling for disaffiliation offers another means by which to test the extent to which it is religious upbringing (*habitus*) or adult religious affiliation (*reflexivity*) that accounts for differences in levels of environmental concern. Furthermore, given that most survey research on the religion-environment connection compares religious groups to the unaffiliated, measuring disaffiliation permits further comparisons. Those raised religious who disaffiliated in adulthood—the “ex’s”—can be compared to those who remained within the religious group of their upbringing. Additionally, those who were not raised religiously affiliated can be compared to those who were raised affiliated but disaffiliated in adulthood or late adolescence. More formally:

H₃: Being raised in a religious tradition with a historically “green” stance is associated with higher levels of adult environmental concern.

H₄: Disaffiliation in adulthood is associated with higher levels of environmental concern than remaining religiously affiliated.

Chapter 5: multilevel model

Other potentially rival hypotheses emerge from the American cultural divide—as Hunter (1991) argued over a quarter of a century ago, religious denominations are becoming less salient than the broader tension between cultural orthodoxy and cultural progressivism. Corroborating this cultural shift, Roof and McKinney (1992:40-71) noted that beginning in the 1970s religious beliefs have become ever less an ascribed status, and religiosity has become increasingly associated with cultural orthodoxy and conservative political ideology (Chaves 2011; Jones 2016; Norris and Inglehart 2011:196-212). It has been well established that being a Republican negatively correlates with environmental concern, and on some issues such as climate change, political conservatism may be the *strongest* predictor of lack of environmental concern (Antonio and Brulle 2011; Funk and Kennedy 2016; Hamilton 2013; McCright and Dunlap 2011). Hamilton (2013) notes the state of American environmental politics at the end of the first decade of the twenty-first century: “As one despairing, Republican-voting meteorologist put it, climate science [denial] has become ‘a bizarre litmus test for conservatism’” (88). If environmental concern can be explained by these cultural and political shifts, then political party affiliation and cultural orientation will more consistently predict environmental concern than religious group identity. Insofar as polarization has further intensified along these lines over the past two decades—and evidence suggests it has (Pew Research Center 2014)—ideological differences cutting across denominations will increasingly explain environmental concern regardless of

official church statements on environmental issues. These issues can be addressed using models which parse out variance related to calendar years from variance related to changes in the effect of age on environmental concern and use a coding scheme which captures cultural divides that cut across religious groups. Two hypotheses are tested in Chapter 5:

H₅: Members of religiously fundamentalist groups hold lower levels of environmental concern.

H₆: Younger members of the same religious group hold higher levels of environmental concern than older members.

It is noteworthy that two studies which modeled change over time using GSS data have been published since this dissertation project was undertaken. Schwadel and Johnson (2017) found that differences among evangelical and mainline Protestants in support for environmental spending vary over time but are linked more strongly to holding a literal interpretation of the Bible than to identifying as Republican. Carlisle and Clark (2018) found that cohort-level increases in environmental concern have occurred across all groups and are not reducible to specific “greening” of Christian traditions. Chapter 5 contributes to these findings by addressing theological orientation as a function of both age and calendar year. *By the end of part one of the dissertation I should be able to state with greater confidence whether long-term ethical shifts have in fact taken place over time as a function of religious group identity, or if they are explicable in terms of broader cultural shifts, fluctuations across years, or higher environmental concern among younger Americans overall.*

Part Two of this Dissertation

It seems uncontroversial to assert that the systematic study of race, class, and gender disparities has represented a cornerstone of American sociology for decades. It would be equally

uncontroversial, I think, to posit that political ideology plays a significant role in explaining levels of environmental concern in the U.S. Evidence emerged in previous chapters which suggested that differences in the religious group-environmental concern connection may cut across these well-established sociological divides. In the part two of this dissertation, I test whether and to what extent, religious group affiliation differs in its association with environmental concern across gender, class, race, and political divides. Chapters 6-8 test whether 1) the religious-environmental concern connection differs by gender, class, and race, and 2) political ideology has a confounding effect on the religion-environmental concern connection in earlier analyses. In Chapter 6, I examine how men and women differ regarding religious belief, practice, and attitudes, before conducting separate multivariate regression analyses to test the extent to which a “green divide” exists between men and women regarding environmental concern and religion. In Chapter 7, I do the same with the trichotomous income variable (below average, average, and above average). Finally, in Chapter 8, I examine the relationship between political ideology and race by dividing the sample into Republicans and Democrats (due to their heterogeneity, Independent/Other Party affiliates have been omitted from the analysis in Chapter 8) and testing conditional effects of race in each major political party.

Well-known theoretical lenses emerging out of sociology that may be collectively referred to as *intersectionality theory* posit complex relationships between race, class, and gender (McCall 2005) in relation to social location, and particularly, to vulnerability to environmental hazards (Harlan et al. 2015). Because the definitions and usages of *intersectionality* have been extensively debated (Davis 2008; Hancock 2007), I should clarify that I simply assume the empirical relevance of gender, class, and race as possible conditional effects on environmental concern as a function of religious group identity. Direct theoretical contributions to the literature

on intersectionality are beyond the scope of the present dissertation, though the findings in part two may make empirical contributions in the future. *In short, by the end of part two of this dissertation, I should be able to state with greater confidence whether religious group identity is more, or less, salient, across gender, income, and racial divides. I should also be able to determine whether the data analyzed here suggests that the religion-environment connection is spurious, explicable in terms of political party or other demographic differences.*

Chapter 6: gender, religion, and environmental concern

Globally, women are found to be more concerned with environmental issues than men and are also more concerned with environmental and technological hazards in general (Bieberstein 2013; Frewer, Miles, and Marsh 2002; Lai and Tao 2003; Stern, Dietz, and Kalof 1993). It has been well established that, at least in postindustrial countries like the United States, women are more religious than men (Emerson, Mirola, and Monahan 2011:137-41; Norris and Inglehart 2004:69-71) and higher levels of religious fundamentalism (which is strongly associated with cultural orthodoxy and social conservatism) have also been found among women in the United States (Darnell and Sherkat 1997; Sherkat and Darnell 1999). In Chapters 3-5 of this dissertation, whereas women were found to be somewhat more likely than men to express a stewardship ethic, the opposite relationship was found regarding conservation. Chapter 6 tests whether the effect of religious group identity on environmental concern differs for women than for men. Put more formally, based on existing literature and findings in part one of this dissertation, it is hypothesized that:

H7: religious group identity is more salient among women than among men in explaining environmental concern.

Chapter 7: self-reported income, religious group identity, and environmental concern

Norris and Inglehart (2011) suggest several correlations that are of import regarding the connection between religiosity, environmental concern, and self-reported income. First, religious participation and belief are expected to decline over time relative to the development of a society from agrarian to industrial to post-industrial (53-79). This contention is particularly salient at the level of the nation or the society—what the authors refer to as *socio-tropic security*, or the level of security on average across a society as a whole—but it is also expected to hold to a lesser extent across *ego-tropic*, or individual, demographic, social indicators (69-71). Another set of predictions associated with existential security theory complicates the religion-environmental concern connection. On one hand, per Norris and Inglehart (2011), “*religious participation is associated with higher levels of membership in non-religious community associations*” (188, italics in original). This includes a modest but statistically significant positive relationship between religious participation and membership in environmental groups (190). Given the possible connections between religiosity, environmental concern, and existential security, it is possible that:

H₈: Religious group affiliation is more salient among those of lower incomes in explaining environmental concern.

Chapter 8: political party affiliation, race, religious group identity, and environmental concern

Several earlier studies have suggested the possibility that the religion-environmental concern connection may be spurious, reflecting a latent dimension of political ideology (Ekberg and Blocker 1995; Greeley 1993; Kanagy and Nelsen 1993). McCright and Dunlap (2011) also noted a *conservative white male effect*—conservative white men are less likely than other groups to express environmental concern, particularly regarding climate change. In part they explain this

by noting that these individuals garnered the greatest advantages within the existing economic system. After examining the role of gender in Chapter 6 and income in Chapter 7, Chapter 8 focuses on the complex connection between political ideology and race in the context of the American cultural landscape, specifically as related to both religious group identity and environmental concern. First, an argument for treating politics and race in the same chapter is warranted.

During the years in which the data analyzed here were collected, economic, social, and cultural upheaval paralleled a political sea change in the U.S. Centeno and Cohen (2012) refer to this period as the rise of *neoliberalism*, which shrunk the Keynesian-era welfare state and deregulated, privatized, and financialized American capitalism; “the rule of markets” meant “conforming to essentialist and universal principles” (318). A brewing crisis, beginning near the end of the 1960s and culminating in the “stagflation” crisis (high inflation, high unemployment) of the late 1970s (319) gives rise to a contention (which they challenge) that, “As has been said of FDR’s New Deal, neoliberalism was a way for the system to survive its own contradictions” (322). Socioculturally, the era has been aptly summarized by Rodgers (2011) in *Age of Fracture*,

One heard less about society, history, and power and more about individuals, contingency, and choice. The importance of economic institutions gave way to notions of flexible and instantly acting markets. History was said to accelerate into a multitude of almost instantaneously accessible possibilities. Identities became fluid and elective. Ideas of power thinned out and receded...the dominant tendency of the age was toward disaggregation (5).

The notable re-shuffling of political party identity is traced by Jones (2016) as the rise—and fall—of the so-called “White Christian Strategy” in American politics. This pattern emerges with the “First Great White Switch” during the 1964 anti-civil rights campaign by Republican

contender Barry Goldwater (88). Though Goldwater lost, Nixon carried the torch forward by adopting compromise strategies which curtailed more robust government-led civil rights efforts in the South (88-9). These efforts pried loose southern loyalties to the Democratic Party. The “Second Great White Switch” emerged with the 1980 loss of politically moderate Southern Baptist Jimmy Carter to the dubiously religious populist Ronald Reagan (89-91).

The coalition between the Republican Party and the more culturally orthodox elements of Christianity reached its apogee mid-way through the two-term presidency of George W. Bush, and then began its decline (93-4). Survey analyses of ostensibly fiscally conservative movements such as the Tea Party suggest that such movements were in fact resurgences of moral conservatism rather than a new tide of libertarianism (94-8). With the election of Obama in 2008, and the defeat of Romney in 2012, the tide seemed to be shifting—the white Christian voting bloc was aging and shrinking. Republican victories rooted in the white Christian strategy that propelled Reagan into the White House are predicted to become less effective in an increasingly multicultural, secular, and culturally progressive social landscape (98-110).

Some would argue based on these broad changes that the American Republican party increasingly became organized around culturally orthodox Christian ideals that may have aided in reproducing past racial and gender hierarchies in the U.S. (Jones 2016:91-3). However, these large-scale shifts foreground the more extensive past and present role of religion, politics, and race, particularly in the context of American Protestantism. In the words of Martin Luther King, Jr.:

We must face that fact that in America, the church is still the most segregated major institution in America. At 11:00 on Sunday morning when we stand and sing, and “Christ has no East or West,” we stand at the most segregated hour in this nation... The first way that the church can repent, the first way that it can move out into the arena of social

reform, is to remove the yoke of segregation from its own body (quoted in Jones 2016:164-5).

Researchers who have recently sought to study multiracial congregations have found that such congregations remain rare (Emerson and Woo 2006). Others have encountered aversion from white Christians to participating in a study about black-white race relations among Christians, including white mainline religious leaders (Emerson and Shelton 2012:17-8). Emerson and Smith (2000) noted that the racial divide in American churches has persisted since the beginning of the eighteenth century (22-5). Some post-Civil War white evangelicals framed racial tensions in terms of individual relationships rather than institutional discrimination, a trend which gave rise to the cultural tensions between North and South, and eventually, between the culturally orthodox and culturally progressive, which remain today (37-49). In other words, race, religion, and politics in the U.S. are sufficiently entangled that an analysis of two of these aspects of the American sociocultural landscape without attention to the third is likely to be woefully incomplete.

Additionally, American blacks are significantly more religious than American whites (Granger and Price 2007; Shelton and Emerson 2012; Smith and Snell 2009). Furthermore, concern over environmental degradation, particularly climate change, and its disproportionate impacts on the poor, women, children, and people of color has garnered increasing sociological scrutiny (Harlan et al. 2015; Nagel 2016). Given this context, religion is expected to take on different salience in explaining environmental concern among blacks relative to whites, and among Democrats and Republicans. Specifically:

H₉: Religious group identity is more salient among blacks than among whites in explaining environmental concern.

Finally, existing literature and concerns surrounding the connections between religiosity, political ideology, and environmental concern offer a possible “alternative hypothesis” which is directly tested in Chapter 8, as well:

H_A: The connection between religious group affiliation and environmental concern is spurious, explicable in terms of differences in political party affiliation.

Summary and Recapitulation

This dissertation is constructed around testing these hypotheses. The next chapter details the analytic strategies to be used, and the remaining chapters are devoted to unraveling issues related to understanding the religion-environmental concern connection in the U.S., and how it has changed over time. Chapter 3 examines environmental concern, broadly speaking, using analysis of religious groups’ levels of environmental concern, particularly by birth cohort (H₁ and H₂). Chapter 4 turns to the effects of religious upbringing and disaffiliation on environmental concern (H₃ and H₄). Chapter 5 deploys a three-level model to attempt to extricate the effects of person-level effects such as age from calendar time as they relate to the religion-environment connection (H₅ and H₆). Chapter 6 compares effects of religious group affiliation among women relative to men (H₇). Chapter 7 compares how religious group affiliation relates to environmental concern differently among below average, average, and above average income earners (H₈). Chapter 8 compares Republicans to Democrats, and blacks to whites, as related to both religious group affiliation and environmental concern (H₉); and assesses the extent to which the religious group identity-environmental concern connection is explicable in terms of political party identity (H_A). Chapter 9 concludes by revisiting the above hypotheses, addressing limitations, and examining the broader theoretical significance of this research.

Chapter 2. Analytic Strategy

I urgently appeal, then, for a new dialogue about how we are shaping the future of our planet. We need a conversation which includes everyone, since the environmental challenge we are undergoing, and its human roots, concern and affect us all. The worldwide ecological movement has already made considerable progress and led to the establishment of numerous organizations committed to raising awareness of these challenges. Regrettably, many efforts to seek concrete solutions to the environmental crisis have proved ineffective, not only because of powerful opposition but also because of a more general lack of interest. Obstructionist attitudes, even on the part of believers, can range from denial of the problem to indifference, nonchalant resignation or blind confidence in technical solutions.

- Pope Francis, *Laudato si* (2015:14)

I hope I'm not going to get castigated for saying this by my priest back home. But I don't get economic policy from my bishops or my cardinals or my pope...religion ought to be about making us better as people, less about things [that] end up getting into the political realm.

- Practicing Catholic and Presidential Candidate Jeb Bush on *Laudato si* (Hale 2015).

This dissertation uses data from the 1973-2014 General Social Survey (GSS), a large nationally-representative survey which contains detailed measures across forty-one years. The GSS was administered every year from 1972 to 1994 except 1979 and 1992 and has been conducted every other year since 1994 (Smith et al. 2015). The multiple, large, cross-sectional waves of the GSS, and large number of attitudinal variables make it ideal for measuring changes in attitudes over time (see Gauchat 2012; Loftus 2001). As of 2014, 59,599 persons had been surveyed, but the GSS uses split ballots, meaning not every person is asked every question. This study used listwise deletion of missing values, which has the potential to introduce non-response bias given an increase in the non-response rates in the GSS (see Berinsky 2008). Since the beginning of this research project I have become aware of several alternatives for addressing missing data and values. Recent GSS publications have suggested the possibility of using weights to adjust for potential sampling bias introduced by GSS research methods, such as a slight oversampling of 1982 and 1987, and bias potentially introduced by limiting responses to one adult per household (Smylie 2016). Alternatives to listwise deletion such as maximum likelihood estimation remain a possibility under conditions such that significant bias is expected (see Enders 2011). Future research may benefit from simulations detailing the use of the GSS-

recommended weighting procedures versus these more sophisticated alternatives, particularly in the context of larger sample sizes and/or measures of fluctuation or change over time, such as those presented in this context. However, given the large sample sizes in this analysis, these biases are not expected to introduce significant systematic sampling bias.

The dependent variables are measures of environmental concern that was not present in the 1972 dataset, and two of the control variables, *region* and *size of place of interview in 1000s*, were omitted in 2008. Given limitations imposed by missing data, the maximum total number of persons included in the multivariate portions of this study is 34,266 (though some of the bivariate tests draw on a significantly larger sample). Where necessary and appropriate, listwise deletion of missing values will be employed. Data for the proposed project are analyzed using SPSS, SAS, and Excel software as appropriate.

Because the central goal of this research is ultimately to explain *why* environmental concern among religious groups differs, and whether it has changed over the study period, relevant theoretical, conceptual, and historical information is included in each chapter. I think this makes the dissertation more readable and adds conceptual and historical depth to the statistical analysis. Tables and charts are presented throughout to visualize the data, though some of the larger, or less conceptually interesting, tables will be relegated to technical appendices at the end of each chapter as needed.

Variable Specifications

A table containing variables to be used in this study, as well as the years/waves of the General Social Survey in which they appear, can be found in the Technical Appendix at the end of this chapter.

Outcome Variables

Two outcome variables are the focus of this study: measures of *stewardship* and *conservation*. Single measures of environmental concern are limited, and these variables are asked in connection with national-level spending, which further limits what conclusions can be tentatively drawn. However, religious political activism in the U.S. has a long history, most visibly around debates over abortion and same-sex marriage (Jones 2016). Religious environmental concern, or creation care, like other religious political efforts, seeks long-term, large-scale ethical change. Even if Religious Environmental Movement Organizations often engage at the local or community rather than federal level (and they do—see Baugh 2017; Ellingson 2016), the goal of ethically contextualized political efforts is expected to be large-scale, long-term political change at the national level.

The outcome variables used in this study are part of a battery of federal government spending variables featured in the General Social Survey. Specifically, questions associated with this variable used the prompt: “We are faced with many problems in this country, none of which can be solved easily or inexpensively. I’m going to name some of these problems, and for each one I’d like you to tell me whether you think we’re spending too much money on it, too little money, or about the right amount. First (READ ITEM A): ...are we spending too much, too little, or about the right amount on (ITEM)? Eleven different items have appeared in this section of the General Social Survey since 1973, of which the primary outcome variable of this study, *Improving and protecting the environment*, is listed second, after *space exploration program*. Beginning in 1984, four additional questions appeared in this federal government spending module: *highways and bridges*, *social security*, *mass transportation*, and *parks and recreation* in

that order. The variable I have operationalized as conservation below is labeled *parks and recreation* and is the last item in the index (Smith et al. 2015).

Stewardship

The primary outcome variable for this study is a response to whether the U.S. is spending enough to improve and protect the environment, a conceptualization of the *stewardship ethic*. Responses are available for this variable across all available years of the GSS since 1973, with a total number of valid responses for each wave (after combining ballots x, y, and z by merging variables) falling between 929 and 2,898. This measure of environmental concern is part of a set of variables loosely related to “spending,” which prompted respondents by noting a list of problems which are complicated and expensive, before asking whether respondents believe *too much*, *about right*, or *not enough* is being done for each problem (in this case 63% believe too little is being done “to improve and protect the environment”). Since the category *too much* accounts for fewer than ten percent of respondents, it has been collapsed into *about right* to create a dichotomous outcome variable (where *not enough*=1 and *about right/too much*=0). Others have used this measure to examine the religion-environmental concern connection (Greeley 1993), and while a single two-category measure of environmental concern is limited, it makes the model simpler and offers a larger set of data from which to build birth cohorts and model change over time.

Conservation

A secondary outcome variable, part of the same battery of “national spending” variables, asks respondents if the U.S. spends enough on national parks, a conceptualization of a *conservation ethic*. Unlike the *stewardship* question, the question regarding spending on national parks has only been asked since 1984. The national parks spending variable appears on 20

iterations of the GSS with a total number of valid responses for each wave ranging between 1,271 and 2,920. For the sake of consistency and simplicity, this variable has also been collapsed to create a dichotomous outcome variable (where *not enough*=1 and *about right/too much*=0, where 33% expressed conservation by answering *not enough*).

Predictors

Religious Group Identity

In religious research, the RELTRAD scheme has been widely used (Steensland et al. 2000), which divides Christians into Catholics, Mainline Protestants, Black Protestants, and Evangelical Protestants. This approach came to replace the earlier FUND scheme, which drew upon the GSS researcher-assigned theological orientations to categorize religion according to *fundamentalist*, *moderate*, and *liberal* orientations (Smith 1990). Given the hypotheses to be tested, this dissertation calls for a coding scheme with more detail, such that comparisons between religious group identities (rather than broad cultural tendencies) can be assessed as a function of official stances on environmental issues. Except for Chapter 5, which employs the FUND scheme, this research uses the author-devised religious group identity coding scheme outlined below.

There are essentially two categorical independent variables which measure belonging to, or being raised in, a religious group identity, each created by merging GSS variables to create categories both large and internally homogeneous enough to test the hypotheses. The primary independent variable *religious group identity* was created by merging the three GSS variables which measure religious *affiliation*, *denomination*, and *fundamentalism*, variables which are present across all waves of the analysis. *Affiliation* measures responses to the question, “What is your religious preference?” while *denomination* further sub-divides Protestants by

denominational identity. *Fundamentalism* represents the respondents' level of theological fundamentalism (how fundamentalist is R?) as determined by General Social Survey researchers. These variables were merged to create categorical predictors (See Table 1, below).

Table 1: Religious Group Identity*Theological Orientation Crosstab

Identity	Fundamentalist	Moderate	Liberal	Unknown	TOTAL
<i>Protestant</i>					
Baptist	11,330	368	0	1	11,699
Methodist	140	2,097	3,224	0	5,461
Lutheran	778	2,847	0	0	3,625
Presbyterian	158	335	1,734	0	2,227
Episcopalian	0	0	1,331	0	1,331
Fund. Other Protestant	5,305	0	0	0	5,305
Other Protestant	0	938	0	300	1,248
Liberal Other Prot.	0	0	948	0	948
Non-Denominational	4	3,097	0	0	4,001
<i>Non-Protestant</i>					
Catholic	0	14,532	0	0	14,532
Jewish	0	0	1,195	0	1,195
Other Religion	115	584	93	1,597	2,389
None	0	1	6,634	0	6,635
TOTAL	17,830	24,799	15,159	1,897	59,685

Note: Totals reflect pooled GSS data across all waves and represent maximum possible N for the independent variable. Actual N may vary by variables used in specific analyses.

First, religious *affiliation* was re-coded into five categories: Protestant, Catholic, Jewish, Other Religion, and None. Then, *denomination* was used to further sub-divide Protestants into *Baptist, Methodist, Lutheran, Presbyterian, Episcopalian, Other Protestant, and Non-Denominational*. The third step was to further sub-divide the heterogeneous other Protestant category by theological orientation using the *fundamentalist* variable, which divides respondents into *fundamentalist, moderate, and liberal*. Put simply, fundamentalism in this context tends toward a more literal interpretation of holy texts, more rigid moral codes, and an emphasis on faith and personal salvation. Liberalism, other the other hand, tends to reinterpret sacred texts in light of modern life, and may treat as parable or metaphor what fundamentalists might interpret as literal truth. Moderates fall somewhere between these two theological orientations. Some

scholars have characterized the cultural divide in quasi-theological terms as a schism between *cultural fundamentalists* and *cultural modernists* (Eve and Harrold 1990; Hunter 1991; Jones 2016:30-3). These measures can also be interpreted as proxies for the divide between the *culturally orthodox* (fundamentalist) and *culturally progressive* (liberal).

The transformation and merging of variables to create religious groups for each set is detailed in Table 1. Given that almost all Baptists are considered *fundamentalist*, all Catholics and virtually all non-denominational Protestants are considered *moderate*, and Episcopalians, Jews, and the unaffiliated are considered *liberal*, these categories were not further sub-divided by *fundamentalism* in either set. *Other religious* groups were also not further divided, given the relatively small number of this sub-set of religious group identities for whom these categories were meaningful. These variables are featured most prominently throughout this dissertation, while Chapter 4 focuses on the role of *upbringing* in a religious group identity (as well as adult disaffiliation) in explaining levels of environmental concern. Accordingly, the relationship between these facets of religious group identity and upbringing is illustrated in detail in Table 2.

Religious Upbringing

A second independent variable was created to examine the role of religious *upbringing* on environmental concern (the focus of Chapter 4). The GSS contains three variables that are analogous to those used to create the primary independent variable by grouping respondents into meaningful religious categories according to *affiliation*, *denomination*, and *fundamentalism at 16*. Using these variables in a similar fashion to the measures of adult religious affiliation above, I created 13 more categories, whether and to what extent religious upbringing affects environmental concern.

Table 2: Religious Upbringing*Theological Orientation Crosstab

Upbringing	Fundamentalist	Moderate	Liberal	TOTAL
<i>Protestant</i>				
Baptist	12,346	373	0	12,719
Methodist	207	2,251	3,826	6,284
Lutheran	777	2,920	0	3,697
Presbyterian	164	352	1,901	2,417
Episcopalian	0	0	1,250	1,250
Fundamentalist Other Protestant	4,410	0	0	4,410
Other Protestant	0	947	0	947
Liberal Other Protestant	0	0	820	820
Non-Denominational	0	1,634	0	1,634
<i>Non-Protestant</i>				
Catholic	0	16,319	0	16,319
Jewish	0	0	1,169	1,169
Other Religion	64	295	98	457
None	0	0	2,932	2,932
TOTAL N	17,968	25,091	11,996	55,055

To control for adult disaffiliation (for the purposes of testing H₄), I created a dummy variable (1=*unaffiliated as adult*, 0=*religiously affiliated*) which is included when analyzing the effects of upbringing within a specific religious group on environmental concern. The role of religious upbringing and disaffiliation is explored in Chapter 4. The detailed examination of religious upbringing allows me to separate out the effects of religious background, culture, and upbringing from broader historical shifts in levels of environmental concern across religious group identities (the focus of the next chapter).

Controls

Religiosity and Institutional Confidence

One of the most recognizable measures of religiosity is self-reported frequency of religious service attendance. Though field research suggests that surveys may significantly overestimate the frequency of religious service attendance due to social desirability bias (see Hadaway and Marler 2005), this measure is consistently found across all GSS waves, and is

common to social scientific research on religion. After some experimentation with the model, I collapsed attendance into a dummy variable, whereby respondents *attend religious services at least once a week*=1, or *infrequently/never attends*=0.

Additionally, measures of *confidence in the scientific community* and *confidence in organized religion* can be found across all measures of the GSS (re-coded *a great deal*=1, *only some/hardly any*=0). These variables capture some of the nuances of religious versus scientific world-views in relation to environmental concern and are expected to be related (positively in the former case, and negatively in the latter) to levels of cultural orthodoxy among respondents. Other measures of religiosity that are not present in a sufficient number of waves of the GSS, which are deployed intermittently to more closely examine the effects of specific beliefs, practices, and worldviews on environmental concern, include: *feelings about the Bible* (Book of fables, Inspired word of God, literal word of God), which appears in all waves after 1984 and is thus included in the *conservation* and *stewardship* models, given that existing research indicates that feelings about the Bible strongly and significantly explains environmental concern (see Eckberg and Blocker 1989; Szrot 2019).

Political Party Identification

Party identification (coded *Democrat*, *Republican*, and *Other=reference*) is also controlled for, given the strength of the partisan divide on many environmental issues. In Chapter 8, data are divided into Democrats and Republicans to examine conditional effects of religious group identity on environmental concern, and to assess the possibility of spuriousness. That is, given the strength of political party affiliation in the U.S. in predicting environmental attitudes, the extent to which Republicans and Democrats differ by religious group identity indicates the

likelihood that the religious group identity-environmental concern is nonspurious. The alternative hypothesis (H_A) is tested by dividing the data by political party.

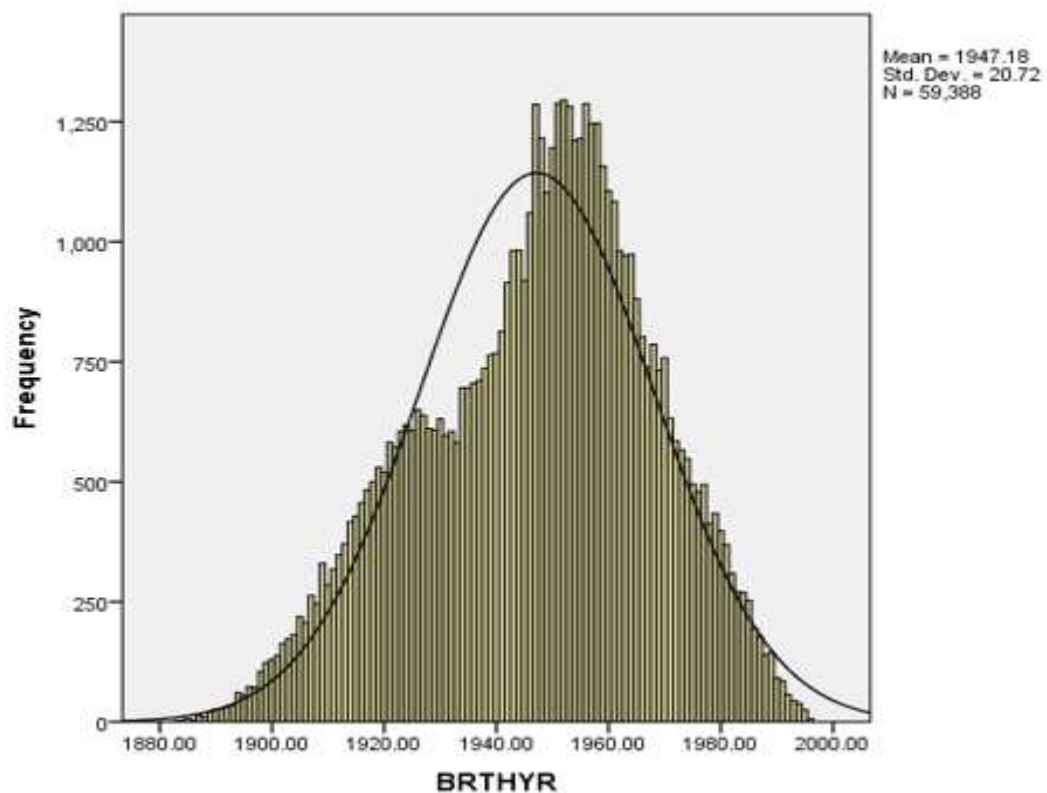


Figure 1: Histogram, Birth Year (1884-1996)

Using Birth Cohort to Examine Change over Time

The focus of much of Chapter 3 is an examination of changes across birth cohorts in relation to environmental concern by religiosity. To create birth cohorts, the GSS variable age was subtracted from the GSS year to create a *birth year* variable (see Figure 1). Birth cohort was treated as a continuous variable in this analysis, and as noted in Figure 1 (a histogram of birth years), would be approximately normally distributed. However, because the ceiling of the age variable is 89 (all persons older than 89 are combined into a single category), and the GSS only surveys persons aged 18 and older, birth year ranges from 1884 to 1996 for the *stewardship variable*, and 1895 to 1996 for *conservation*. A birth cohort variable was created with seven

values, in which 0=a birth year between 1884 and 1904 (1895 to 1904 for *conservation*), 1=a birth year between 1905 and 1919, 2=birth year between 1920 and 1934, 3=birth year between 1935 and 1949, 4=birth year between 1950 and 1964, 5=birth year between 1965 and 1979, and 6= birth year between 1980 and 1996.

An important limitation in this use of birth cohorts inheres in the data collection methods of the GSS (see Figure 2). With an age ceiling of 89 and an age floor of 18, this means that not all cohorts were present across all survey waves. Members of birth cohort 0 would be at least 89 years of age as of 1993 (1904+89=1993); thus, data for cohort 0 ceases to be available after that year when using birth cohort analysis given the age ceiling. Similarly, data for cohort 1 ceases to be available after 2008, when people born in 1919 turned 89 years of age. Data for cohorts 2-4 was available across all GSS survey waves. However, data for cohorts 5 and 6 are truncated by the floor effect—a person born in 1965 does not turn 18 until the year 1983, and a person born in 1980 does not turn 18 until 1998.

Because the focus of this study was whether environmental concern has increased over time as a function of religious group identity, the main effects of religious group and birth cohort, as well as religious group*birth cohort interactions, were examined. To detect change over time in levels of environmental concern among different religious group identity, birth cohort*religious group identity interactions were tested in all relevant models. Birth cohort is also used as a control variable elsewhere as needed. However, as others have noted (see Glenn 1981), cohort analyses are plagued by the difficulty of separating cross-sectional age effects from cohort effects. Due to collinearity issues, and given the focus of this research, the variable *age* (which was used to create cohorts) has been excluded from the cohort analyses (but is included prominently in Chapter 5). This may pose additional limitations given longstanding research in

environmental sociology suggesting that age is significantly negatively associated with environmental concern (Buttel 1979; Mohai and Twight 1987). Given the historical and theoretical perspectives linking religious group identities to environmental concern, it is likely that the use of age rather than birth cohort as a predictor of levels of environmental concern rather than birth cohort downplays the role of ethical shifts in explaining changes in levels of environmental concern among different groups at different times. The choice to use these seven birth cohorts was based on interpretability, and on preserving the overall shape of the distribution of birth years; a more sophisticated approach employing “generations” would draw upon shared historical events and experiences, and involve persons potentially belonging to more than one generation simultaneously (see Mannheim 1952), adding further complexity to efforts to assess change over time.

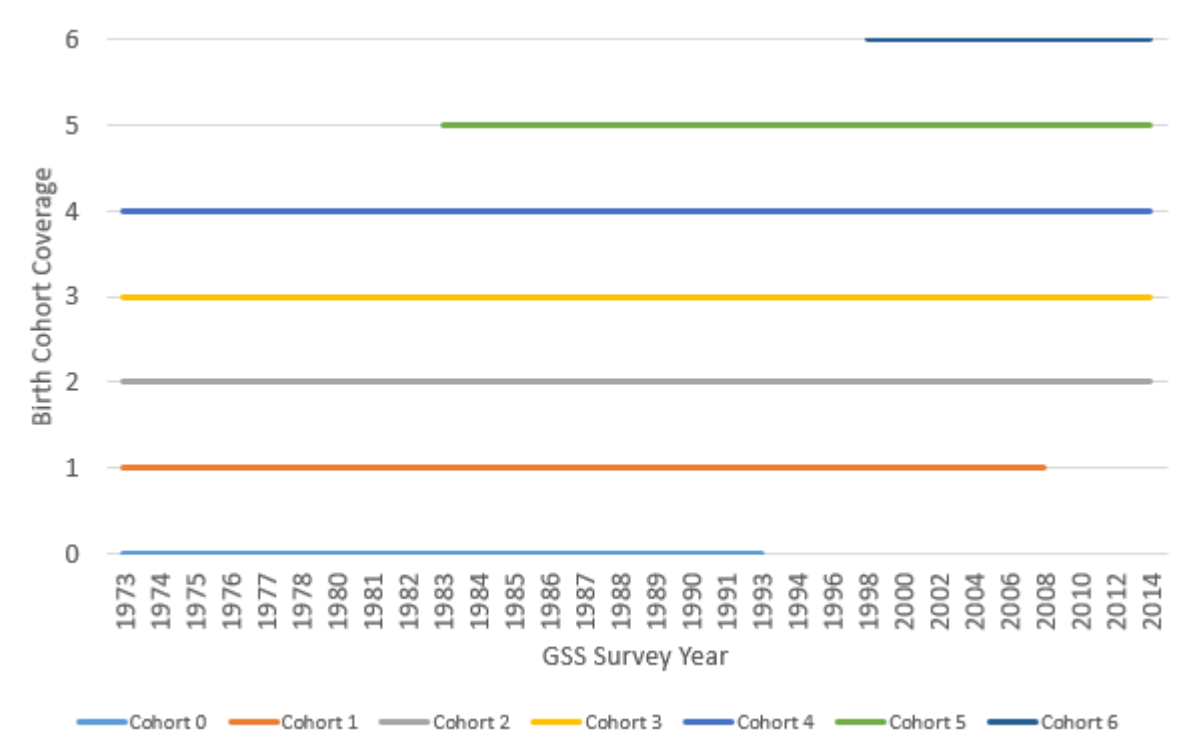


Figure 2: Birth Cohort Coverage by GSS Survey Year

Additionally, a quadratic birth cohort term (cohort*cohort) was tested and has been included in all models in which model fit was improved by its inclusion. A three-way (religious group identity*cohort*cohort) interaction was also tested across all models, but did not significantly improve model fit, indicating that models could likely be treated as varying quadratically at the same rate across other interactions. Because the focus of this study is change over time, Chapters 3, 6, 7, and 8 all feature some interpretations which include religious group identity, cohort, cohort², and religious group identity*cohort interactions. Due to the difficulties of summarizing interaction terms which contain a categorical variable, a linear effect, a quadratic effect, and a categorical*continuous interaction in writing, interactions were computed using “hypothetical persons modeling” in which model-predicted values are imputed for coefficients in order to chart the model-predicted values at each point (Hoffman, 2015:41-77)—in this case, with each successive birth cohort. The model-predicted change in stewardship, as denoted by $E(Y)$, is the sum of the intercept β_0 , the simple main effect of religious group identity $\beta_i X$, the linear change in stewardship by cohort $\beta_1 Z$, the quadratic change in stewardship by cohort $\beta_3 Z^2$, and the religious group identity by cohort interaction coefficient $\beta_{i1} XZ$:

$$E(Y) = \beta_0 + \beta_i X + \beta_1 Z + \beta_3 Z^2 + \beta_{i1} XZ$$

With the addition of the quadratic cohort term, the linear effect of time becomes the instantaneous rate of linear change specific to cohort zero, the rate of cohort change becomes the first derivative of $\beta_1 Z + \beta_3 Z^2$, or $\beta_1 + 2\beta_3 Z$, and the cohort-specific deceleration (as indicated by a negative quadratic cohort coefficient) is the second derivative of $\beta_1 Z + \beta_3 Z^2$, or simply $2\beta_3$.

Gender, class, and race

Gender is included as a control variable in all chapters (female=1, male=0), except Chapter 6, where testing H_7 requires splitting the data by gender to examine the differences in

religious group identity among women and men in explaining environmental concern. I also control for social class using a measure of *perceived family income* (re-coded *below average, average, above average*) which will be used to split the data in Chapter 7 to test H₈. Similarly, *race* (coded *nonwhite=1, white=0*) is included as a control in the majority of the models, but data is split by race (*0=white, 1=black, 2=other*) to test H₉ given significant theological differences between Protestants by race (see Shelton and Emerson 2012) and evidence of a complex “green divide” by race with regard to environmental concern in the U.S. (Baugh 2017) in Chapter 8.

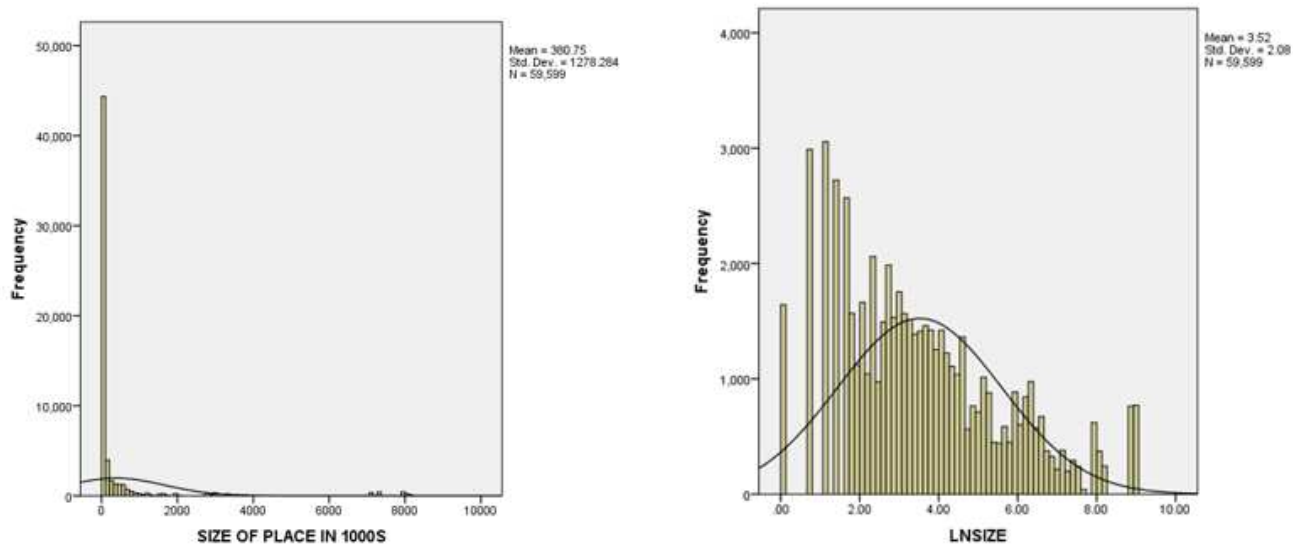


Figure 3: Size of Place in 1000s, Original and Natural Log-Transformed Distributions

Other controls

Demographic controls include *education*, which is measured as a continuous variable with values from 0 to 20 but has been centered at 12 to provide more meaningful intercepts in multivariate regression analyses. Geographic controls include *region* and *size of place in 1000s*, as religion and politics differ by region and between urban and rural populations in the U.S. For this study, the U.S. has been divided into four regions: Northeast, Midwest, South, and Other.

Region permits comparison of *stewardship* and *conservation* effects relative to differing regions of the U.S. The variable *size of city/town in which the interview takes place in 1000s of people* serves as a proxy for comparing *urban* versus *rural* residence. The original variable is highly overdispersed as indicated by Figure 3 (left). Overdispersion this extreme violates the assumption of *homoscedasticity* of errors in multivariate regression—regression analysis typically assumes that error (e) is normally distributed around the conditional mean. Because there is a clustering of responses near zero, using this variable to predict environmental concern would result in inaccurate standard errors and might impart statistical significance to nonsignificant effects (Hoffman 2004). To cope with this problem, the variable was natural log-transformed after adding one to correct for skewness (Figure 3, right). Even though the transformed distribution still exhibits the hallmarks of overdispersion and heteroskedasticity, these effects are far less extreme in the transformed variable. Coefficients must be re-transformed using the exponential (e^x) function for meaningful interpretation. Even though region and size of place in 1000s are not included in the 2008 GSS (and thus all models which include region and size of place of necessity exclude all other 2008 data), the importance of regional and urban-rural divides in assessing environmental concern is, I think, relatively clear.

Additionally, *frequency of prayer* (recoded *daily or more*, *weekly*, and *never*), *belief in life after death* (yes=1, no=0), and *belief in God* (“don’t believe”=atheist; “no way to find out”=agnostic; “believe in some higher power,” “believe sometimes” and “believe but have doubts” combined; and “know God exists”), which are only available across 11 of the GSS waves, are used in Chapter 4 to sub-divide the religiously unaffiliated.

Model Specifications

Re-coding the dependent variables as dichotomous indicators (1=*too little*, 0=*about right/too much*) permits the use of the Linear Probability Model (LPM). LPM is based on the linear Ordinary Least Squares (OLS) regression model and treats the dichotomous dependent variables as linear—coefficients represent the difference in probability that Y equals 1 given X. LPM coefficients (β) are interpretable as probabilities falling between [0, 1]. As with the formulas for other forms of linear regression, the LPM equation can be written:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \dots \beta_i X_i + e \text{ where } \beta_0 = P(Y = 1 | \sum X_i = 0) \text{ and } \beta_i = \Delta P(Y = 1 | X_i)$$

In other words, the model intercept (β_0) is the expected probability that Y = 1 when all coefficients (β_i) are zero, and coefficients are the difference in the probability that Y will equal one for the given predictor variable (X_i). In the model set forth by the independent variable(s) and controls noted in the previous section, I will use *None* or the religiously unaffiliated as the reference category. Thus, coefficients can be read as the change in probability of expressing environmental concern (as *stewardship* or *conservation*) for a religious group relative to the religiously unaffiliated. Although LPM violates the linearity assumptions of OLS regression, some research indicates that linear probability coefficients do not meaningfully differ in their magnitude from the less intuitive odds ratios (as used in logistic models) provided probabilities do not approach 0 or 1 (Hellevik 2009). The primary reason for using LPM lies with straightforward interpretability—coefficients can be interpreted as probabilities, or changes in probability. I have employed LPM in Chapter 3, particularly for this reason.

However, over the course of this research, I became more familiar with some significant mathematical disadvantages to LPM. One limitation of LPM is the assumption of *linearity*, and as noted above, many of the models benefited from the addition of a *nonlinear* (quadratic) cohort term. According to Mood (2010), when relationships vary nonlinearly, LPM can produce

systematically biased standard errors (in an unknown direction). Additionally, higher-order interaction terms proved problematic in earlier iterations of this work. Some early models using LPM resulted in model-predicted changes in probability that approached one, and model-predicted trajectories that exceeded one. Such coefficients are mathematically improbable, and impossible, respectively. In both cases, model fit, coefficients, and standard errors were deemed dubious, which led me to question the veracity of LPM as I began to address some of the more complex interactions in this paper (particularly in the three-level model in Chapter 5 and the higher-order interaction terms in Chapter 8).

In this updated version, all models presented in this dissertation save those presented in Chapter 3 employed binary logistic regression. Appropriate for dichotomous outcome variables, logistic regression uses a “logit” link function from the family of generalized linear models to transform the conditional mean, such that the resulting coefficients are unbounded (can vary, in principle, infinitely in both directions) but do not exceed the limits of possible outcomes as set forth by the binary outcome variables [0, 1] (Hoffman 2004:46-52; Linneman 2014:435-61). The logit is related to probability (p) such that:

$$\text{Logit} = \text{Ln}\left[\frac{p}{1-p}\right] \text{ and } \text{Ln}\left[\frac{p(y_i=1)}{1-p(y_i=1)}\right] = \beta_0 + \beta_1 X_1 + \beta_2 Z_2 \dots$$

A logit thus becomes the natural log transformed change in the odds that $Y=1$. Logits are not straightforwardly interpretable when they involve variables that are treated as continuous and/or interaction effects which include at least one continuous variable. This is the case in most models of interest in this dissertation. As such, logits can be converted from natural log-transformed odds ratios (for which *logit* is a useful shorthand) to changes in probability using the inverse link function $P = \frac{e^{\text{logit}}}{1+e^{\text{logit}}}$ such that:

$$P(y_i = 1) = \frac{1}{1+e^{[-1(\beta_0+\beta_1 X_1+\beta_2 Z_2\dots)']}}$$

Statistically significant associations in religious upbringing and adult disaffiliation are converted to model-predicted probabilities for each dependent variable using the above equation and displayed in charts for readability.

Modeling Change over Time, Chapter 5

Models are built to test specific hypotheses, and many types of models are included as needed, but the central goal of this research is to model and explain *change over time*. The simplest models deployed to explain change over time are cohort analyses which build upon the LPM by including interaction effects between the continuous variable *cohort* and the categorical *religious group* independent variables (Chapter 3). Modeling religious upbringing and disaffiliation is somewhat more straightforward (Chapter 4), requiring no interaction effects (interaction effects were tested but were not shown to be significant). Binary logistic regression was used to compare changes in environmental concern across birth cohorts by gender (Chapter 6), class (Chapter 7), and the conditional effects of both race and political party affiliation (Chapter 8). However, Chapter 5 employs multilevel modeling to disentangle changes across survey years from changes by age in the context of the religion-environment connection. There are potentially 29 separate survey waves across 41 years on which change can be modeled using the data. Change over time can be modeled in ways that are more sophisticated, and more flexible, with *multilevel* models. Such models presume that change between persons and change within persons can be modeled separately to examine the extent to which outcomes are a function of differences between persons or changes within persons over time.

Note how each measure changes over time in Figure 4. *Stewardship* fluctuates more noticeably, falling to historic lows in the late 1970s, building to a crescendo in 1990, and falling dramatically by 1993, increasing again in 2004 and receding in to another historic low in 2012.

Conservation appears to follow similar minor fluctuations, although the two measures diverge a bit after 2006. Modeling these changes required *piecewise models* (in the case of stewardship) which examine differing fluctuations in stewardship before and after 1991 as well as *nonlinear time* parameters which permit time to vary according to quadratic, log-linear, and other nonlinear trajectories. The specific steps through which models were fitted are displayed in Chapter 5. However, ultimately only the stewardship model called for a multilevel model.

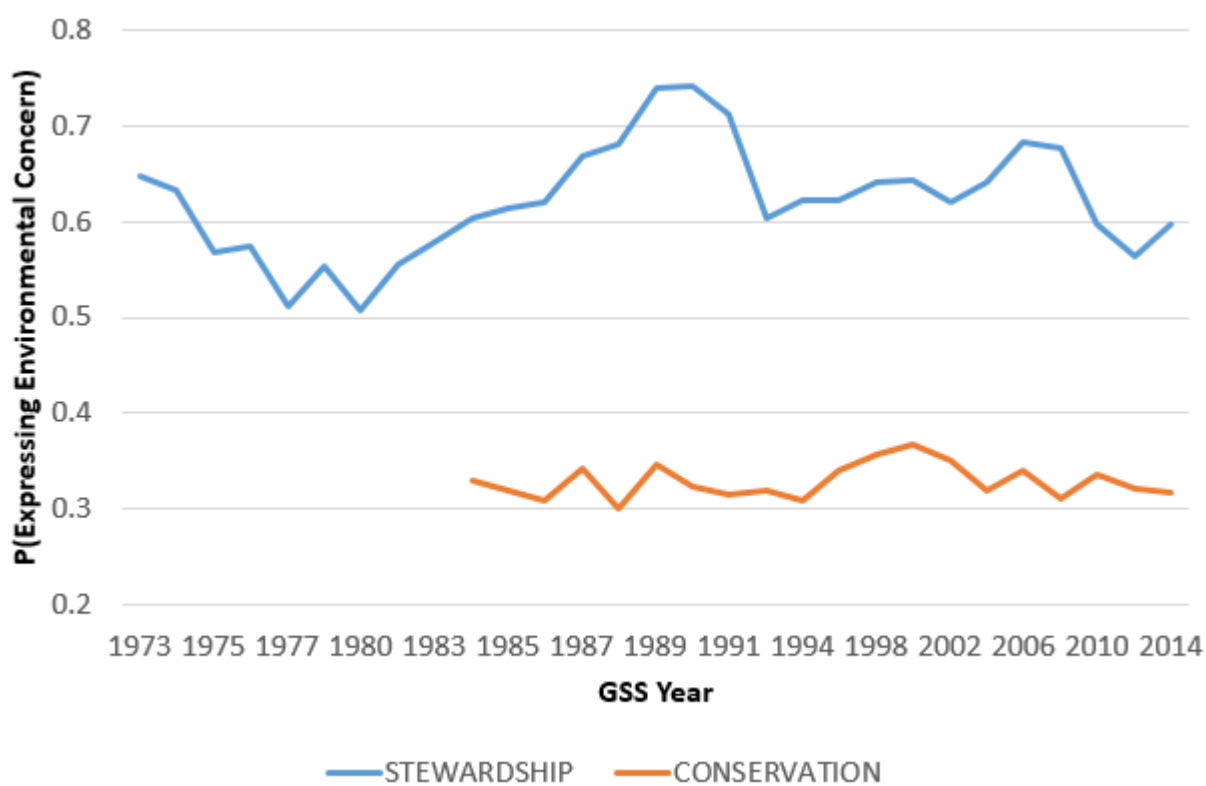


Figure 4: Mean Probability, Environmental Concern by Year

The GSS is not a longitudinal data set in the strictest sense—different people were asked the questions across each wave in the study, and so modeling within-person change is not feasible using this data set. Thus, the most comprehensive means by which to address the limitations in the data, while also offering a novel approach to testing change over time, is to build a three-level model. Here, persons (and person-level information) constitute Level 1, and

GSS year constitutes Level 3. Level 2 is religious group identity*year—in this case, religious group identity was operationalized using the trichotomous fundamentalist-moderate-liberal divide. The reasons for this lie both with the hypotheses to be tested in Chapter 5, as well as because earlier models exhibited local convergence problems with the less parsimonious coding scheme.

At each level, a *random effect* partitioned the variance at the intercept (which was assigned as 1991, as explained in Chapter 5). The level 3 random effect of year allows me to control for the initial differences in levels of stewardship in 1991; the level 2 random effect of year*group identity allows me to control for differences in levels of stewardship by religious group in 1991. In this design, random slopes (which control for differing trajectories over time) cannot be tested—there is, essentially, nothing over which random slopes can vary randomly, given that the GSS is not a longitudinal survey. As noted in Chapter 5, it would have been theoretically possible to also include a *crossed* random intercept for religious group identity at level 3. This is inadvisable however in this design, for at least two reasons. First, there are only three categories of religious group identity—models which utilize random effects often perform better with a dozen or more categories. Second, the dissertation has been laid out to describe *how change over time has occurred by religious group identity* rather than *why* change has occurred. The latter question would be more appropriate to the use of a crossed random effect of religious group identity.

Accounting for Age

The most notable advantage of the multilevel model in the context of this dissertation lies with the ability to disentangle the effects of year from the effects of age, something that cannot be done using cohort analysis alone. That is, once variances associated with year were

partitioned out, the fixed effects of age could be tested individually to examine whether differences in environmental concern occurred due to changes over calendar years, or whether changes were to be found among younger versus older Americans. Given the interest in age for this project, it was the primary focus of the analyses in Chapter 5. In a multilevel model, age can have differing effects at all three levels, and age must be re-coded to avoid conflated effects (“smushing”) across levels (see Hoffman 2015:344-50).

To avoid conflated effects (smushing), the unique effects of age were obtained using variable-based centering. Prior to doing so, an empty means three-level model using age as the predictor was estimated to determine the extent of the variance in age at each level of the model. The G matrix output indicated that the vast majority of variance was to be found at Level 1 of the model (272.44, $Z=129.98$, $p < .0001$; simply, the respondent-level effect of being older), while additional variance could be found at level 2 (18.169, $Z=9.77$, $p < .0001$; the effect of a religious group being older in a given year on average) and the remainder was located at level 3 (3.7132, $Z=2.45$, $p=.0071$; the additional effect of more older people in a given year). After assessing the distribution of variance in age, three variables were computed. First, mean values for each religious group identity at each year (level 2, religious group identity*year, L2Age) were obtained, and then these values were used to calculate the means per year across all groups (level 3, year, L3Age).

There are two different ways to re-code variables to avoid conflated effects. The first is variable-based centering, or person-mean centering, which clearly separates between-person from within-person aspects of the variable. To wit, in a three-level model using age, the person-level age variable (level 1) would be averaged to calculate within-group age at level 2, or the average age within a religious group in a given year. These values would then be averaged to get

a between-year age at level 3, or the average age in each year. Then, the unique effect of age at level 1 would be calculated by subtracting level 2 age from level 1 age. Next, the unique effect of age at level 2 would be calculated by subtracting level 3 age from level 2 age, and level 3 age would be centered using a constant. Earlier versions of Chapter 5 employed variable-based centering, but results were difficult to interpret in this design.

Thus, a second option was used instead, constant-based-centering or grand-mean-centering. Values were calculated as described above, but effects of age at each level were centered using a constant (here, 45, the approximate grand mean age in the data set). All three age effects were then included in the regression models. As with any other form of multivariate regression, if only one age variable (X) were included, its coefficient would represent its total effect on Y . Including all three levels of age in this model means that coefficients for each level age can be interpreted as the unique effect of age (X) at that level after controlling for age at the other levels. Thus, level 1 age becomes the contextual effect of a person being older, level 2 age becomes the contextual effect of belonging to a religious group that is older in a given year, and level 3 age becomes the additional effect of people being older in a given survey year (perhaps, for instance, because of an aging population). Technically, every control variable included in the final models in Chapter 5 could be partitioned to examine contextual effects, and there seem to be good theoretical reasons to pursue such research in the future. For instance, if there are more religiously fundamentalist persons in one region, then the level 2 region effect could be re-centered to reflect this. If theologically liberal persons are more educated on average, or the American population has become more educated over time on average, then the level 2 and level 3 education effects could be re-calculated and centered to reflect this. Thus, the multilevel model in this dissertation is used to directly assess the differing effects of age and calendar year on the

religion-environment, but such a model could be re-specified in numerous ways for future research.

Again, given that the GSS is not actually a longitudinal study, it remains possible that: (1) levels of environmental concern are due to birth year (cohort), (2) levels of environmental concern change over the life course (age), and/or (3) levels of environmental concern have changed across the calendar years included in this survey (year). However, testing cohort and upbringing before estimating a series of multilevel models allows me to say with more confidence the extent to which these respective aspects of change over time explain the religion-environment connection. The models estimated in Chapter 5 are also based on the logit distribution (as discussed above) and coefficients can be interpreted similarly.

The goals of this project are fourfold, then: Chapter 3 examines the relationship between religious group and environmental concern, broadly speaking. Chapter 4 examines the relationship between religious *upbringing* and environmental concern, while Chapter 5 examines the relationships between person-level effects and religious group identities as they change over time from 1973 to 2014. Chapters 6 and 7 examine differences in birth cohort changes in levels of environmental concern by religious group identity as a function of gender and class, respectively. Chapter 8 looks at the differing salience of religious group identity among Democrats and Republicans, as well as how race and religious group identity interact within political party divides. Chapter 9 summarized and recapitulates findings, re-examines the hypotheses presented, addresses limitations, and raises important issues related to social theory, methodology, and future research at the religion-environment intersection.

Technical Appendix A2

Table 3: Primary Study Variables, Total N

LABEL	GSS NAME	YEARS	TOT N
GSS YEAR FOR RESPONDENT*	YEAR	ALL	62,466
DEPENDENT VARIABLES			
IMPROVING AND PROTECTING THE ENVIRONMENT	NATENVIR	1973-	53,184
PARKS AND RECREATION	NATPARK	1984-	40,696
INDEPENDENT VARIABLES			
RELIGIOUS AFFILIATION*	RELIG	ALL	57,740
RELIGION IN WHICH R WAS RAISED*	RELIG16	ALL	56,197
SPECIFIC DENOMINATION*	DENOM	ALL	33,909
DEONOMINATION IN WHICH R WAS RAISED*	DENOM16	ALL	34,377
HOW FUNDAMENTALIST IS R CURRENTLY*	FUND	ALL	55,753
HOW FUNDAMENTALIST WAS R AT AGE 16*	FUND16	1973-	54,763
CONTROLS			
HOW OFTEN R ATTENDS RELIGIOUS SERVICES	ATTEND	ALL	57,437
CONFIDENCE IN ORGANIZED RELIGION	CONCLERG	1973-84; 1986-	40,912
CONFIDENCE IN THE SCIENTIFIC COMMUNITY	CONSCI	1973-84; 1986-	42,327
HIGHEST YEAR OF SCHOOL COMPLETED*	EDUC	ALL	57,826
RESPONDENTS SEX	SEX	ALL	57,986
RACE OF RESPONDENT	RACE	ALL	57,986
AGE OF RESPONDENT*	AGE	ALL	57,780
OPINION OF FAMILY INCOME	FINRELA	ALL	54,626
REGION OF INTERVIEW	REGION	ALL BUT 2008	59,599
SIZE OF PLACE IN 1000S*	SIZE	ALL BUT 2008	59,599
PARTY IDENTIFICATION	PARTYID	ALL	57,639
BELIEF IN LIFE AFTER DEATH	POSTLIFE	1973; 1975-6; 1978-80; 1986-	42,097
FREQUENCY OF PRAYER	PRAY	1983-85; 1987-90; 1993-	30,642
FEELINGS ABOUT THE BIBLE	BIBLE	1984-5; 1987- 1988; 1991-94; 1998-2000;	31,377
RS CONFIDENCE IN THE EXISTENCE OF GOD	GOD	2006-	19,498

*Note: This variable has undergone transformations as described in the preceding beyond simply collapsing categories or omitting missing responses.

Chapter 3. Changes in Environmental Concern by Religion and Birth Cohort

Especially in its Western form, Christianity is the most anthropocentric religion the world has seen. As early as the 2nd century both Tertullian and Saint Irenaeus of Lyons were insisting that when God shaped Adam he was foreshadowing the image of the incarnate Christ, the Second Adam. Man shares, in great measure, God's transcendence of nature. Christianity, in absolute contrast to ancient paganism and Asia's religions (except, perhaps, Zoroastrianism), not only established a dualism of man and nature but also insisted that it is God's will that man exploit nature for his proper ends. – Lynn White, Jr. 1967

Half a millennium ago, conquest and riches brought many early explorer-warriors—*conquistadores*—to American shores. Whereas these *conquistadores* largely viewed the native peoples as sub-human, fit only for servitude or eradication, in 1537 Pope Paul III issued *Pastorale Officium*, a decree which “proclaimed the dignity and rights of the native peoples of the Americas by insisting that they not be deprived of their freedom or the possession of their property” (John Paul II 1987:3). Catholic missionaries flocking to the “New World” now had a papal mandate to treat the native peoples with dignity. Ultimately the *conquistadores*, however Catholic in name, frequently disregarded the Church’s pronouncements in favor of plunder (Fisher 2000:15).

It would be more than two centuries before the present-day United States came to exist as a sovereign nation-state. In the intervening decades, European settlers began to arrive on the East coast of the continent; early accounts of what was found on the new continent were framed in terms of *wilderness*, an idea at times freighted with ethical and theological (rather than ecological) connotations. For some, “The term aligned the Pilgrims with Israelites in the Sinai wilderness, and evoked Jesus’ testing in the wilderness where Satan tempted him. It described a place where order and holiness were absent, a desolation that pilgrims passed through on the way to the Promised Land” (Purdy 2015:52). Legally speaking, defining the early United States as *wilderness*, as an empty and Godless terrain, permitted the settlement of lands previously

occupied by First Peoples, whose relationship to the land was thought improper if not sinful, in that they did not “properly” cultivate it (Purdy 2015:81-2).

Defining the relationship between human beings and nature as one of transformation and cultivation for human needs (and for the glory of God) represents a significant current in the American cultural imagination, one that Purdy (2015) identifies as a *providential* imagination, or a settler mentality. Tensions abound. While Lynn White (1967) described how large-scale farming in medieval Christian Europe began to gain ground by transforming the ground on an unprecedented scale, scholars who have studied present-day First Peoples’ struggles note that governing bodies still evoke a Eurocentric understanding of land ownership, cartography, and geography that, at its most extreme, permits areas occupied by First Peoples to be defined as “empty” (Sawyer 2004:55). A gap between ideas of nature as *wilderness*, and *stewardship* as “virtuous” human transformation of nature, remains culturally significant in the United States, represented pithily in the bumper sticker “Are you an environmentalist, or do you work for a living?” seemingly serving to reify the incommensurability between a natural order and human needs (White 1996). The roots of these definitions can be traced back to an early “radical ethical protest against nature” in the context of Western civilization. This protest emerged out of the Zoroastrianism founded in present-day Iran in the first century BCE, and ultimately provided theological ground for a worldview which sundered God, and humanity, from nature. In this cosmological view, nature could no longer be invoked as a criterion of right or wrong (Campbell 1986:39, 87-9).

As the unabashedly ethnocentric “settler mentality” gradually faded, and the providential environmental imagination attenuated, two new attitudes toward the natural world had coalesced in the United States. By the early twentieth century, progressive reformers such as Theodore

Roosevelt began to view nature as a public good to be quantified, managed, and conserved, while Romantics such as John Muir gave rise to an American romanticism founded on the unspoiled natural world as intrinsically valuable, at once a spiritual retreat and a vacation spot (Purdy 2015:37-40). *Conservation*, more closely associated with the latter vision, and *stewardship*, reflected in the former, came of age in the U.S. in the wake of nearly four centuries of historical tensions on the American continent, and two millennia beyond. This chapter focuses on these environmental visions, as related to religious currents, churches, and groups within the U.S. population, from the end of the nineteenth century to the present.

How the human-nature relationship is conceived is central to both the sociology of religion and environmental sociology. This relationship has evolved in the context of the U.S. in complex ways, many of which were touched upon in Chapter 1, and can presently be tested empirically. First, there is the matter of the Lynn White thesis: while White makes a historical claim, spanning centuries, the extent to which his contention that Western Christianity is uniquely anthropocentric is examined here. Insofar as White's thesis holds explanatory power in the context of the U.S. since 1973, Christianity is expected to be inversely related to environmental concern relative to other groups (H₁).

I also begin to examine the salience of religious traditions in explaining environmental concern in this chapter. On one hand, if religious groups are effective at spreading a message of environmental concern, then differing dynamics in environmental concern across religious groups should manifest over time (H₂). On the other hand, it may be the case that religious group identity has become less important over time, and that the tension between the culturally orthodox and the culturally progressive, and between the theologically fundamentalist and theologically liberal, should manifest itself in ways that cut across denominations (it is of course

possible that both developments have taken place to varying degrees). I examine these possibilities along the axes of *stewardship* and *conservation*, concluding with a deeper examination of other religious groups as well as some tentative conclusions. In short, this chapter will begin to answer the question: *who cares about the environment?*

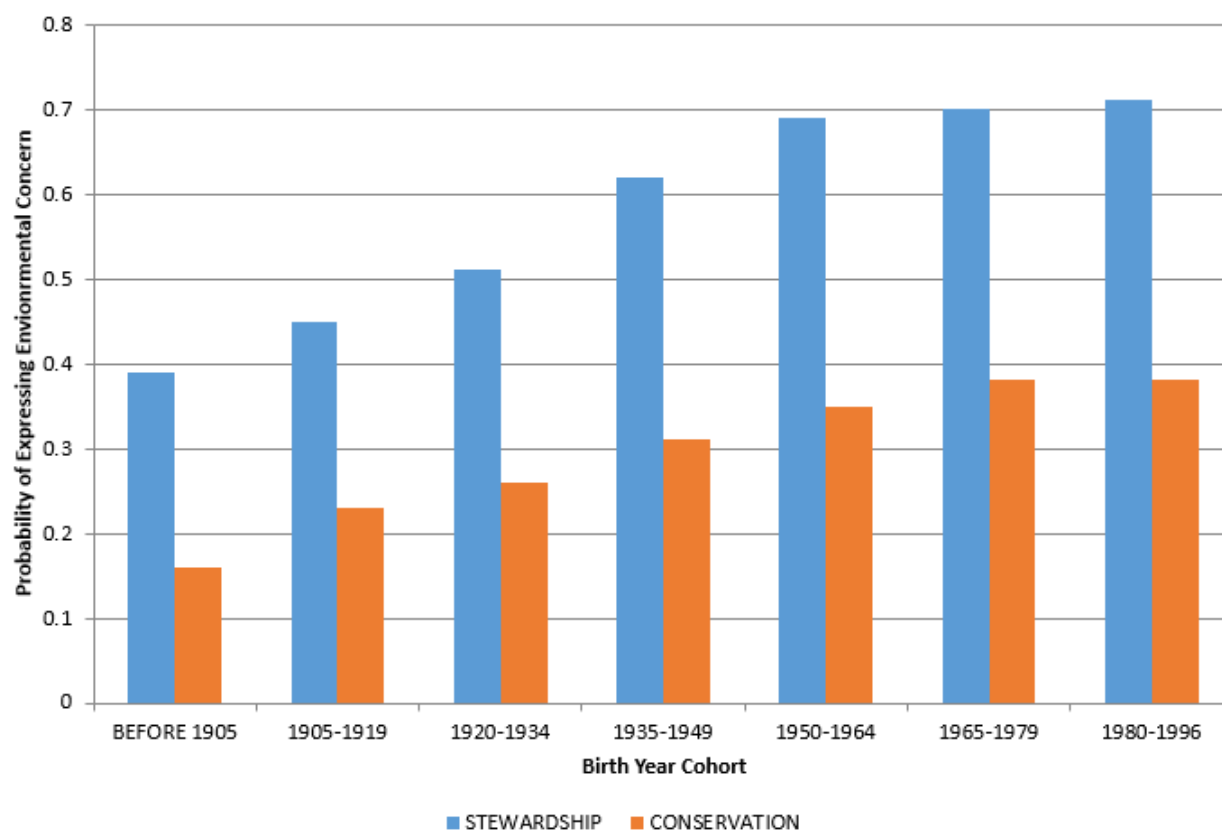


Figure 5: Probability of Expressing Stewardship and Conservation by Birth Cohort

How Levels of Environmental Concern Differ Over Time

The most straightforward way to examine how environmental concern has changed over time is to conduct a *cohort analysis*, comparing how environmental concern has been expressed across seven distinct birth cohorts, both in general and across each measure of environmental concern. Figure 5 indicates that change by birth cohort has indeed taken place across all three measures, with noticeably lower levels of environmental concern among earlier cohorts, and higher levels of environmental concern among later cohorts. There is a slight leveling off that

takes place between cohorts 4 (1950-1964) and 5 (1965-1979). Between cohorts 5 and 6 (1980-1996), levels of environmental concern are relatively stable. Broadly speaking, environmental concern across both measures has increased *overall* during the period under examination.

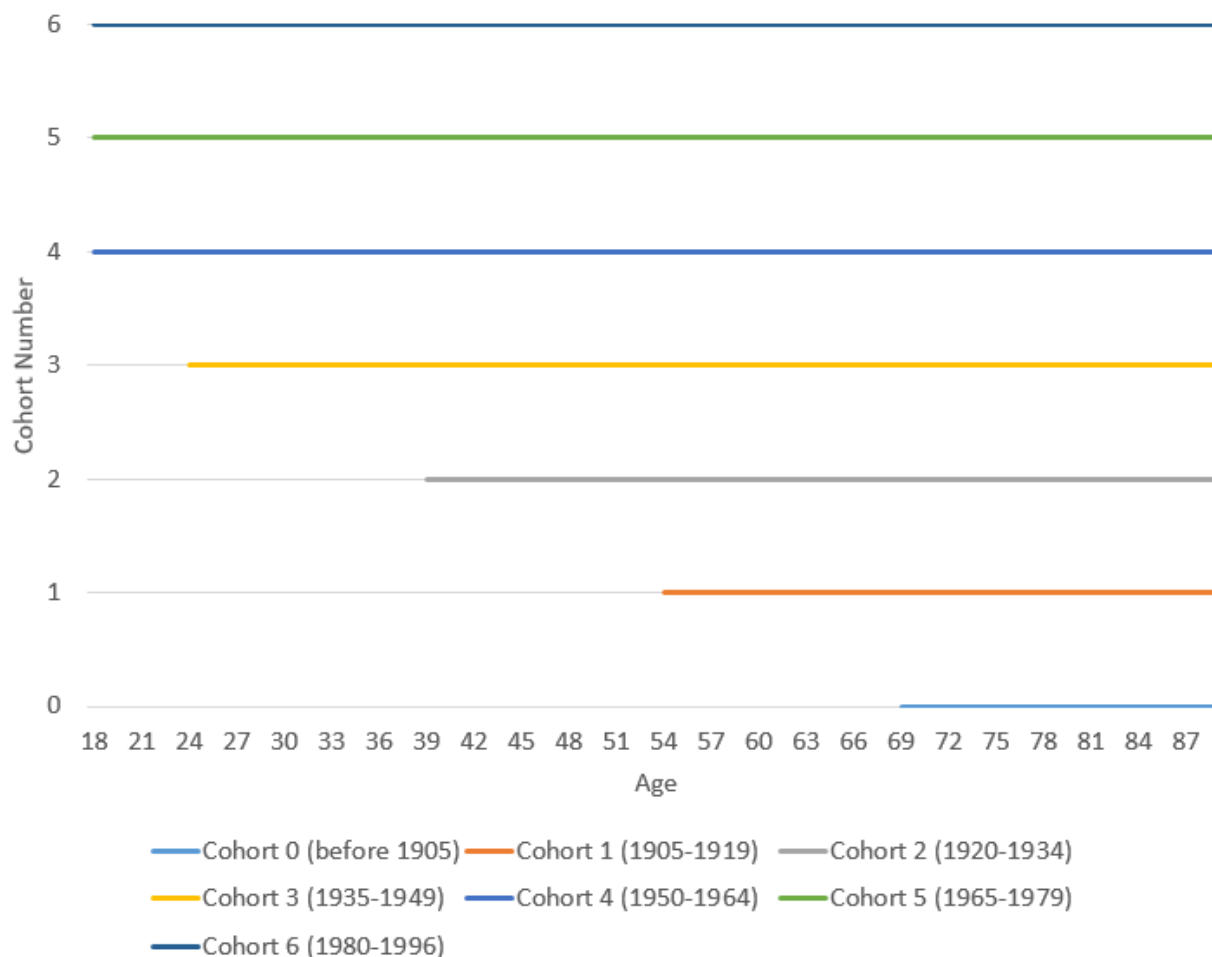


Figure 6: Cohort Coverage by Age

Such straightforward results may be misleading due to data limitations. Specifically, cohort coverage is only complete as a function of age beginning with cohort 4. That is, members of cohorts 0, 1, 2, and 3 were at least 69, 54, 39, and 24 years of age when sampled, respectively (see Figure 6), and existing literature suggests that age may be a significant *negative* predictor of environmental concern (Buttel 1979; Mohai and Twight 1987). To add another layer of complexity to the analysis, religiosity is also known to *increase* with age (Norris and Inglehart

2011:261). Despite its limitations, cohort analysis is useful for analyzing the religion-environment connection, because findings suggesting positive change in environmental concern across cohorts, conditional upon religious groups, would appear more compelling. Note Figure 5. Environmental concern across all three measures has increased rather dramatically across birth cohorts. Less than 40% of cohort 0 (1883-1904) express a stewardship ethic, while, by the youngest cohort, more than 70% express stewardship. Birth cohort is treated as a continuous variable in all the models below given the generally linear increase in environmental concern across all measures and across all cohorts, albeit with some flattening in the later cohorts.

Descriptive Results

Table 4 contains descriptive statistics for GSS data across all waves and variables. Reference categories have been noted—intercepts (as applicable across models) represent a person who was raised unaffiliated, is now religiously affiliated, born before 1905, is an average income white male with 12 years of education who does not attend religious services weekly or more, does not have high confidence in science or religion, resides in the Northeast region of the U.S., does not identify as a Republican or a Democrat, and feels the Bible is a Book of Fables written by men. Note that the feelings about the Bible variable is only used in the *conservation* analysis but has been included given recent research suggesting the strength of feelings about the Bible in predicting environmental concern (Schwadel and Johnson 2017; Szrot 2019).

There is an oversampling of women (55 percent of the sample), and possibly an oversampling of Democrats (50 percent compared to 35 percent Republicans), which may limit the generalizability of this analysis. The *perceived* income variable is also more rudimentary than an inflation-adjusted income variable but has been chosen as a control due to the empirically established relationship between perceptions of risk and vulnerability and religiosity (Norris and

Inglehart 2011) as well as environmental concern (McCright and Dunlap 2011; Marshall et al. 2006). This variable is more systematically addressed in Chapter 7. Note also that changes in proportions between *stewardship* and *conservation* reflect broader cultural shifts in the U.S. that were more evident between 1984 and 2014 (the first year in which the conservation question appears on the GSS) than between 1973 and 2014 (the first year in which the stewardship question appears).

The decrease across most historical Protestant denominations, and a concordant increase in the unaffiliated, is of interest. Fundamentalist other Protestants and Catholics remained steady, while there was a modest increase in the proportion of nondenominational respondents during the same period. Additionally, the U.S. was more nonwhite, more educated, had lower confidence in religion and lower religious service attendance, and were proportionately more Republicans and fewer Democrats in the U.S. between 1984 and 2014 than between 1973 and 2014. Slight regional and perceived income fluctuations are also noteworthy.

Age was omitted from the birth cohort analysis due to collinearity with cohort, as was GSS year (the cohorts were created by subtracting age from GSS year of respondent). These data limitations bear upon the intercept in the multivariate regression analysis in the next section. Given the reference categories selected, the intercept indicates the expected level of environmental concern for a religiously unaffiliated, average income, politically independent/other party, white male who does not regularly attend religious services, does not have great confidence in either the scientific community or organized religion, and resides in the Northeast in a place with less than 1000 people. The exact value of the intercept is relative to the variables that have been included, or excluded, in the model.

Table 4: Descriptive Statistics

Variable	Stewardship (N=34,266)		Conservation (N=16,687)			
	Mean	SD	Mean	SD	Min	Max
<i>Dependent Vars.</i>	.63		.33		0	1
Baptist	.20		.19		0	1
Methodist	.09		.08		0	1
Presbyterian	.04		.03		0	1
Lutheran	.07		.05		0	1
Episcopalian	.02		.02		0	1
Fundamentalist Other Protestant	.09		.09		0	1
Other Protestant	.02		.01		0	1
Liberal Other Protestant	.02		.01		0	1
Nondenominational	.05		.06		0	1
Catholic	.25		.25		0	1
Jewish	.02		.02		0	1
Other Religion	.04		.05		0	1
None (ref)	.09		.14		0	1
Birth Cohort (0-6)	3.32	1.362	3.85	1.262	0	6
Cohort ²	12.91	8.881	16.43	9.416	0	36
Attend Services Weekly/More	.27		.26		0	1
High Conf. Science	.43		.42		0	1
High Conf. Religion	.28		.24		0	1
Education	.94	3.048	1.38	2.975	0	20
Nonwhite	.18		.21		0	1
Female	.55		.55		0	1
Below Average Income	.29		.31		0	1
Average Income (ref)	.49		.46		0	1
Above Average Income	.22		.23		0	1
South	.34		.36		0	1
Midwest	.26		.25		0	1
Other Region	.20		.21		0	1
Northeast (ref)	.20		.18		0	1
LnSize/Place in 1000s	3.52	2.068	3.54	2.016	0	8,175
Republican	.35		.36		0	1
Democrat	.50		.48		0	1
Independent/Other (ref)	.15		.16		0	1
Bible is Literal Word	-		.32		0	1
Bible is Inspired Word	-		.48		0	1
Book of Fables (ref)	-		.20		0	1

Stewardship Multivariate Findings

In the first set of models (Table 5), stewardship was regressed on religious group identity, birth cohort, and controls using linear probability modeling (LPM). Thus, coefficients represent changes in the probability of expressing stewardship. Per Model 1, all Christian religious groups were initially significantly negatively associated with environmental concern relative to the

unaffiliated, with stronger negative associations among Protestants than Catholics, and weaker negative associations among more theologically liberal groups such as Episcopalians and Liberal Protestants, generally speaking. Controlling for cohort in Model 2 revealed a positive suppressor effect, resulting in a slight positive association among Jews relative to the unaffiliated, and rendering differences in stewardship among the theologically liberal groups Episcopalians and liberal other Protestants nonsignificant relative to the unaffiliated. For one-unit linear change in cohort, stewardship was expected to increase by 13.9%, *ceteris paribus*. Per the small standard error, this relationship is quite strong. However, the linear change in cohort is less positive by twice the quadratic cohort term, at each cohort-level change. This means that the rate of growth in levels of stewardship has diminished among recent cohorts relative to earlier cohorts.

Per Model 3, with the addition of birth cohort-religious group identity interactions, the religious group identity effect becomes the simple main effect of religious group identity conditional among those in cohort 0 (born before 1905). As such, Model 3 indicates that members of most religious groups who were born before 1905 were less likely to express stewardship than their later counterparts. Again, the theologically liberal Episcopalians and liberal other Protestants stand out as noteworthy exceptions. Significant positive interactions, indicating positive rates of growth in levels of stewardship across birth cohorts beyond those accounted for by the simple main effect of birth cohort (which becomes conditional on being unaffiliated in Model 3), are evident. Stewardship increased significantly among Baptists, Methodists, Lutherans, and theologically moderate other Protestants, while stewardship *decreased* among fundamentalist other Protestants and Jews (though Jews at cohort 0 are exceptional in their notably *higher* levels of stewardship relative to the unaffiliated).

Table 5: Stewardship Regressed on Religious Group Identity, Controls, Linear Probability Model (N=34,266)

	Model 1		Model 2		Model 3		Model 4	
	b	(se)	b	(se)	b	(se)	b	(se)
Baptist	-.125	(.008)***	-.090	(.010)***	-.180	(.030)***	-.136	(.030)***
Methodist	-.132	(.011)***	-.070	(.011)***	-.175	(.033)***	-.126	(.032)***
Presbyterian	-.120	(.015)***	-.055	(.015)***	-.111	(.040)**	-.066	(.039)+
Lutheran	-.155	(.013)***	-.099	(.013)***	-.213	(.036)***	-.163	(.035)***
Episcopalian	-.064	(.018)***	-.003	(.018)	-.059	(.047)	-.039	(.047)
Non-denom	-.116	(.014)***	-.101	(.014)***	-.171	(.042)***	-.134	(.041)**
Fund. Prot other	-.164	(.012)***	-.133	(.012)***	-.219	(.034)***	-.148	(.034)***
Prot, other	-.178	(.022)***	-.121	(.022)***	-.214	(.038)***	-.152	(.037)***
Lib. Prot other	-.060	(.021)**	.011	(.021)	.090	(.052)+	-.049	(.051)
Catholic	-.089	(.009)***	-.058	(.009)***	-.100	(.029)**	-.089	(.029)**
Jewish	-.012	(.020)	.041	(.020)*	.160	(.051)**	.086	(.051)+
Other Religion	-.006	(.015)	-.021	(.015)	-.066	(.055)	-.055	(.054)
Cohort(0-6)			.139	(.007)***	.117	(.010)***	.094	(.010)***
Cohort ²			-.012	(.001)***	-.011	(.001)***	-.009	(.001)***
BC*Baptist					.024	(.008)**	.024	(.007)**
BC*Methodist					.028	(.009)**	.043	(.009)***
BC*Presbyt.					.013	(.012)	.011	(.011)
BC*Lutheran					.033	(.010)**	.032	(.010)**
BC*Episcopal.					.013	(.014)	.012	(.014)
BC*Non-denom					.017	(.010)+	.020	(.010)+
BC*Fnd Prt Oth					-.007	(.003)*	-.003	(.003)
BC*Prot. Oth.					.026	(.009)**	.024	(.009)**
BC*Lib Oth Pr.					.029	(.016)+	.022	(.016)
BC*Catholic					.009	(.007)	.011	(.007)
BC*Jewish					-.045	(.015)**	-.037	(.015)*
BC*Other Rel.					.011	(.013)	.009	(.012)
Attend Weekly+							-.036	(.006)***
Conf. Science							.040	(.005)***
Conf. Religion							-.038	(.006)***
Educ (Ctr=12)							.009	(.001)***
Female							.021	(.005)***
Nonwhite							-.002	(.008)
Inc. Bel Av.							.015	(.006)*
Inc. Ab Av.							-.010	(.007)
Midwest							-.043	(.008)***
South							-.064	(.008)***
Other Region							-.081	(.008)***
Ln(Size+1)							.012	(.001)***
Republican							-.086	(.008)***
Democrat							.042	(.008)***
Constant	.727	(.008)***	.390	(.014)***	.463	(.029)***	.473	(.030)***
Adjusted R²	.010		.042		.043		.071	

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

Model 4 includes controls. Religious group and cohort effect coefficients were attenuated slightly by the addition of controls but remain roughly like Model 3 in terms statistical significance. Measures of religiosity, such as attending religious services at least once a week, or

expressing a great deal of confidence in organized religion, were negatively associated with stewardship, complicating the relationship between religiosity and stewardship. Unsurprisingly, political party affiliation was associated with environmental concern, with Republicans expressing lower levels of environmental concern, and Democrats, higher. Education played a significant positive role in predicting stewardship, while important urban/rural (as measured by $\ln(\text{size}+1)$) as well as regional differences exist (again, region coefficients are with reference to the generally more urban, populous, and politically liberal Northeast).

As noted previously, existing research has indicated that conservatives, whites, and men are more likely to both deny environmental problems such as climate change, and to be less concerned about such problems (McCright and Dunlap 2011). Whereas women expressed modestly higher levels of environmental concern than men in this study, and Republicans, lower levels than other party affiliates, nonwhites did not statistically differ from whites after controlling for cohort effects. This may be due to the specific dimension of environmental concern measured, the relatively crude measure for race included in the model, or some factor related to race that overlaps with religious identity in a way not yet accounted for. Finally, note the relative increases in adjusted R-squared in Model 2 relative to Model 1, and Model 4 relative to Model 3—though interesting and significant effects of religious group identity remain after estimating a full model with controls, cohort effects and controls explain a significant proportion of the overall variance. Model-predicted cohort changes are displayed in Figure 1. Note that the unaffiliated has been charted as a reference category, the effect of which is predicted by the summing the intercept with the simple main effects of linear and quadratic cohort (for the unaffiliated, $\beta_i X$ and $\beta_{i1} X^2$ are equal to zero). Regarding the modeling of religious group identities included in Figure 1, some caveats are in order. In particular, both the simple main effect and interaction coefficients

were significant for Baptists, Methodists, and Lutherans per Model 4, but only the simple main effect coefficients were significant for nondenominational, fundamentalist and moderate other Protestants, and Catholics, suggesting that the religious group-specific increases (and in the case of fundamentalist other Protestants, flattening out in the latest two birth cohorts) in stewardship by birth cohort were significant for the former three groups, but not the latter four. However, interactions in Figure 1 were calculated based on the inclusion of all terms and were selected based on whether the simple main effect of religious group identity differed significantly from the unaffiliated.

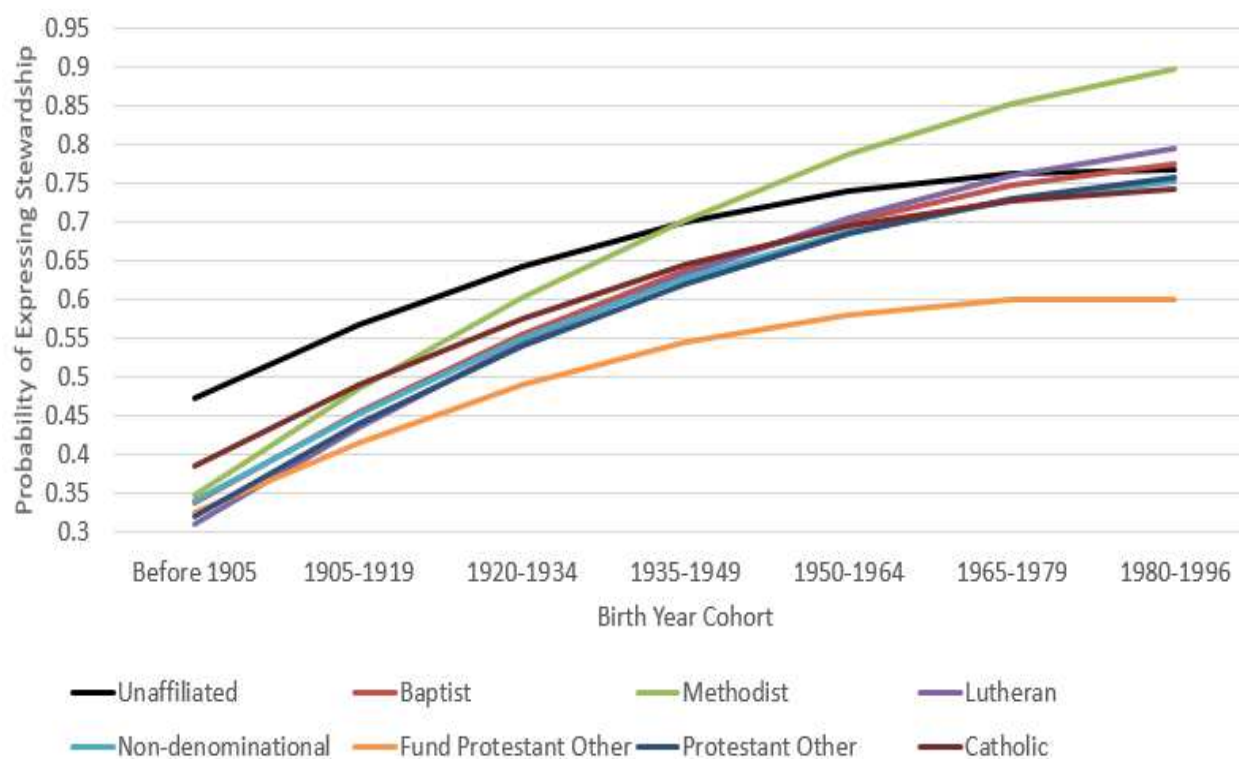


Figure 7: Model-Predicted Probability of Expressing Stewardship, by Birth Cohort and Religious Group Identity

A general upward trend is evident across all groups. However, except fundamentalist other Protestants, the model-predicted probability of expressing stewardship is more dynamic within these religious groups more rapidly than among the unaffiliated. This finding, coupled with the lack of statistical difference among several other religious groups relative to the

unaffiliated as indicated by simple main effects in Model 4, suggests that levels of stewardship among religious groups, particularly among those born after 1965, rival levels of stewardship among the unaffiliated. In fact, model-predicted levels of stewardship among Baptists, Methodists, and Lutherans have surpassed those of the unaffiliated. While this development took place among the youngest cohort in Baptists and Lutherans, for Methodists, stewardship levels reached parity with those of the unaffiliated in Cohort 3 and continued to climb (albeit at a decelerating rate) afterward.

Catholics, the nondenominational, and theologically moderate other Protestants have approached parity with the unaffiliated according to the model, while the trajectory for fundamentalist other Protestants remains notably lower than other groups. With the noteworthy exception of Baptists (who are mostly theologically fundamentalist, as noted in Chapter 2), levels of stewardship among religious groups otherwise fall roughly along the fundamentalist-moderate-liberal divide, with fundamentalist other Protestants expressing the lowest levels of stewardship, majority theologically liberal Methodists expressing the highest, and theologically moderate or largely theologically moderate religious groups such as Lutherans, Catholics, the non-denominational, and moderate other Protestants coming to achieve rough parity with the unaffiliated among the two youngest cohorts.

Religion and Conservation Multivariate Results

The roots of conservation are deep in the U.S., and span centuries. The idea that national parks and recreation link to an ethic of treating nature as sacred, setting it aside, *preserving it from human activity* rather than calling for human activity to transform it, is a notion that is, to some degree, at odds with stewardship. Both environmental imaginations had their roots among

the aesthetic, theological, and cultural heritage of New England Calvinists stretching back to the seventeenth century Puritan colonists (Stoll 2015:54-76).

Table 6: Conservation Regressed on Religious Group Identity, Controls, Linear Probability Model (N=16,687)

	Model 1		Model 2		Model 3		Model 4	
	b	(se)	b	(se)	b	(se)	b	(se)
Baptist	-.030	(.013)*	-.016	(.013)	-.118	(.047)*	-.127	(.047)**
Methodist	-.123	(.016)***	-.099	(.016)***	-.177	(.054)**	-.133	(.054)*
Lutheran	-.130	(.019)***	-.110	(.019)***	-.258	(.062)***	-.198	(.062)**
Presbyterian	-.085	(.022)***	-.067	(.022)**	-.007	(.066)	.059	(.066)
Episcopalian	-.065	(.027)*	-.039	(.027)	-.049	(.079)	.002	(.079)
Fund. Prot. Other	-.098	(.015)***	-.084	(.016)***	-.176	(.053)**	-.142	(.053)**
Prot, other	-.142	(.033)***	-.124	(.033)***	-.220	(.060)***	-.167	(.060)**
Lib. Prot other	-.059	(.032)+	-.032	(.033)	-.014	(.096)	.048	(.095)
Non-denom	-.076	(.017)***	-.074	(.017)***	-.223	(.064)**	-.183	(.064)**
Catholic	-.091	(.012)***	-.080	(.012)***	-.166	(.045)***	-.114	(.045)*
Jewish	-.095	(.028)**	-.077	(.028)**	-.099	(.093)	-.101	(.092)
Other Religion	-.021	(.018)	-.028	(.018)	-.014	(.074)	-.014	(.073)
Cohort(0-6)			.062	(.013)***	.044	(.018)*	.045	(.017)*
Cohort ²			-.005	(.002)**	-.005	(.002)*	-.006	(.002)**
BC*Baptist					.024	(.011)*	.027	(.011)*
BC*Methodist					.018	(.014)	.017	(.013)
BC*Lutheran					.037	(.018)*	.041	(.015)**
BC*Presbyterian					-.021	(.017)	-.023	(.017)
BC*Episcopal.					-.003	(.021)	-.006	(.021)
BC*Fund Prt Oth.					-.002	(.004)	.000	(.004)
BC*Prot. Oth.					.023	(.013)+	.022	(.012)+
BC*Lib Oth Pr.					-.011	(.026)	-.017	(.026)
BC*Non-denom					.035	(.015)*	.036	(.015)*
BC*Catholic					.020	(.010)+	.014	(.010)
BC*Jewish					.002	(.024)	.005	(.024)
BC*Other Rel.					-.004	(.016)	-.003	(.016)
Attend Weekly+							-.044	(.009)***
Conf. Science							-.001	(.008)
Conf. Religion							-.003	(.009)
Educ (Ctr=12)							-.003	(.001)*
Female							-.026	(.007)***
Nonwhite							.086	(.010)***
Inc. Bel Av.							.011	(.008)
Inc. Ab Av.							.008	(.010)
Midwest							-.063	(.011)***
South							-.008	(.011)
Other Region							-.029	(.012)*
Ln(Size+1)							.007	(.002)***
Republican							-.081	(.011)***
Democrat							-.011	(.010)
Literal Word							-.011	(.012)
Inspired Word							-.025	(.011)*
Constant	.399	(.009)***	.228	(.026)***	.304	(.047)***	.346	(.049)***
Adjusted R²	.007		.012		.013		.035	

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

Parks and recreation have always been about far more than, well, parks and recreation. And over the past fifty years, with an increased awareness of the earth's biodiversity and the human impact upon it, conservation has developed into a mainstream project for preventing species extinction due to human activity—biologist E.O. Wilson (2016) notably proposes setting aside half the acreage of the planet to protect biodiversity from human interference. Meanwhile, a decades-old moral conflict has been brewing around Yellowstone National Park, a largely intact ecosystem, between scientific experts, development interests, and political activists on one hand, and farmers and ranchers who have grown increasingly resentful of what they view as interference in, if not condemnation of, their respective way of life (see Farrell 2015). Given conservation's long and often tense history, it may well be as ideologically and culturally polarizing as calls for greater environmental protection and improvement (*stewardship*). In this section, I investigate this possibility. Ultimately, those who adopt the wilderness ethic will differ in meaningful ways from those who adopt the stewardship ethic—both measures may serve to indicate differing dimensions of environmental concern that are theoretically and historically relevant in the context of religious group identity.

Table 6 presents the results of regressing conservation on religious group identities. Note that adjusted R-squared suggests that this model does not predict conservation as well as it predicted stewardship. Per Model 1, a simple regression analysis which directly estimates the main effects of religious group identity, virtually all religious group identities, on average, are associated with lower levels of conservation. Interestingly, Baptists hold higher levels of conservation relative to theologically liberal other Protestants and Episcopalians, while the lowest levels of conservation are found among theologically moderate and liberal groups such as Methodists, Lutherans, and theologically moderate other Protestants. Turning to Model 2, a

similar pattern remains, albeit slightly attenuated by the introduction of the linear and quadratic birth cohort terms. The rate of increase in conservation at cohort zero is 6.2%, becoming less positive with each younger cohort by twice the quadratic coefficient term.

Next, religious group*cohort interaction terms were estimated per Model 3. Again, this renders the main effect of religious group identity as conditional upon cohort 0. Interaction terms indicated additional statistically significant change in conservation specific to religious groups across birth cohorts. Immediately apparent is that the relatively higher levels of conservation in Baptists compared to other religious groups can be accounted for in terms of an upward trend among Baptists across birth cohorts in levels of conservation. An even steeper upward trend can be found among Lutherans (though the conditional main effect of being Lutheran is also the most strongly negative in the model), with similarly steep increases among Catholics. Model 4 indicated a similar pattern regarding religious-group specific change across cohorts, which is detailed in Figure 2 below. Additionally, lower levels of conservation are found among those who attend religious services weekly or more, women, those who have attended college, people residing in the Midwest, Republicans, and Inspired Word Bible believers (but not Literalists), while higher levels of conservation can be found among nonwhites and residents of larger towns and cities. Taking account of Adjusted R-squared values, controls seem to account for greater variance than religious group identity despite numerous statistically significant correlations, but this model, compared to the stewardship model, is not as efficient in predicting levels of conservation.

Note Figure 8. The model-predicted changes in levels of conservation are reported here, for the same seven religious groups as in Figure 1, plus the unaffiliated for reference. Only Baptists, Lutherans, and the nondenominational are significantly different in both the simple

main effect of religious group identity and interaction term (compared to Baptists, Methodists, and Lutherans in the previous model). Methodists, fundamentalist and moderate other Protestants, and Catholics are only statistically different from the unaffiliated in the simple main effect of religious group identity (compared to fundamentalist and moderate other Protestants, the nondenominational, and Catholics in the previous model).

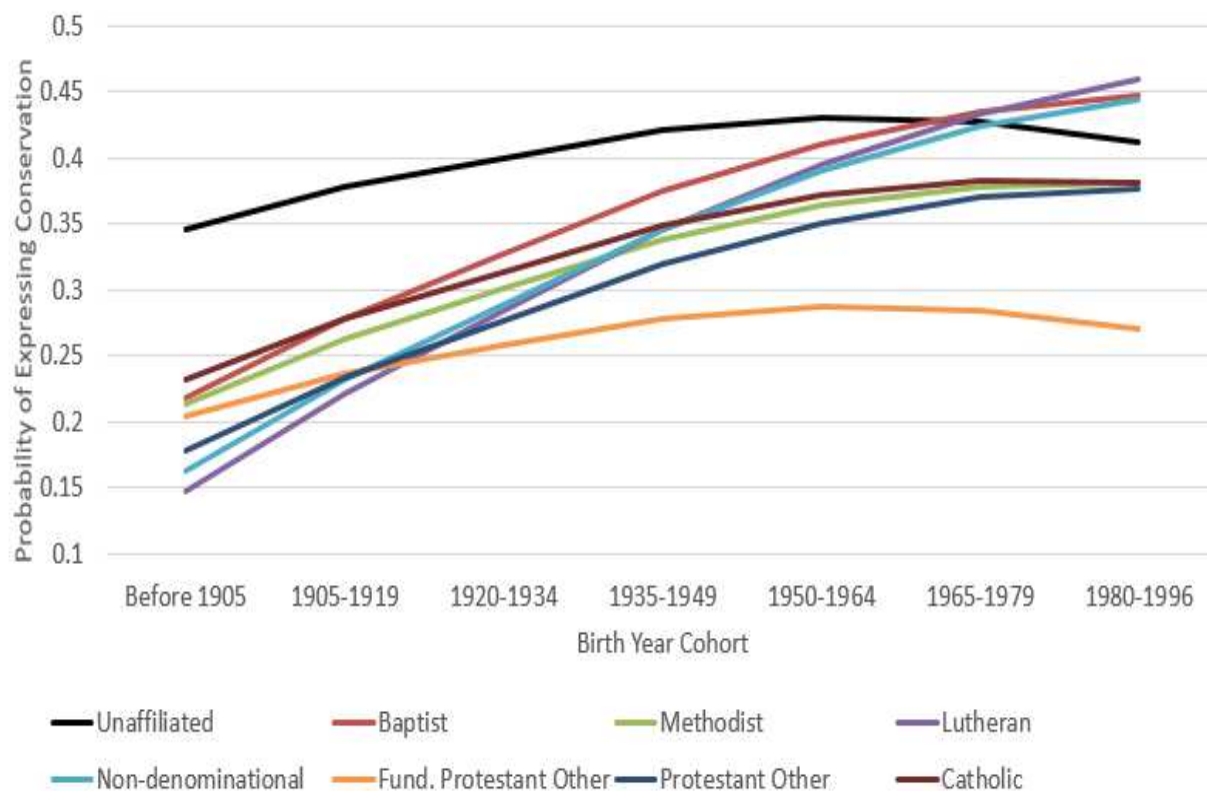


Figure 8: Model-Predicted Probability of Expressing Conservation, by Birth Cohort and Religious Group Identity

However, similarities between the trajectories of stewardship and conservation regarding these groups should not be overplayed. Model-predicted levels of conservation among the unaffiliated peaked among those in the 1950-1964 birth cohort and were lower among more recent cohorts. By the youngest cohort, Baptists, Lutherans, and the nondenominational had surpassed the unaffiliated in levels of conservation. Baptists are majority fundamentalist in theological orientation, while Lutherans and the nondenominational are predominantly

theologically moderate. While majority-theologically liberal Methodists, theologically moderate Catholics, and moderate other Protestants converged in levels of conservation not far from the unaffiliated (and would, by model-predicted projections, be roughly on par with the unaffiliated by the next birth cohort), fundamentalist other Protestants remain significantly lower in their levels of support for conservation efforts relative to other groups.

Environmental Concern by Religious Group Affiliation: Summing Up

Evidence from this study points to notable cohort-level differences in levels of environmental concern across both stewardship and conservation measures among Baptists, Methodists, Lutherans, fundamentalist and moderate other Protestants, the nondenominational, and Catholics. This analysis also suggests that theologically liberal groups like Episcopalians and theologically liberal other Protestants, a group likely to include historically socio-culturally liberal denominations such as the Unitarian Universalists, do not differ significantly from the unaffiliated. The fact that the same seven effects have appeared as significant in both models (albeit with notable differences in terms of rates of change across birth cohorts) points to a degree of external validity in the models estimated here as they relate to the religion-environment connection more broadly. Earlier analyses, which did not include a quadratic birth cohort term, and which sub-divided religious group identities differently across each variable, provided somewhat less consistent results.

Overall, only Lutherans surpassed the unaffiliated on both measures of environmental concern, and this did not occur until the most recent birth cohorts. Among the younger cohorts, Methodists held the highest stewardship levels, while Baptists held the highest conservation levels. Across both measures, fundamentalist other Protestants held significantly lower levels of environmental concern than any other group, after controlling for sociodemographic and

attitudinal factors. This may be explicable in terms of the conservative eschatology and End Times thinking posited by Guth, et al (1995)—environmental concern may turn attention away from concerns related to salvation and may be framed as irrelevant or even idolatrous among theologically fundamentalist Protestants who view the End Times and the Second Coming of Jesus as imminent. Eckberg and Blocker (1996) also concluded that among sectarian Christianity, a dominionistic theology may stymie the development of environmental concern (353). It may also be the case that fundamentalist Protestant sects are in part able to resist tendencies toward liberalization and secularization (of which environmental concern may be viewed as a proxy) by building social networks around religious community that iteratively reinforce specific beliefs and practices (Szrot and Collins 2019). Yet another possibility (strongly suggested by reviewers of an article based on this research) is that fundamentalism is not incompatible with environmental concern, but that broader political and cultural divides have subverted attempts to cultivate environmental ethics among theologically fundamentalist groups (see Pogue 2016). However, this explanation is challenged by the finding that largely-fundamentalist Baptists *have* been able to cultivate an environmental ethic across birth cohorts, suggesting that reducing the religion-environment connection to political and cultural polarization may be too simple an explanation. Chapter 8 examines this contention further.

The reason why Bible belief did not exert stronger impact in the conservation model, which was expected given existing research (Eckberg and Blocker 1989; Schwadel and Johnson 2017), may be because fundamentalist Protestant is an *identity* comprised of social and cultural traits such as high levels of church attendance, frequent prayer, faith in organized religion, relatively higher levels of social network homogeneity, as well as Bible belief, which interact in a more complex manner to stymie growth in environmental concern (Szrot 2019; Szrot and

Collins 2019). These findings suggest that there are benefits in using this more detailed, less parsimonious religious classification scheme which focuses on religious *identity* as related to the religion-environment connection.

More broadly, based on the results of this study, most the branches of contemporary American Christianity, *contra* White (1967), are simply not at odds with engendering environmental concern, and H₁ ought to be rejected. Among the oldest cohorts, relative to the unaffiliated, Judeo-Christians generally held lower levels of environmental concern across both measures. However, environmental concern among younger cohorts, particularly among theologically moderate and liberal religious groups, has reached, or in a few cases, even surpassed, levels of environmental concern found among the unaffiliated. Such findings should of course be qualified by noting some of the modestly negative associations found between environmental concern and weekly religious service attendance, high trust in organized religion, and in the case of conservation, inspired word Bible belief. Differing facets of religious practice and attitudes which are not directly accounted for by religious group identity may exert other influences on both stewardship and conservation that are not directly accounted for here. Also, it remains to be seen whether, and to what extent, these religious group identities are historically and doctrinally linked to environmental concern—the extent to which this can be established (see Chapter 9) may externally validate these findings as arising out of religious group identity *per se* rather than out of some dimension of culture or ideology that was not included in the models estimated here.

Additionally, Hunter (1991) noted that due to the “culture wars” which intensified during the last two decades of the twentieth century, religious group identity may lose salience, folded into an increasingly salient distinction between *culturally orthodox* and *culturally progressive*

elements of Americans society. And given the recent history of downplaying the threats posed by environmental problems such as climate change (Mooney 2005; Oreskes and Conway 2010), it is possible that increasing cultural and political tensions may continue to shift the cultural and ethical landscape regarding religious identity and environmental change in directions not readily predicted by this analysis. These possibilities are tested further in Chapter 5.

While it is the case that the theologically fundamentalist other Protestants hold notably lower levels of environmental concern, and that the gap between this religious group identity and the others has grown with each birth cohort, it is also the case the Baptists, who are largely considered theologically fundamentalist, hold relatively high levels of environmental concern. Environmental concern among Baptists has also increased across each successive birth cohort to reach rough parity, and has in some cases surpassed, that of the unaffiliated. Though it is also the case that the highest levels of stewardship are found among younger Methodists, many theologically moderate groups have come to reach rough parity with the unaffiliated among the younger cohorts. Whatever may be driving these change (race and political party likely play a role which will be tested in Chapter 8), these findings do suggest that religious group identity remains salient in ways that are not smoothly reducible to broad fundamentalist-moderate-liberal theological differences, or, by proxy, cultural rifts.

“Other Religion”: Complexities, Tensions, and Limitations among non-Judeo-Christians

I begin with a caveat: unfortunately, there is not a lot of sophisticated statistical analysis that can be done with this intriguing catch-all category *other religion*, for two reasons. First, there are significant limitations in the dataset. Though this category contains about five percent of the U.S. population, the category *other religion* is not further sub-divided within the available GSS data until the year 1998, providing only nine possible waves of data which distinguish

between Buddhists, Hindus, Muslims, Eastern Orthodox Christians, etc. Given this relatively recent effort to collect data on these groups, and the fact that they constitute a relatively small sample of the U.S. population, for most groups, the number of respondents per GSS wave numbered in the single digits, which does not give me enough statistical power to draw significant conclusions about these groups.

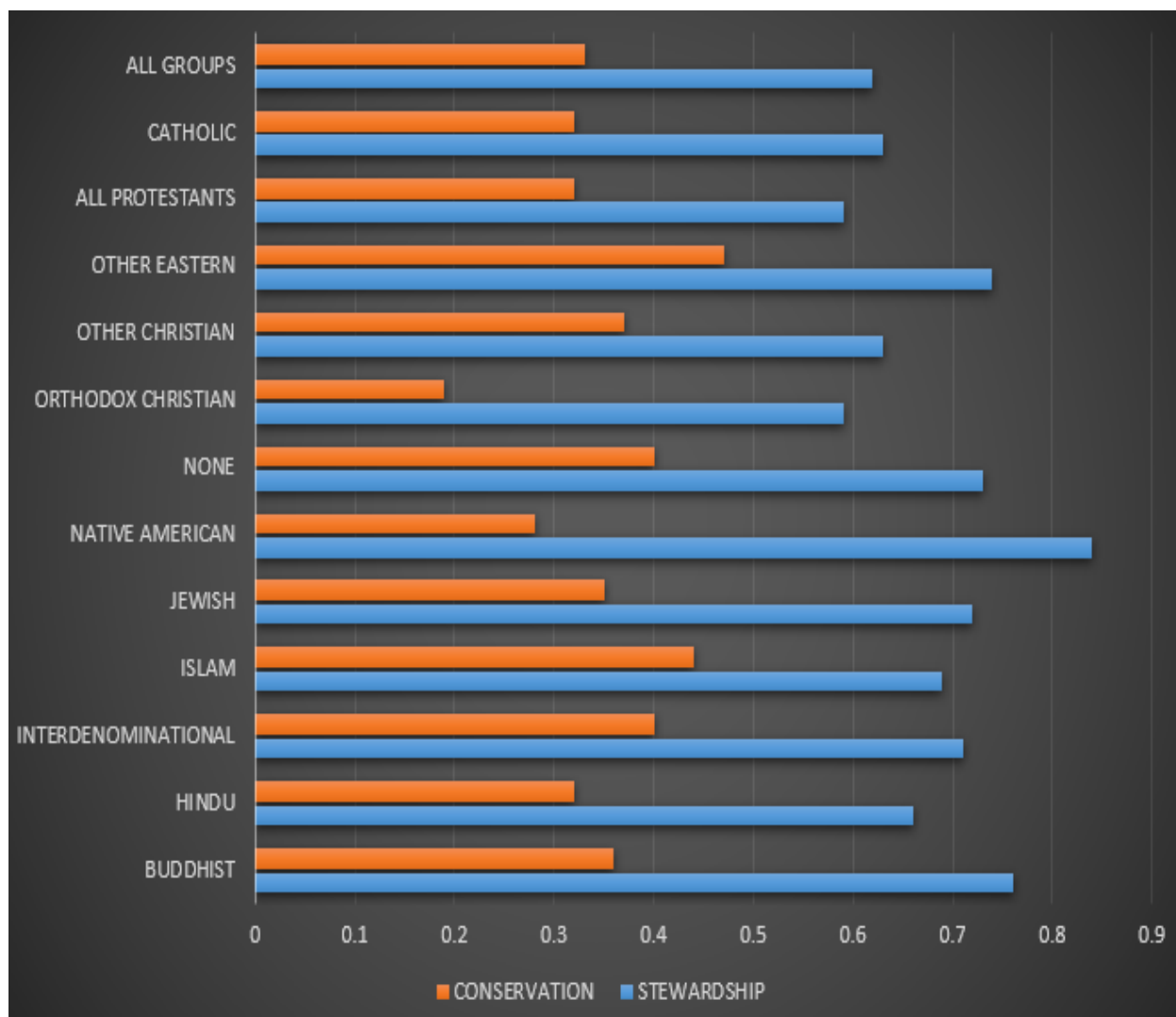


Figure 9: Conservation and Stewardship by Religious Affiliation, Non-Judeo-Christian Religious Group Identities

Second, the small size of these groups likely obscures a great deal of variation. For example, in addition to the division between *Shi'a* and *Sunni*, Muslims who emigrated from East Asia and settled along the west coast are likely to differ in both culture and ethnicity from

Muslims who emigrated from the Arabian Peninsula and settled in the Northeast. A person raised Buddhist who originally hailed from rural Myanmar is expected to differ culturally in meaningful ways from a progressive California suburbanite who converted to Buddhism in middle age. And as early commentators on this research have noted, there is tremendous diversity in the category “Native American Spirituality.”

While these distinctions are neither absolute nor in principle insurmountable—for religious groups like other social groups, as a rule, can be defined in terms of commonalities as well as differences—the relatively small sample sizes make it impossible for me to parse out individuals using these increasingly narrow criteria. Future research along these lines might be better conducted using stratified sampling techniques (allowing for oversampling of non-Judeo-Christian faiths) or qualitative methods such as interviews, fieldwork or ethnography. Still, it would be remiss not to examine this category more closely, to assess in some preliminary sense whether, and to what extent, the relative lack of statistical difference between *other religion* and the unaffiliated in models above might obscure a great deal of variation. This is especially true given that demographically speaking, the U.S. has become more multicultural over the past decades, and there is little reason to suspect that this trend will reverse itself in the future (Jones 2016).

Figure 9 explores this highly heterogeneous group in relation to Catholics, Protestants, the unaffiliated, and all groups, providing a “snap shot” of differences in levels of environmental concern in the absence of rigorous multivariate analysis. Distinctions between religious groups outside the Judeo-Christian tradition are instructive. Native Americans hold higher levels of environmental concern as measured by stewardship than any other group, and non-Christian groups tend to score higher on stewardship measures. From here, however, the picture gets a bit

more complex, with the highest levels of conservation appearing among *other eastern* faiths, and the lowest, among Orthodox Christians. The reasons for lower levels of conservation among Orthodox Christians are not at this juncture clear, particularly given the recent stance of Ecumenical Patriarch Bartholomew regarding environmental concern as a central part of the Eastern Orthodox faith (Grim and Tucker 2015:91, 98-107). Higher levels of conservation among other eastern religions, as well as among Muslims, are similarly poorly understood at this juncture. However, it is possible to say something about the mismatch among Native Americans between stewardship and conservation: it is noteworthy that Native American cosmologies tend to be less anthropocentric, and that the divide between humans and the natural world is, to some extent, an artifice of Western thought, perhaps leading to lower levels of conservation ethic. Additionally, given the racially-fraught aspects of conservation, from ignoring the ancestral claims and rights of First Peoples to the Progressive movement of the early twentieth century and its coupling of wilderness ethos with the embrace of dubious racialized “scientific” theories such as eugenics (Purdy 2015:180-87), it is possible that conservation is tinged with highly unpalatable sociocultural ramifications. However, I hesitate to speculate further: Native American spiritualities are diverse, and the entire pooled 1973-2014 GSS contains only 25 Native American respondents. Therefore, it would be presumptuous to assume that these persons speak for the entirety of Native American belief systems and cosmologies as related to environmental concern across the U.S. at present, let alone in the past. As noted above regarding data limitations, such information would likely be better gleaned from qualitative research methods, such as ethnography, interview research, or document analysis.

Conclusion

In this chapter, I have explored some of the broader questions related to the religion-environmental concern connection. Two hypotheses were tested. Regarding H₁, that Christian affiliation is negatively associated with environmental concern (Lynn White thesis), in general, this appears not to be the case, but the evidence is mixed, and uneven. Though I have found generally negative correlations between Christian belief and environmental concern, these correlations often disappeared after accounting for sociodemographic and ideological background factors. There is also a great deal of variation between denominations and affiliations, as well as meaningful positive changes over time across numerous groups on both measures.

Given that this is the first of several analyses, I cannot say yet *why* these changes have taken place over time at the juncture, nor have I successfully unwound the connection between religious backgrounds, cultures, and upbringing as they relate to environmental concern. I should note that, regardless of these findings, I do not take this to be a systematic *confirmation* or *refutation* of White's thesis regarding Christianity and anthropocentrism—his argument spans several centuries and is directed at the *historical roots*, not relatively recent circumstances. It may come as a bit of a shock that environmental issues are not *more* polarized than they appear to be in this analysis. Furthermore, it may be heartening that environmental concern has continued to increase (albeit at a decreasing rate given the negative quadratic term) with each successive birth cohort. Among Christians in the newer cohorts, religious identity often does not have a negative effect on either stewardship or conservation, and in some cases, may even have a positive effect.

Regarding H₂, that groups with pro-environmental stances experience increasingly positive levels of environmental concern when compared to those that do not, some evidence

supports that there are meaningful differences between groups which have adopted pro-environmental stances and those that have not. In the introduction, several broad religious group identities were discussed in relation to environmental concern: Presbyterians, Episcopalians, Baptists, Lutherans, and Catholics. Yaple (1982) also indirectly found that Methodist religious leaders offered pro-environmental doctrinal stances, as well as many of the largest denominations within the above religious group identities. Presbyterians and Episcopalians did not significantly differ from the unaffiliated on either measure. Catholics, Lutherans, Baptists, and Methodists have increased in levels of environmental concern at a higher rate relative to the unaffiliated, in some cases surpassing levels among the unaffiliated within the most recent birth cohort.

The primary finding in this regard is that it is possible for religious groups to become “greener” across many successive cohorts. It is noteworthy that the evidence points to a negative relationship between religiosity and environmental concern that has largely *decreased* across birth cohorts—given the negative relationship between religious service attendance and confidence in organized religion, it cannot be stated with any certainty at this juncture whether increases in environmental concern have taken place *because* of official church pronouncements. It is also possible that church pronouncements responded to cultural shifts rather than the other way around, or that cohort analysis obscures change in environmental concern that happens over persons’ life courses (age effects) as well as changes that may have occurred over the years in which the GSS was administered (period effects).

With few exceptions, American Christians born more recently are “greener” than past cohorts, though Americans have become more environmentally concerned overall during this period. This chapter has explored, broadly speaking, the relationship between religious group

affiliation and environmental concern across two measures. The next chapter investigates environmental concern by *upbringing* as a cultural phenomenon rooted in upbringing rather than an association with adult religious identity. Both aspects of religious identity, both upbringing and adult affiliation, are expected to be significant predictors of environmental concern, but may differ by religious *disaffiliation*, another aspect of religiosity and religious change that will be explored in Chapter 4.

Chapter 4. Religious Upbringing, Disaffiliation, and Environmental Concern

“Religion is the audacious attempt to conceive of the entire universe as humanly significant.”
 - Peter L. Berger, *The Sacred Canopy*

Having examined the role of adult religious identity in predicting levels of environmental concern, I turn now to an examination of religious *upbringing* as it relates to environmental concern. Do some religious cultures foster greater levels of *environmental cultures* from youth, even among those who disaffiliate in adulthood? A related question: how does adult disaffiliation affect environmental concern in relation to religious upbringing? And finally, who are the religiously unaffiliated, and how might differences in worldview and religious experiences among the unaffiliated relate to levels of environmental concern? The two hypotheses to be assessed in this chapter are: H₃: Being raised in a religious tradition with a historically “green” stance is associated with higher levels of adult environmental concern, and H₄: Disaffiliation in adulthood is associated with higher levels of environmental concern than remaining religiously affiliated.

How we (Dis)Believe: Cultures and Correlates of Religious Change

Philosophers and social theorists from the beginnings of sociology have predicted the eventual demise of religion and the rise of the secular in the Western world at the hands of Enlightenment philosophy and the rise of a scientific worldview (Lenzer, 1998; Lough, 2006; Nietzsche, 1990). “*Secular*, in English, derives from the Latin for ‘the present aeon,’ *saeculum*, meaning ‘this present age.’...*Saeculum* is a time word, used frequently to translate the Greek word *aeon*, which also means age or epoch” (Cox 1966:16). Secularization theory, a macro-level social science corollary of this prediction, “is currently experiencing the most sustained challenge in its long history” (Norris and Inglehart 2011:3). Some even argue that secularization theory has become a “religion” unto itself, akin to an article of faith for which adherents seek

post hoc evidence (Christiano, Swatos, and Kivisto 2008:55-64). Yet secularization, in a classical, linear, universalized form, is more akin to “conjectural history,” a speculative effort which attempts to situate the European Enlightenment within a narrative of progress (Palmeri 2016:1-16).

Many incarnations of this narrative have taken the form of variations on a theme: “Once upon a time, many say, society was *religious*. Now, unfortunately, some would say, it is *secular*. Once religion informed and shaped all parts of our lives—education, family life, work, politics, and health care were all infused with religious meaning” (Emerson, Mirola and Monahan 2011:67). These speculative narratives have guided, and continue to guide, research, but are sometimes offered up in place of evidence, allowing social scientists to downplay or dismiss the *sui generis* importance of religion, especially in societies that appear to be secularizing. The U.S. is such a society—despite being more religious than other wealthy nations in the world (Gao 2015), it has, at least over the course of the last half century or so, been undergoing an uneven erosion of religious belief and practice across many measures (Chaves 2011; Jones 2016; Norris and Inglehart 2011:88-110; Roof and McKinney 1992).

In *the Protestant Ethic and the Spirit of Capitalism*, Weber (2001) made a historical argument, that Protestantism, particularly four specific species of Protestantism, was instrumental in the historical rise of industrial capitalist modernity in the context of eighteenth-century Western Europe. The role of religion was examined (perhaps, one might argue, delimited) to a specific social-psychological worldview that facilitated the changes from a medieval Europe dominated by the authority of God and king to a society of a type more familiar, to varying degrees, to we denizens of the twenty-first century. Put briefly (and leaving aside a great deal of nuance and richness) Calvinism gave rise to a worldview defined in terms of

predestination—God had already separated the damned from the saved, and no human activity could change this. Over time, individuals began to look for “signs” of their possible salvation in adherence to worldly virtues—temperance, hard work, modesty, and pursuit of a divine calling (57-61). Work became divine, and the those who pursued their calling, not for greed or indulgence, but out of a God-given duty, were more likely to accumulate wealth which could be re-invested in turn, and the process of investing wealth and earning profit was born.

In *the Social Construction of Reality*, Berger and Luckmann (1966) develop a constructivist approach to sociology of knowledge in which human beings build the social world through the process of internalizing external expectations and then reinforcing them. If religion delineates a specific worldview that shapes a culture at the macro-level, it is also possible that “religious cultures” arise in which individuals may be shaped by religious cultures to which they have been prominently exposed, even if they are not themselves religious (Norris and Inglehart 2011:17-8). Thus, it becomes plausible at the micro-level, that to be *raised* in a faith, even a faith to which one no longer adheres, then, is expected to have consequences for one’s own attitudes and lived experiences. Evidence in the previous chapter suggests that some religious groups’ worldviews are more, or less, conducive to fostering environmental concern. This chapter examines whether and to what extent being raised in the context of these worldviews will affect adult levels of environmental concern.

Historian Mark R. Stoll (2015) presents intriguing evidence that the rise (and fall, or at least, fragmentation) of environmentalism has religious roots. New England Puritans and later Congregationalists developed and internalized stewardship ethos, which were later taken over by Presbyterians. Presbyterians dominated environmental work in the context of the early twentieth century Progressive movement, including in some of the highest offices of government. Grover

Cleveland (1885-1889 and 1893-1897), William Henry Harrison (1889-1893), Theodore Roosevelt (1901-1909), and Woodrow Wilson (1913-1921) were Presbyterians, as were the majority of their Secretaries of Interior and Agriculture, from Secretaries Noble and Rusk of the Harrison administration (1889-1892) to Franklin Delano Roosevelt's Secretary of the Interior Ickes, and secretary of Agriculture H.A. Wallace (1933-1945) (277-82). By the mid-twentieth century, it was not Presbyterians per se but those who had disaffiliated from their childhood religious views who drove environmentalism forward. Rachel Carson, author of the now-famous expose on pesticides *Silent Spring* (2002) and exemplar of a "normative turn" in American ecology (Grim and Tucker 2015:72-83), was herself a lapsed Presbyterian (Stoll 2015:196-7), as was folk singer and "Presbyterian preacher of the Age of Ecology" John Denver (Stoll 2015:191). As Stoll argues, "Many things fall neatly into place when the historical trajectory of American environmentalism is regarded as a sort of para-religious movement or an expression of Reformed Protestant belief and culture...the post-Presbyterian environmentalism of Baptists, blacks, Catholics, and Jews did not come from nowhere" (267). If these trends are distributed across the U.S. population, it is possible (1) that religious upbringing will have a significant effect on environmental concern that is not captured in adult religious adherence, and (2) that Presbyterianism, specifically, will follow a rather unique trajectory relative to other religious groups. This chapter focuses on whether *environmental concern is higher among those raised in traditions with pro-environmental stances even if they disaffiliate or change religions in adulthood*. In this chapter, I examine the role of upbringing on stewardship and conservation in much the same way as in the preceding chapter. However, since this chapter focuses religious change, I also assess how religious *disaffiliation*—those who were raised in a religious belief but left the religion of their upbringing sometime after the age of 16—affects level of environmental

concern. This raises additional questions regarding the possibility of ethical shifts in levels of environmental concern along religious lines. Specifically, which groups have higher levels of disaffiliation? Who are the *nones*, in terms of religious/spiritual belief? And how do differences in belief *among* the unaffiliated help to explain levels of environmental concern?

Effects of Upbringing on Environmental Concern

Analysis proceeded similarly to the previous chapter. Four models were created for each measure, much like those used in Chapter 3. There are, however, several notable differences. First, all religious groups are measured in terms of upbringing rather than adult religious affiliation. Respondents were asked what religion they belonged to at the age of 16, which, according to existing research, is a meaningful moment in the study of religious change in adolescence and early adulthood (Smith and Snell 2009). Additionally, a dummy variable was added to indicate whether respondents disaffiliated in adulthood (1=unaffiliated as adult, 0=affiliated as adult). This makes it possible to compare those who are raised with a specific religious group identity and later disaffiliated to those who remained within the religious group in which they were brought up as adults. One important limitation of this approach: this variable does not account for those raised in a different faith than that to which they belong as adults—in this context, I can only say what the effect of leaving religion is relative to staying religious as an adult.

In building these models, I initially experimented with the addition of various interaction terms. Two-way (birth cohort*religious upbringing) analyses were conducted, but results were sufficiently like those already presented in the previous chapter that this portion of the analysis has not been included in the chapter. Two-way (religious upbringing*disaffiliation) analyses were also conducted, but the inclusion of conditional effects resulted in little improvement in

model fit, and only two of the resulting conditional terms, *Lutheran* and *Other Protestant*, were statistically significant. A conditional effect of disaffiliation on the conditional effect of birth cohort on religious group (a three-way religious group*birth cohort*unaffiliated as adult interaction) was also tested but did not significantly improve model fit. Given the results of these tests of interaction terms, I have only reported the simplest, most parsimonious “main effects” models.

Per the differences in these models relative to those used in the last chapter, the intercept in these models represents the probability of expressing environmental concern across the dependent variable in question for someone who was raised without religious belief (*Raised None*), is religious as an adult, never attends religious services, has low levels of trust in both science and organized religion, has a high school education, is white, male, average income, resides in a town with less than 1,000 people in the Northeast, was born into birth cohort 0 (before 1905), and is neither Republican nor Democrat. Given previous discussions in Chapter 3 and the above notes regarding upbringing and disaffiliation, descriptive statistics have been relegated to the technical appendix at the end of this chapter.

Accounting for the “Ex’s”

American religion has experienced numerous changes over the course of the twentieth century. However, perhaps one of the most talked-about and salient developments, particularly in the wake of the 1960s, is the rise of the *nones*—an increase in the proportion of Americans who report belonging to no religious faith at all (see, for example, Chaves 2011). Figure 4.1 illustrates this trend, broadly speaking, from the GSS data set used in this study. Note that the increase in the religiously unaffiliated roughly matches the pattern of decline among Protestants. In other words, it is likely that Protestant disaffiliation accounts for the increasing proportion of the

unaffiliated in the U.S. over time. According to the data used for this study, 2006 was the last time Protestants constituted a majority of the U.S. population, and in 2014, the unaffiliated constituted over one-fifth of respondents. Recent research suggests that the proportion of the U.S. that does not identify as religiously affiliated has increased and continues to do so (Jones 2016; Chaves 2011).

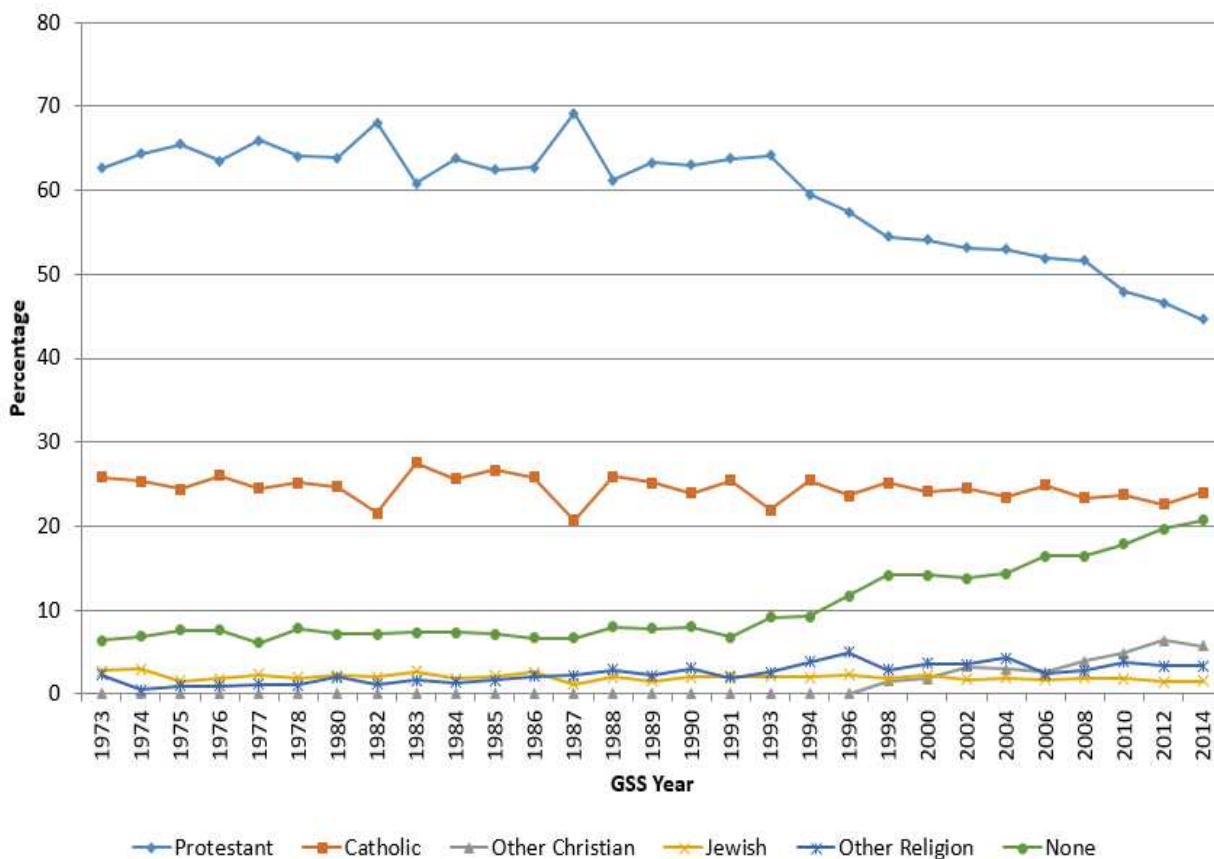


Figure 10: Religious Change in the U.S., General Social Survey 1973-2014

These trends track roughly with other analyses, including those using other data sets, and if such trends continue, some scholars project that the unaffiliated will make up as large a proportion of the U.S. as Protestants by the middle of the twenty-first century (Jones 2016:50-1). It is also worth noting that, though Catholics appear to be “holding their own” as a share of the U.S. population per Figure 10, this is largely due to the massive influx of Latino/a immigrants

over this time period, who subsequently are increasingly likely to leave Catholicism for stricter evangelical Protestant churches or join the ranks of the unaffiliated (Fisher 2000; Funk 2014; Ghani 2014). Additionally, there is evidence that the more culturally orthodox evangelical Protestants and theologically distinctive Black Protestants have been able to more effectively maintain steady membership over time relative to mainline Protestants, for whom declines in membership are more precipitous, and began over half a century ago (Chaves 2011; Roof and McKinney 1992). Both evangelical and mainline groups, however, were showing signs of waning by the close of the twentieth century (Jones 2016:51-6).

Table 7: Percent Disaffiliation by Religious Upbringing

Adult Affiliation	N@16	Total “Ex’s”	% “Ex’s”	Theological Orientation
Baptist	12,723	801	6.3	Mostly Fundamentalist
Methodist	6,284	455	7.2	Mostly Moderate-Liberal
Lutheran	3,697	290	7.8	Mostly Moderate
Presbyterian	2,417	247	10.2	Mostly Liberal
Episcopalian	1,250	150	12.0	Liberal
Fund. Other Prot.	4,410	380	8.6	Fundamentalist
Mod. Other Prot.	947	65	6.9	Moderate
Liberal Other Prot.	820	85	10.4	Liberal
Non-Denominational	1,634	238	14.6	Moderate
Catholic	16,319	1,622	9.9	Moderate
Jewish	1,169	113	9.7	Liberal
Other Religion	1,483	247	16.7	Mostly Moderate
None/Unaffiliated	2,932	-	-	Liberal
Total N (excl. None)	53,153	4,693	8.8	-

Table 7 provides evidence that many of the unaffiliated were raised in religious faiths that they moved away from in adulthood. The General Social Survey provides a proxy measure for religious upbringing (religious affiliation at 16) for every religious group identity measured in the context of this study. Thus, it was possible to create the same coding scheme for upbringing as for adult identity. Using the variable category *None*, a variable for the “Ex’s” was created by multiplying religious affiliation at 16*unaffiliated as adult, as displayed in Table 7. For each religious affiliation, then, it is possible to calculate the percentage of respondents in this study

who left the religion of their upbringing by the time the respective GSS data were collected. In total, across all groups, nearly nine percent of respondents reported being raised within a religious group and disaffiliating in adulthood.

Table 7 indicates rates of disaffiliation across all religious groups, as well as the proportion of the unaffiliated who were raised with religious affiliation. Overall, 8.8% of those raised in a religious group disaffiliated sometime after the age of 16. Higher levels of disaffiliation were found among those of non-Judeo-Christian faiths (other religion), and among Protestants tending toward theological liberalism. Note that 2,932 were raised without a religious affiliation, and 4,693 of the unaffiliated were raised religious but disaffiliated after age 16. This means that of the total 7,625 “nones” in the sample, 61.5% were raised religious. It is noteworthy that “none” is a label which belies the complexity of the unaffiliated as a group (see Galen 2014); however, in the context of research on upbringing and disaffiliation, the fact that well over half the unaffiliated in the sample were raised with a religious affiliation may have numerous implications at the religion-environmental concern connection.

Stewardship, Upbringing, and Disaffiliation

I begin with Stewardship regressed on upbringing, as indicated in Table 8. Unlike Chapter 3, results are reported in logits, or log-transformed changes in the odds of expressing stewardship. Per Model 1, the simple regression, while those raised Methodist indicate the lowest levels of environmental concern, followed by other Protestants and Lutherans, most groups are not statistically different from the unaffiliated, and those raised Jewish and Episcopalian (both “theologically liberal” groups) exhibit notably *higher* levels of environmental concern relative to the unaffiliated. In Model 2, after controlling for adult disaffiliation, several “suppressor effects” emerge. Along with an *increase* in already-positive levels environmental concern among those

raised Jewish and Episcopalian, Baptists, Presbyterians, theologically liberal Other Protestants, Catholics, and Other Religious groups exhibit *higher* levels of environmental concern than those raised with no religious affiliation. However, there is a stronger association between reporting being unaffiliated as an adult and environmental concern than is found among any of these religious groups separately. Put succinctly, while religious groups do exhibit higher levels of stewardship relative to the unaffiliated when holding adult religious (dis)affiliation constant, the highest expected levels of stewardship are to be found among who were raised in theologically liberal religious groups and disaffiliated in adulthood. However, persons raised in moderate groups such as Catholics, Lutherans, Presbyterians, as well as the mostly-fundamentalist Baptists, are also predicted to exhibit higher levels of stewardship relative to those raised without religion, holding adult (dis)affiliation constant, and persons raised in these religious groups, who disaffiliated in adulthood, would hold proportionately higher levels stewardship ethic. This means that part of the negative association between the main effect of religious traditions and environmental concern relative to the unaffiliated found in some of the models in Chapter 3 is specific to *adult* religiosity. *Thus, when controlling for both childhood upbringing as well as adult disaffiliation, those raised in religious traditions in many cases express higher levels of environmental concern than the unaffiliated, and those who disaffiliated in adulthood express higher levels of environmental concern still.*

Controlling for birth cohort in Model 3 only serves to amplify these general patterns overall, with three important exceptions. Methodist upbringing becomes positively associated with stewardship after controlling for birth cohort, while being raised “Other Religion” no longer significantly differs from being raised without religion. Additionally, the adult disaffiliation coefficient loses some of its strength—a Presbyterian, Episcopalian, Liberal Other Protestant, or

Jewish upbringing thus becomes a stronger positive indicator of stewardship ethic than disaffiliation. In other words, controlling for birth cohort, being raised in any of these four groups and remaining religiously affiliated as an adult is predicted to result in *higher* levels of stewardship ethic relative to someone who was raised, and remains, unaffiliated. After controlling for relevant attitudinal, demographic, and geographic factors (Model 4), patterns generally hold, with attenuation among the effect of disaffiliation, and among being raised theologically liberal religious groups.

Table 8: Stewardship Regressed on Upbringing, Main Effects, Binary Logit (N=34,143)

	Model 1		Model 2		Model 3		Model 4	
	β	(se)	β	(se)	β	(se)	β	(se)
Raised Baptist	-.063	(.053)	.165	(.058)**	.214	(.058)***	.199	(.061)**
Raised Methodist	-.241	(.059)***	-.017	(.062)	.159	(.063)*	.134	(.064)*
Raised Lutheran	-.258	(.064)***	-.037	(.067)	.097	(.068)	.090	(.070)
Raised Presbyterian	-.005	(.073)	.202	(.075)**	.357	(.076)***	.320	(.078)***
Raised Episcopalian	.210	(.091)*	.414	(.092)***	.555	(.094)***	.422	(.096)***
Raised Non-denom.	-.115	(.081)	.040	(.083)	-.026	(.084)	.025	(.085)
Raised Fund Prot	-.302	(.063)***	-.085	(.066)	-.069	(.067)	.028	(.068)
Raised Prot other	-.510	(.097)***	.284	(.099)**	-.083	(.101)	-.056	(.102)
Raised Lib. Prot	.065	(.105)	.273	(.106)*	.438	(.109)	.374	(.111)**
Raised Catholic	.028	(.054)	.238	(.056)***	.256	(.057)***	.140	(.058)*
Raised Jewish	.447	(.098)***	.656	(.099)***	.824	(.101)***	.378	(.104)***
Raised Other Rel.	.031	(.088)	.182	(.089)*	.084	(.090)	-.021	(.093)
None as Adult			.572	(.041)***	.411	(.042)***	.243	(.044)***
Cohort(0-6)					.556	(.032)***	.462	(.034)***
Cohort ²					-.047	(.005)***	-.035	(.005)***
Attend Weekly+							-.163	(.027)***
Conf. Science							.191	(.024)***
Conf. Religion							-.161	(.027)***
Educ (Ctr=12)							.046	(.004)***
Female							.101	(.024)***
Black							.040	(.041)
Other Race							-.211	(.060)***
Inc. Bel Av.							.060	(.028)*
Inc. Ab Av.							-.055	(.031)+
Midwest							-.217	(.036)***
South							-.334	(.036)***
Other Region							-.378	(.039)***
Ln(Size+1)							.054	(.006)***
Republican							-.383	(.037)***
Democrat							.182	(.035)***
Constant	.594	(.050)	.332	(.053)***	-.950	(.073)***	-.694	(.090)***
-2LL		44,906.592		44,701.072		43,646.149		42,604.786

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

As noted in Chapter 3, fundamentalist other Protestants' lower levels of environmental concern may be due to a set of cultural and social factors that comprise a religious *identity*. This may be similarly true among those who are theologically liberal: being a liberal Protestant may be an *identity* that is likely to include a higher likelihood of being socially liberal, culturally progressive, attending religious services less often, holding higher trust in science, lower trust in organized religion, being more highly educated, and residing in more densely populated areas.

Figure 11 illustrates the overall pattern in levels of stewardship relative to religious upbringing and disaffiliation. Only statistically significant groups have been included. The gray bars represent the model-predicted (Table 8) levels of stewardship among those who were raised in each respective religion *and remain religiously affiliated*. To reiterate, one of the limitations of the dichotomous measure of adult (dis)affiliation is that I do not have the means to say whether these individuals switched to a different religion in adulthood—only that they remained religiously affiliated in some way. The black bars represent the additive effect of adult disaffiliation relative to remaining affiliated with the religious tradition of one's upbringing. The intercept in the model is for those who were raised unaffiliated but became religiously affiliated in adulthood (a rather uncommon scenario), and the black *unaffiliated* bar is the predicted level of stewardship for someone who was raised unaffiliated and remains so as an adult. The coefficients used to construct the bar chart in Figure 11 were drawn from Model 4, which controlled for attitudinal, demographic, and geographic factors.

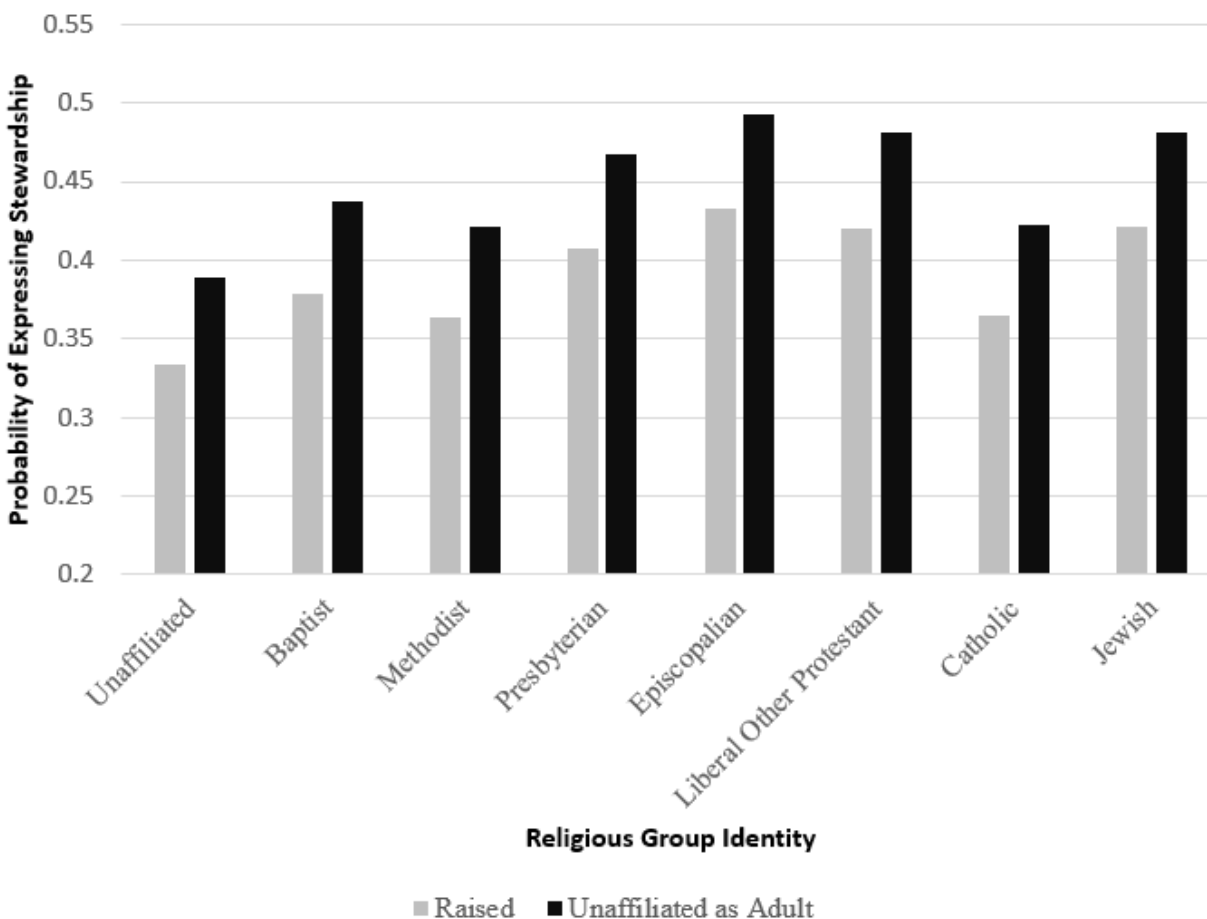


Figure 11: Model-Predicted Stewardship by Religious Upbringing, Disaffiliation

Thus, practicing Catholics and Methodists are expected to hold lower levels of stewardship ethic than the unaffiliated. However, Catholics and Methodists who disaffiliated sometime after age 16 hold higher levels of stewardship than those who were raised unaffiliated. According to the model, practicing Baptists are expected to hold slightly higher levels of stewardship ethic than the unaffiliated, while ex-Baptists hold higher levels of stewardship than any of the practicing religious groups. Practicing and ex- Jews and Presbyterians hold similar levels of stewardship ethic relative to one another, while the highest model-predicted levels of stewardship are found among the theologically liberal other Protestants and (also theologically liberal) Episcopalians, with higher levels still among those who disaffiliated after age 16. In short, there is compelling evidence that religious upbringing positively affects levels of

environmental concern as measured by stewardship among many of the denominations known to have taken official “green” doctrinal stances (H₃, see Yaple 1982). The model indicates that religious upbringing effects on stewardship remain significant even among those who disaffiliate in adulthood. Interestingly, the highest levels of stewardship ethic are predicted to be found among lapsed Jews, Presbyterians, Episcopalians, and other Liberal Protestants. This indicates that religious upbringing across many traditions is positively associated with environmental concern as measured by *stewardship*, but that the highest levels of environmental concern on this measure are found among those who were raised in one of the aforementioned religious traditions but disaffiliated in adulthood.

Conservation, Upbringing, and Disaffiliation

Table 9 bears some similarities to the previous set of findings, with some notable differences. Here, Baptists exhibit *higher* levels of conservation ethic than the unaffiliated in Model 1, *prior to* controlling for disaffiliation. The effect for Baptists becomes even stronger in Model 2, after controlling for adult (dis)affiliation, and Methodists, Episcopalians, Catholics, and persons of other religious faiths also exhibit modest positive associations with conservation, while being unaffiliated in adulthood is a stronger positive predictor of conservation than all but Baptist upbringing. Per Model 3, patterns generally strengthen after controlling for birth cohort, and Lutheran religious upbringing becomes statistically significant. After controlling for attitudinal, demographic, and geographic factors (Model 4), Liberal Protestant upbringing becomes statistically significant relative to being raised unaffiliated, and other patterns generally hold, though there is a decline among Baptists—it is possible that Baptist identity is tied up in other culturally orthodox commitments such as mistrust of government regulation or other vectors of political conservatism that, once controlled for, reduce its salience regarding

conservation ethic. It is also possible that, given that a large proportion of Baptists are African-American, there are meaningful differences in conservation by race, a speculation that is supported by the relatively strong effect of being nonwhite on levels of conservation.

Table 9: Conservation Regressed on Upbringing, Controls, Binary Logit (N=16,614)

	Model 1		Model 2		Model 3		Model 4	
	β	(se)	β	(se)	β	(se)	β	(se)
Raised Baptist	.257	(.072)***	.457	(.076)***	.479	(.076)***	.314	(.079)***
Raised Methodist	-.080	(.083)	.112	(.086)	.191	(.087)*	.214	(.089)*
Raised Lutheran	-.127	(.094)	.058	(.097)	.104	(.097)	.269	(.099)**
Raised Presbyterian	-.089	(.104)	.084	(.107)	.162	(.107)	.252	(.109)*
Raised Episcopalian	.216	(.125)+	.398	(.127)**	.464	(.127)***	.475	(.130)***
Raised Non-denom.	-.088	(.105)	.042	(.106)	.027	(.107)	.066	(.108)
Raised Fund Prot	-.043	(.087)	.143	(.089)	.154	(.090)+	.168	(.091)+
Raised Prot other	-.293	(.161)+	-.091	(.163)	-.018	(.163)	.087	(.165)
Raised Lib. Prot	-.096	(.164)	.075	(.165)	.155	(.166)	.236	(.168)
Raised Catholic	-.007	(.070)	.174	(.073)*	.178	(.073)*	.176	(.075)*
Raised Jewish	-.020	(.136)	.178	(.138)	.226	(.139)	.127	(.143)
Raised Other Rel.	.197	(.109)+	.320	(.110)**	.277	(.110)*	.133	(.113)
None as Adult			.446	(.049)***	.382	(.050)***	.230	(.055)***
Cohort(0-6)					.307	(.066)***	.310	(.068)***
Cohort ²					-.024	(.009)**	-.028	(.009)**
Attend Weekly+							-.214	(.043)***
Conf. Science							.003	(.036)
Conf. Religion							-.014	(.042)
Educ (Ctr=12)							-.016	(.006)*
Female							-.125	(.034)***
Black							.491	(.055)***
Other Race							.167	(.069)*
Inc. Bel Av.							.042	(.039)
Inc. Ab Av.							.039	(.046)
Midwest							-.318	(.054)***
South							-.050	(.051)
Other Region							-.101	(.055)+
Ln(Size+1)							.029	(.009)**
Republican							-.393	(.052)***
Democrat							-.079	(.048)
Literal Word							-.053	(.057)
Inspired Word							-.111	(.049)*
Constant	-.744	(.064)***	-.981	(.069)***	-1.783	(.138)***	-1.403	(.162)***
-2LL		21,005.000		20,924.416		20,832.670		20,441.720

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

I will more specifically examine the Black-white divide regarding religious affiliation and environmental concern in Chapter 8. Note that weekly or more religious service attendance is negatively associated with conservation, as is (intriguingly) viewing the Bible as the Inspired Word of God, but *not* Biblical literalism. Much as was the case with conservation in Chapter 3,

living in the Midwest and identifying as Republican are negatively associated with conservation, whereas living in larger population centers is positively associated with conservation.

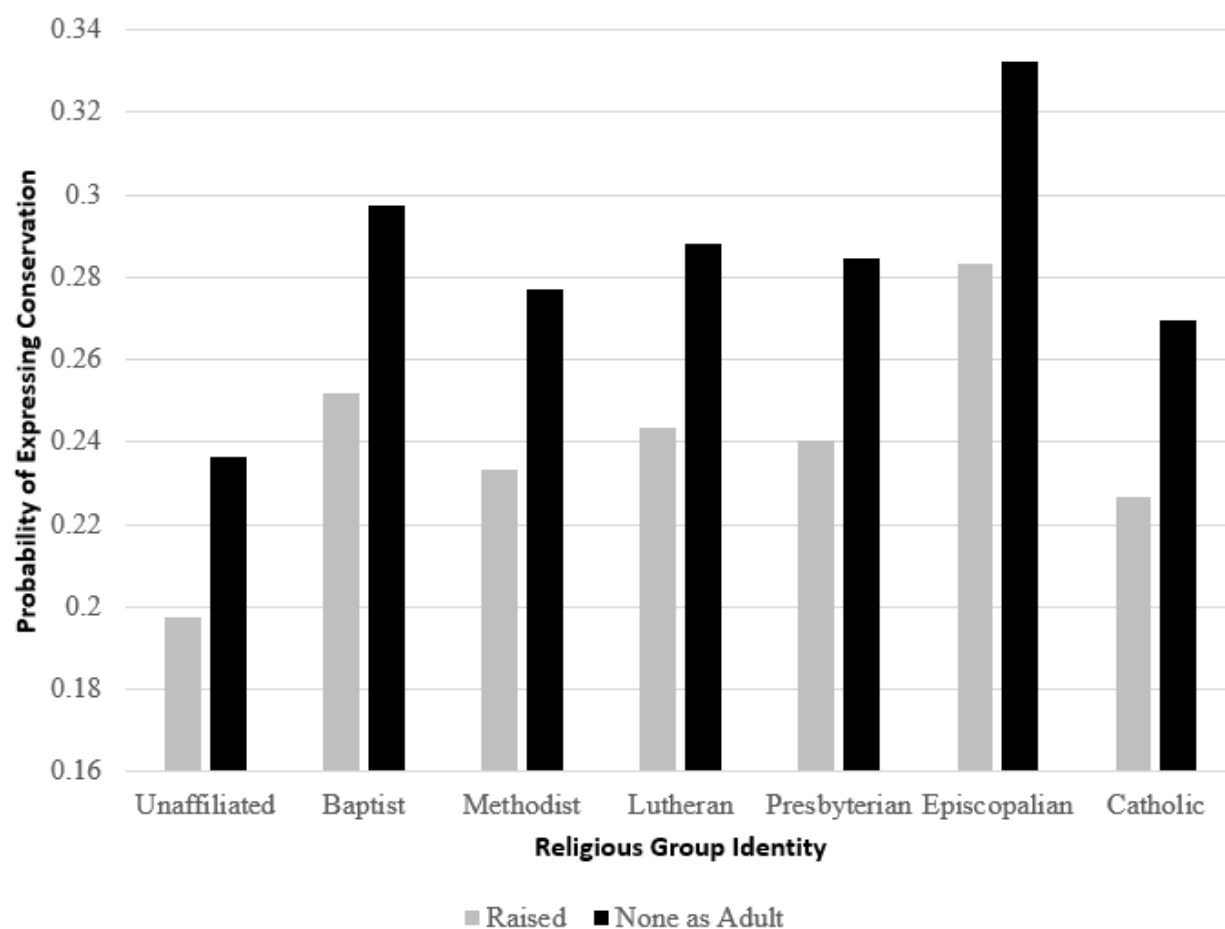


Figure 12: Model-Predicted Conservation by Religious Upbringing, Disaffiliation

Figure 12 indicates model-predicted levels of conservation by upbringing, and differences between affiliated and ex-members of each respective faith tradition. While affiliated Catholics, Fundamentalist Other Protestants, and Methodists (an interesting mixture, indeed) exhibit lower levels of conservation than those who were raised unaffiliated and remain unaffiliated as adults, disaffiliated members of each of these groups exhibit notably higher levels of conservation than the unaffiliated, and levels roughly comparable to those of practicing Episcopalians and Presbyterians. Practicing Baptists and Lutherans are predicted to hold higher

levels of conservation than the unaffiliated, and ex-Baptists and Lutherans, levels that are higher than any practicing religious group. Episcopalians hold the highest levels of conservation (in addition, as indicated by the previous set of findings, to the highest levels of stewardship), followed closely by Presbyterians, which seems to indicate that Stoll's (2015) historical research indicating that Presbyterians played a leading role in the development and implementation of American conservation to an extent holds true for the American population (H₃).

How Religious Upbringing Relates to Religious Group Identity: Summing Up

Summing up, across all eight models deploying both measures of environmental concern, there are statistically significant, if uneven, positive correlations between certain religious identities and levels of environmental concern. There are both significant differences by denomination in levels of environmental concern, and there are positive correlations between religious upbringing and environmental concern. Though being raised in the theologically liberal Episcopalian faith tradition is associated with the highest levels of environmental concern across both measures, being raised in a Catholic, Baptist, and even fundamentalist other Protestant faith tradition also appears to have positive impacts on levels of environmental concern. There is also a strong positive association with Presbyterian upbringing and measures of environmental concern, a finding which lends robust empirical confirmation to Stoll's (2015) historical argument that environmentalism emerged in the twentieth century amid Presbyterians (and later lapsed Presbyterians). It is not merely "environmental elites" who emerged from the ranks of the Presbyterian Church—culturally, Presbyterian upbringing is associated with higher probability of expressing environmental concern.

Perhaps most interestingly, the largely-fundamentalist Baptists appear to foster a rather consistent environmental culture as well, with modest positive associations between Baptist

upbringing and environmental concern across all measures. Based on upbringing, being raised within some denominations is positively associated with environmental concern relative to those raised unaffiliated. What each of these groups have in common, doctrinally, that may explain these findings, will be revisited further below. However, the aggregated findings so far suggest the possibility that people raised in the context of religious groups in which environmental concern is discussed cultivate environmental concern in adulthood, even (and perhaps especially) if they disaffiliate.

In fact, it is noteworthy that disaffiliating in adulthood is also positively associated with environmental concern. This may suggest that attitudes toward environmental issues are after all linked to a broader, “culturally progressive” reflexive worldview and that more pro-environmental Christians may ultimately cite an incompatibility between this worldview and specific culturally orthodox “political theologies” that fail to cultivate environmental concern in adulthood. Note, for example, that confidence in organized religion has been consistently negatively correlated with environmental concern across all measures, both in the context of this and the previous chapter. Also, attending religious services at least once a week is generally negatively associated with environmental concern (though earlier models indicated that less frequent attenders are not statistically different from those who never attend). Given these findings, it may be the case that high levels of participation in organized religion have, over time, become more intimately linked to political conservatism—and, by proxy, to lower levels of environmental concern. This speculation accords with contemporary trends in American religion as noted by Chaves (2011).

Finally, differences in education are uneven, with positive associations tending to manifest themselves on the stewardship front, and negative associations, regarding conservation.

Being that education can be viewed, in part, as a measure of relative socio-economic security, and that both race and class are strongly related to religious belief and participation in the U.S. (Norris and Inglehart 2011:270-6; Putnam and Campbell 2010), further investigation into how these, as well as the “gender gap” in environmental concern (McCright and Dunlap 2011; Nagel 2015), affect the relationship between faith traditions and environmental concern, will be investigated later. For now, I want to further explore the category “unaffiliated” given its prominence in this chapter. What exactly do the unaffiliated believe? And how do differences among the unaffiliated shape attitudes toward environmental concern? These questions will be addressed in the next section.

Who are the Nones, Anyway?

As noted above, perhaps one of the most significant changes in the American religious landscape is the dramatic increase in the proportion of the U.S. population who do not claim any religion—the unaffiliated, or the *nones*. At first brush it would seem obvious what it means to not be religiously affiliated, but in fact, sociologists have uncovered surprising depth and diversity in religious beliefs and practices among the unaffiliated (Bellah et al. 1996; Galen 2014). Figure 13 on the next page summarizes some of the ways in which the religiously unaffiliated differ—and resemble—the broader population of this study. Unless otherwise noted, measures are percentages.

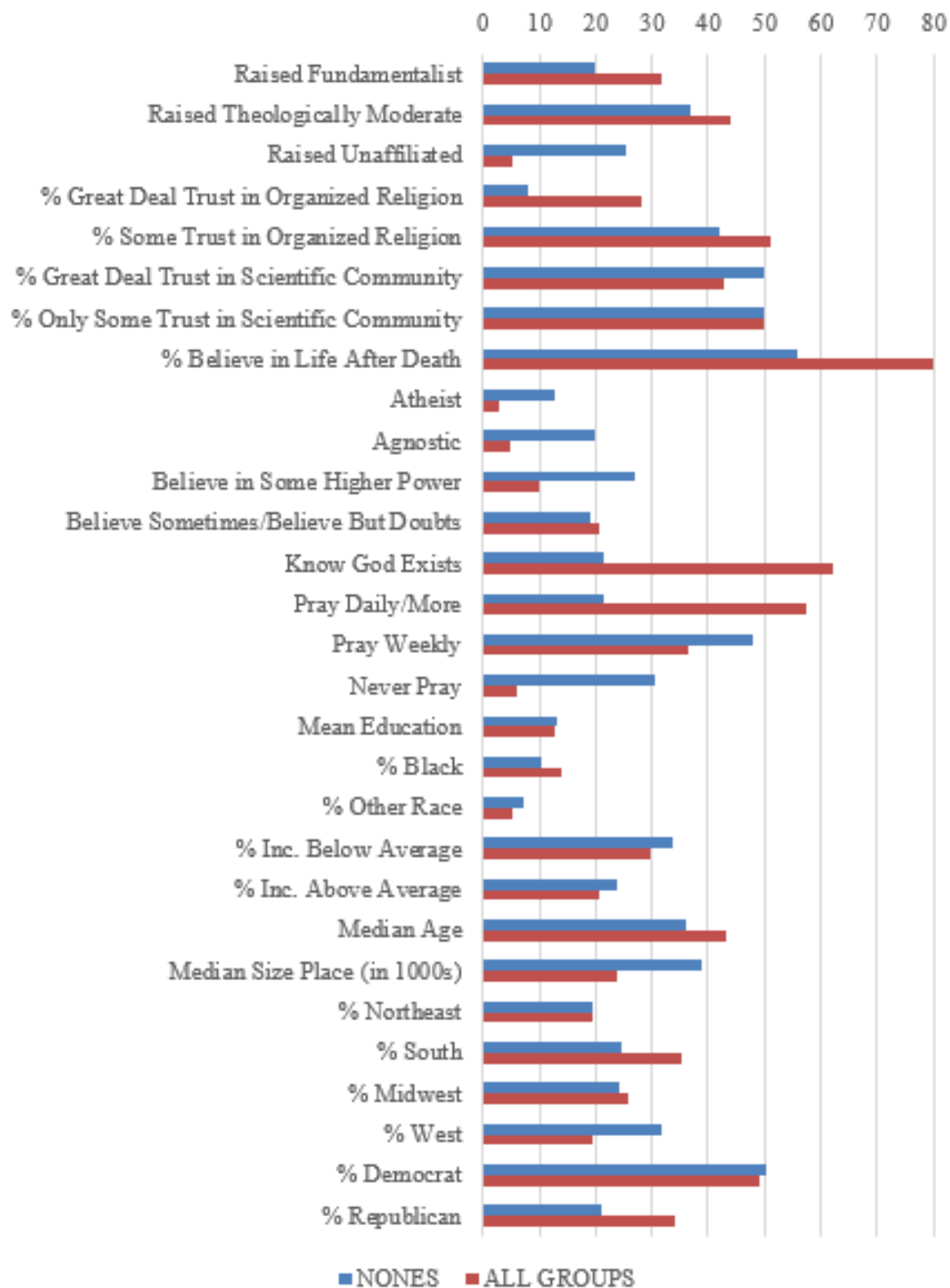


Figure 13: Who Are the Unaffiliated (the "nones")?

Unsurprisingly, the unaffiliated are more likely to have been raised without religious belief. They are more likely to live in larger population centers in the Western U.S., are younger, less likely to vote Republican, have slightly higher levels of education, much lower levels of trust in organized religion, and slightly higher levels of trust in the scientific community. Somewhat less intuitively, the unaffiliated are hardly consistently atheistic in their worldviews. In fact, less than 15% of the unaffiliated claim to have no belief in God (atheist), and an additional 20% are agnostic (no way to know for sure whether God exists). Over half believe in life after death, 70% report praying at least weekly, and more than one in five claim they know God exists. In short, while the “nones” are clearly much less religious in terms of belief than the general public, there is great diversity within this group. One sub-set of explanations contends that many “nones” are “spiritual not religious,” a trend which some scholars have described as the rise of *postmodern religion*, a shift toward religion rooted in the personal and subjective experience of the individual (Bellah et al. 1996; Szerszynski 2005:22; Tomlin 2009:19-32; Woodhead and Heelas 2000:110-3; Zinnbauer et al. 1997). A more critical explanation may be that a significant proportion subscribe to what Smith and Denton (2011) refer to as “Moralistic Therapeutic Deism,” which can be defined as “a belief in a creator God who watches over human life on earth, wants people to be good, nice, and fair to each other, but does not need to be particularly involved in one’s life except when needed to resolve a problem” (6). This approach to religion, which research has shown is linked particularly to younger American cohorts, “is colonizing many historical religious traditions, and, almost without notice, converting believers in the old faiths to its alternative religious vision of divinely underwritten personal happiness and interpersonal niceness” (Smith 2014:46).

The unaffiliated are investigated as a group across the measures depicted in Figure 13 above. Because these measures are not available across all waves, and in many years, and the nones represent less than ten percent of the American population, the number of respondents in the regression models depicted in Table 10 below is 1,173. Assessing the unaffiliated permits further understanding of how aspects of spirituality not readily captured by standard measures of religiosity (though many of the measures below would be commonly found among religious believers as well) and helps to further clarify whether it can be argued that there is something culturally specific within some religious groups that drives environmental concern.

Table 10: Environmental Concern Regressed on Spirituality, Linear Probability, Nones (N=1,173)

	STEWARDSHIP		CONSERVATION	
	b	(se)	b	(se)
Fundamentalist at 16	.034	(.042)	-.002	(.049)
Moderate at 16	-.008	(.037)	.019	(.043)
Raised Unaffiliated	.007	(.041)	-.039	(.047)
Agnostic	-.030	(.045)	.088	(.053)+
Higher Power	-.005	(.046)	.078	(.054)
Believe in God Sometimes	-.053	(.052)	-.010	(.060)
Know God Exists	-.067	(.054)	.045	(.063)
Pray Daily	.127	(.042)**	.031	(.049)
Pray Weekly	.100	(.032)**	.020	(.037)
Believe in Life After Death	-.037	(.031)	-.023	(.035)
High Trust Organized Religion	-.169	(.055)***	-.093	(.064)
Some Trust Organized Religion	-.055	(.027)*	-.034	(.031)
High Trust in Science	.123	(.059)*	-.173	(.067)*
Some Trust in Science	.136	(.058)*	-.151	(.066)*
Education	.006	(.005)	.001	(.006)
Female	.060	(.027)*	.028	(.031)
Black	-.104	(.045)*	.027	(.052)
Other	.023	(.046)	-.029	(.052)
Income Below Average	.062	(.029)*	.046	(.033)
Income Above Average	.058	(.034)+	.048	(.040)
Birth Year	.000	(.001)	.001	(.001)
Ln Size	.004	(.007)	-.005	(.008)
South	.009	(.039)	-.042	(.045)
Midwest	.072	(.040)+	-.063	(.046)
Other Region	-.011	(.037)	-.060	(.043)
Democrat	.121	(.031)***	.066	(.035)+
Republican	-.114	(.037)**	-.112	(.043)**
Constant	.453	(.103)***	.489	(.117)***
Adjusted R²	.081		.023	

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

Prior to interpretation, I should note that the data presented in Table 10 are the result of analyses using Linear Probability Modeling rather than the logistic regression employed elsewhere in this chapter. This means that the coefficients are changes in probability, and the constant is the probability of a political independent residing in the Northeast in a place with less than 1,000 persons, who was born in 1884, is average income, white, male, with a high school education, little trust in science or organized religion, who does not believe in life after death, does not pray, was raised in a theologically liberal (but religiously affiliated), and does not believe in God.

Note the Stewardship Model above. The nones who pray are notably more likely to express a stewardship ethic. Daily prayer is associated with a 12.7% increase in stewardship ethic, while weekly prayer is linked to a 10% increase relative to those who never pray. Much as is the case with other groups, confidence in organized religion among the unaffiliated is negatively correlated with stewardship, and confidence in the scientific community, positively correlated, though these associations are stronger among the unaffiliated. Among the unaffiliated, women are more likely than men to express stewardship, and Blacks are less likely than whites. Below average incomes are positively associated with stewardship, as are above average incomes, though the latter is not significant at the $p < .05$ level. The effects of political party identity are strong as expected, but the measures of confidence in organized religion is negatively associated with stewardship more strongly than identifying as Republican.

Interestingly, praying (rather than not praying) is comparable to identifying as a Democrat in terms of both effect size and significance. The reasons for this are not known, but several explanations are possible. Perhaps these are lapsed formerly religious persons who clung to prayer as habitus after disaffiliation, and this effect further reflects the positive effect of

disaffiliation on stewardship. In other words, perhaps prayer is a proxy for those raised religious who later disaffiliated. It is also possible that frequent prayer is exhibited by others loosely affiliated with some form of New Age, pagan, wiccan, or alternative “Earth spirituality,” who may both pray, and identify as unaffiliated. It is also possible that the positive effect of prayer is due to the growth of “Moralistic Therapeutic Deism” (see Smith 2014) among younger cohorts and may reflect cultural differences between older and younger nones. In any event, the act of prayer is uncontroversially a spiritual practice, and the fact that the unaffiliated who pray are more likely than those who do not to express a stewardship ethic is intriguing, if the reasons why are not readily clear. None of these explanations (which are not altogether mutually exclusive) seem to fundamentally challenge earlier findings in this chapter and may indirectly corroborate them.

Political party is not the strongest association with conservation either—confidence in the scientific community, surprisingly, is strongly negatively correlated with conservation ethic. The reasons for this are not known, but it seems possible, as mentioned in the previous chapter, that conservation taps a variety of views regarding how and why individuals value national parks and other wilderness sites. Some may hunt, fish, camp, or otherwise use such sites for recreational purposes without much thought to how conservation is connected, past and present, to the efforts of scientific community and national regulatory regimes. It is also possible that those who are engaging with wilderness on spiritual terms are doing so with something analogous to Purdy’s (2015) *Romantic imagination* in mind, a vision of nature as a place of escape from a society ever more dependent on science, technology, industry, *rationality* (122-3), and that the transcendental appeal of nature stands in negative relation to seemingly technocratic appeals to science. It could also be that conservation strikes a more ruggedly individualistic “libertarian” or “anti-federalist”

nerve, such that individuals who tend to mistrust government agencies for other reasons fervently support intervention when it comes to national parks. Across most measures of religious belief and upbringing, however, the unaffiliated do not differ significantly from one another on levels of environmental concern.

Conclusion

In this chapter, I examined two hypotheses. H₃, that being raised in a religious tradition with a historically “green” stance is associated with higher levels of adult environmental concern, was largely supported, and provides further corroboration for H₂ in Chapter 3. That is, persons raised in groups with pro-environmental stances hold higher levels of environmental concern when compared to those that were not. To restate: Presbyterians, Episcopalians, Baptists, Lutherans, and Catholics. Yapple (1982) also indirectly found that Methodist religious leaders offered pro-environmental doctrinal stances, as well as many of the largest denominations within the above religious group identities. Put simply, these are the groups found to cultivate higher levels of environmental concern across both measures (though those raised Jewish and liberal other Protestant both held higher levels of stewardship). Again, these findings suggest that research into the religion-environment connection may benefit from a more “classic” religion coding scheme that does not assume the cultural cleavages that have wended their way into American society over the past half a century, as do the FUND (Smith 1990) and RELTRAD (Steensland et al. 2000) coding schemes. This is by no means to suggest that the “culture wars” (Hunter 1991) are irrelevant—highest levels of environmental concern on both measures were generally found among those raised in theologically liberal Protestant groups.

H₄, that disaffiliation in adulthood is associated with higher levels of environmental concern than remaining religiously affiliated, was also supported by the evidence presented here,

further complicating the religion-environment connection. Given that a majority of the unaffiliated were raised religious, and upbringing is a strong indicator of adult religiosity, it seems that if religion is a predictor of environmental concern, examining the role of religious *upbringing* is an important step in disentangling the religion-environment connection. Based on the findings here, religious upbringing, particularly in a “pro-environmental” religious group, exhibits some positive effects on environmental concern. However, more surprisingly, the highest levels of environmental concern can be found among those who were raised religious and disaffiliated. Based on model fit criteria, this effect did not differ across religious groups, but was common to disaffiliation in general. As noted in the introduction, this could be explained in terms of greater emphasis on *reflexivity* and personal agency in adulthood—again, religion is perhaps best understood here as an *identity* comprised of a complex of sociocultural, political, and economic factors. In other words, shifts in identity which loosen ties to organized religion may also lead to identities more amenable to environmental concern. This finding was surprising. Further research into religious “switching” (including but not limited to disaffiliation) may aid in explaining such phenomena.

Overall, environmental concern does not neatly map onto a liberal-moderate-fundamentalist theological divide. While the theologically liberal Episcopalians lead in environmental concern across both measures, the largely theologically liberal Methodists fall below the largely theologically fundamentalist Baptists, while theologically moderate Catholics and largely theologically liberal Presbyterians cultivate middling levels of environmental concern. Only in the simple regression stewardship model was there evidence of a negative relationship between environmental concern and religious upbringing, and these effects disappeared after adding controls. Again, consistent with a history of Baptist engagement with

environmental issues, Baptist upbringing seems to be linked to *higher* levels of environmental concern across both measures. Finally, the lack of strength of Bible belief relative to environmental concern underscores the contention, offered in the conclusion of Chapter 3, that something specific to religious traditions that more accurately captures the relationship between religion and environmental concern than feelings about the Bible per se.

Though the unaffiliated are a diverse and heterogeneous group, when it comes to environmental concern, one of the most consistent predictors is political party affiliation, with the predictable split between Republicans (negatively associated) and Democrats (positively associated). Relatively strong, positive associations with prayer regarding stewardship are intriguing, as are strong negative associations between conservation and confidence in the scientific community. However, overall, differences in spiritual beliefs, practices, and upbringing are not statistically significant among the unaffiliated when controlling for attitudinal, demographic, and geographic factors.

Questions remain. While it is clearer now that some faith traditions have more successfully cultivated environmental concern than others, and some explanations as to *how* many traditions have changed over time has been explored, I have not yet examined the reasons *why* that may be the case. To answer this question, I undertake the estimation of multilevel models in the next chapter which parse out the effects of theological orientation, age, and time. In the second half of this dissertation (Chapters 6-8), I also attempt to analyze conditional differences by gender, income, political affiliation, and race, to shed new light on the religion-environment connection before summarizing findings, limitations, and theoretical implications in Chapter 9.

Technical Appendix A4

Table 11: Descriptive Statistics, Upbringing

Variable	Stewardship (N=34,143)		Conservation (N=16,614)		Min	Max
	Mean	SD	Mean	SD		
<i>Dependent Vars.</i>	.63		.33		0	1
Raised Baptist	.23		.22		0	1
Raised Methodist	.11		.10		0	1
Raised Presbyterian	.05		.04		0	1
Raised Lutheran	.07		.06		0	1
Raised Episcopalian	.02		.02		0	1
Raised Fund Other Prot	.08		.08		0	1
Raised Other Protestant	.01		.01		0	1
Raised Lib. Other Prot	.02		.01		0	1
Raised Nondenominational	.03		.04		0	1
Raised Catholic	.30		.31		0	1
Raised Jewish	.02		.02		0	1
Raised Other Religion	.02		.03		0	1
Raised None (ref)	.04		.06		0	1
Unaffiliated as Adult	.11		.14		0	1
Birth Cohort (0-6)	3.32	1.362	3.85	1.262	0	6
Cohort ²	12.91	8.881	16.43	9.416	0	36
Attend Weekly or More	.27		.26		0	1
High Conf. Science	.43		.42		0	1
High Conf. Religion	.28		.24		0	1
Education	.94	3.048	1.38	2.975	0	20
Black	.13		.14		0	1
Other	.04		.07		0	1
White (ref)	.83		.79		0	1
Female	.55		.55		0	1
Inc. Below Av.	.29		.31		0	1
Average Income (ref)	.49		.46		0	1
Inc. Above Av.	.22		.23		0	1
South	.34		.36		0	1
Midwest	.26		.25		0	1
Other Region	.20		.21		0	1
Northeast (ref)	.20		.18		0	1
LnSize/Place in 1000s	3.52	2.068	3.54	2.016	0	8,175
Republican	.35		.36		0	1
Democrat	.50		.48		0	1
Independent/Other (ref)	.15		.16		0	1
Bible is Literal Word	-		.32		0	1
Bible is Inspired Word	-		.48		0	1
Book of Fables (ref)	-		.20		0	1

Chapter 5. Multilevel Model

Whereas Chapter 3 approached the measurement of ethical dynamics using birth year cohorts, and Chapter 4 examined the effects of religious upbringing and disaffiliation, this chapter approaches measurement of change across religious groups regarding environmental concern in another way. Specifically, a series of multilevel models were estimated which model *dependency*—that is, they attempt to separate the variation in environmental concern across years (level 3) and within a religious group in a given year (level 2) from the cross-sectional (level 1), person-level predictors of environmental concern (particularly age). Not only does this offer another means by which to measure ethical change across religious groups along both dimensions of environmental concern, but it permits separation of the effects of time (year, and year by religious group) from the effects of age on environmental concern. Accordingly, this is the most technical chapter of this dissertation, in terms of statistical analysis.

The recent history of environmental issues in the United States has generated a great deal of scholarly interest, of far greater scope than can be tackled here. However, several noteworthy factors bear mention in the context of this chapter. Given that the data used for this dissertation encompasses 1973-2014, two developments bear repeating: first, the Lynn White thesis (1967) laid blame for the burgeoning environmental crisis at the feet of Western Christianity. In many ways, this may have led to the range of responses which have been documented statistically in previous chapters. Nineteen seventy-three makes for a particularly interesting point of departure given its proximity to a wave of official statements by American Christian denominations which explicitly addressed environmental challenges and responsibilities (Danielsen 2013; Djupe and Hunt 2009; Holland and Carter 2005; Shaiko 1987; Smith and Pulver 2008; Yaple 1982).

The second development, which serves as a means by which to divide the recent history of environmental concern, is marked by the 1992 Rio de Janeiro Earth Summit, an ostensibly global effort among over 100 United Nations member nations to engage with the potential dangers of anthropogenic climate change (Oreskes and Conway 2010:197; Vidal 2012). An unintended consequence of this conference was manifested in a strong and consistent U.S. pushback against anticipated demands for sweeping regulatory reform to combat carbon emissions, which critics viewed as tantamount to corruption of the principles of free enterprise and evidence of creeping socialism (Oreskes and Conway 2010:197-215;247-51). Note Figure 14, marking a rather dramatic decline in stewardship between 1991 and 1993, which corresponds to this event. Given that the specific question used to measure *stewardship* is captured by the statement “Are we spending too little to improve and protect the environment?” it is likely that this precipitous drop captures part of this sociocultural development.

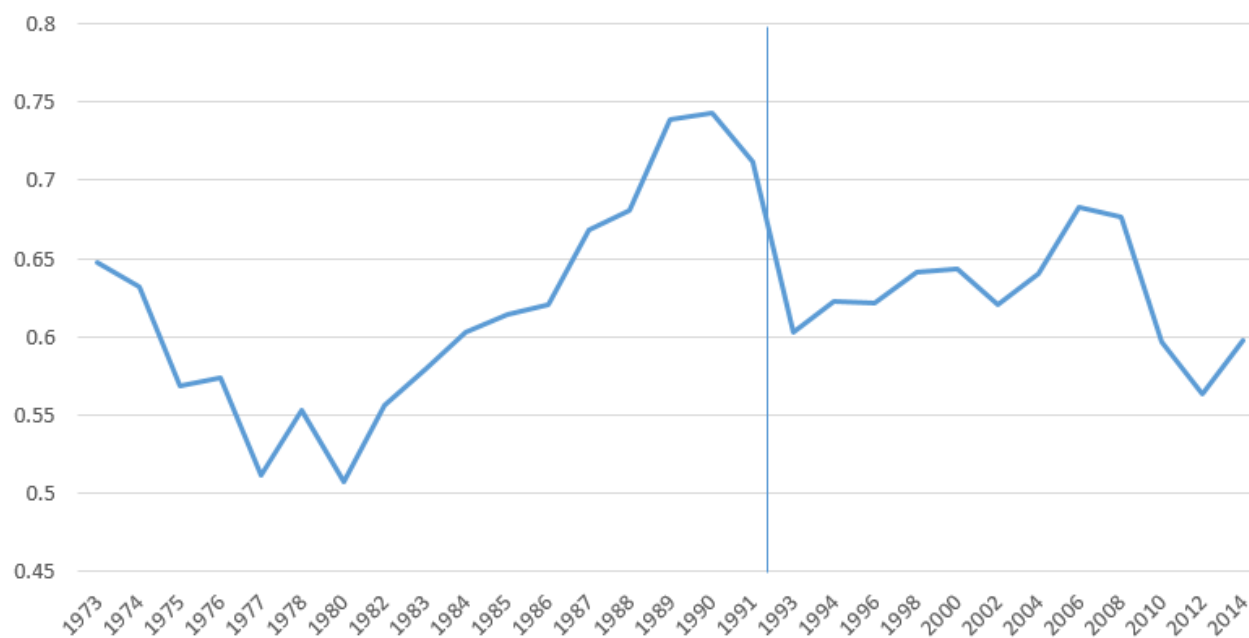


Figure 14: Stewardship Fluctuations, "The Rio Effect" (1992, Vertical Line)

This development does not stand on its own, however. As noted in previous chapters, the last decade of the twentieth century was marked by the intensification of what Hunter (1991)

referred to as “culture wars”—a growing rift between culturally progressive and culturally orthodox forces along which other aspects of American culture and civic life presumably also increasingly organized. While Hunter does not explicitly address environmental issues when discussing these “culture wars,” other observers on both sides of the political spectrum noted that environmental issues have increasingly been championed by culturally progressive elements (Dreher 2006; Schwadel and Johnson 2017). Given these developments, I have chosen this period as a means by which to parse out two unique historical periods for analysis: 1973-1991 and 1993-2014 (the GSS does not include a 1992 wave). This periodization merits the use of a piecewise model for stewardship (if not for conservation) allowing me to compare changes over time in these two historical periods. Note that the models in this chapter were estimated using SAS 9.4, and syntax can be made available upon request.

Modeling Change Over Time, Stewardship (FUND Coding Scheme)

Changes in levels of stewardship over time across 29 occasions between 1973 and 2014 were examined in 34,266 persons nested in three groups (descriptive statistics, largely similar to those presented in Chapter 3, are presented in the technical appendix of this chapter). Three-level generalized linear mixed models were estimated using Laplace likelihood estimation in SAS PROC GLIMMIX. Estimating multilevel models first requires developing an accurate, parsimonious, and theoretically meaningful measure of time. A three-level empty means, random intercept model was estimated, the worst-fitting possible multilevel model that contains no predictors (Model 1.1, Table 12). Investigators often employ such models also to obtain the interclass correlation coefficient, or the proportion of the total variance explained by each level of the model. However, this model uses a logistic outcome (see Chapter 2), and as such, these comparisons are not particularly meaningful. The primary means by which to compare model fit

is the likelihood ratio test (represented by $-2 \times \log$ likelihood, or $-2LL$, and based on the chi-squared distribution).

Table 12: Stewardship Model Fit Comparisons

MODEL	(-2LL)	Δ-2LL	df	Δdf	Sig.	DECISION
1.1. Three-Level Empty Means	43,560.52	-	3	-	-	keep third level
1.2. Test Slope91, Slope93	43,550.46	10.06	5	2	.007	keep piecewise slopes
1.3. Test Quadratic Slope91	43,543.98	6.48	6	1	.011	keep quadratic Slope91 (Model 1)
1.4. Test Quadratic Slope93		FAILED TO CONVERGE				1.4 is Model 1
2.1. Test Religious Group	43,468.07	75.91	8	2	>.001	ReligID significant (Model 2)
2.2. Test ReligID*Slope91	43,467.43	0.64	10	2	.726	ReligID changes parallel on Slope91
2.3. Test RlgID*Slp91*Slp91	43,462.72	5.35	12	4	.253	ReligID changes parallel on Slope91
2.4. Test ReligID*Slope93	43,466.51	1.56	10	2	.458	No conditional ReligID*Slopes
3.1. Test L1, L2, L3 Age	42,155.73	1,312.34	11	3	>.001	Age is significant
3.2. Test L1Age*ReligID	42,148.76	6.97	13	2	.031	Significant Conditional Effects on Age
3.3. L2Ag*RlgID L3Ag*RlgID	42,148.18	0.58	17	4	.965	Gradients Improved
3.4. Test L2Age*L1Age	42,114.66	33.52	18	1	>.001	Keep Interaction Effect
3.5. Test L3Age*L1Age	42,099.73	14.93	19	1	>.001	Keep Interaction Effect (Model 3)
3.6. L2Age*L1Age*ReligID	42,096.05	3.68	21	2	.159	Drop Effect
3.7. L3Age*L1Age*ReligID	42,096.99	2.74	21	2	.254	Drop Effect
4.1. Slope91*L3Age	42,099.88	0.15	21	2	.928	Drop Effect
4.2. Slope91*L1Age	42,099.57	0.16	21	2	.923	Drop Effect
4.3. Slope91*L2Age	42,099.58	0.17	21	2	.919	Drop Effect
4.4. Slope93*L3Age	42,099.41	0.32	21	2	.852	Drop Effect
4.5. Slope93*L1Age	42,094.08	5.65	21	2	.059	Keep Effect (Model 4)
4.6. Slope93*L2Age	42,094.09	0.01	22	1	.920	Drop Effect
4.7. Slope93*L1Age*ReligID	42,088.49	5.59	24	2	.061	Drop Effect
5.1. Controls (No Intercept)	40,948.28	1,145.8	47	26	>.001	Model 6
6.1. Remove ReligID Effects	41,004.53	56.25	28	19	>.001	Model 5 (ReligID Nonspurious)

Table 12 traces the series of model fit tests conducted to estimate the regression models presented in Table 13. A brief description of the decisions made based on fit test criteria is noted in the right-most column for each model. Model 1.1 is the baseline three-level empty means model for stewardship, which estimated a random intercept for both Level 3 (year) and Level 2 (year*religious group identity). Again, the General Social Survey is not, strictly speaking, a “longitudinal survey” because it does not ask the same persons the same questions over time—each year of the survey contains different respondents. Thus, each person within the survey is nested within both a year and a religious group identity—it is assumed due to the survey design

that no person is measured in more than one year, and no person is a part of more than one religious group at the time of the survey. Persons are thus assumed to be nested in “time-invariant” groups. Level 2, then, captures the variation in stewardship in a unique year for persons within a unique religious group. Level 3 captures the additional variation in stewardship accounted for by the year of the survey.

To restate, I could have included a level-3 crossed effect of religious group identity (as well as Level 3 time and Level 2 time*religious group identity), but my decision to treat religious group identity as a fixed rather than a random effect was based on both the context of the dissertation project as well as the specific research question. That is, a random effect at the level of group (in this case religious identity) is useful for denoting *why* (how much of the variance in stewardship is captured by the variance component for religion *qua* religion) rather than describing *how* religious group identity impacts changes in stewardship over time. Given that measures of ethical change situated in historical developments is at the center of this dissertation, and that the rest of the models featured in Chapters 1-4 and 5-8 attempt to *describe* the nature and contours of this change, religious identity groups were modeled using fixed effects (after parsing out religious group*year variance at level 2). As noted above, 1992 can be viewed (both empirically and historically) as a watershed year in both cultural polarization and resistance to environmental regulation. The question as to whether and to what extent the piecewise slopes (one for 1973-1991 and one for 1993-2014) posited above better account for change over time than a single slope is an empirical question which can be answered using likelihood ratio fit tests. Piecewise slopes cover the change within each epoch, and this change is found to be significant according to likelihood ratio tests. According to Model 1.3, treating the 1973-1991 slope as quadratic further improves model fit, though a model which included both

quadratic slopes failed to converge. Effect sizes indicate an R^2 of .351, .233, and .368 for the slope91, slope91*slope91, and slope 93 slopes, respectively. Pseudo R^2 indicates that variance explained in the random effects in the piecewise model for level 2 and level 3 is .001 and .349, respectively. The resulting unconditional time model may be referred to as a Three-Level Piecewise Random Intercept Fixed Quadratic 1973-1991 Slope Fixed Linear 1993-2014 Slope Logistic Regression model. After estimating the best unconditional time model for the purposes of this analysis, fixed effects were added to the model beginning with main effects of religious group identity (Model 2.1), which resulted in a significant fit improvement. This indicates that adding religious group identity resulted in a significantly better model than the unconditional time model.

Table 13: Three-Level Piecewise Random Intercept, Fixed Quadratic 1973-1991 Slope, Fixed Linear 1993-2014 Slope Logistic Regression Models, Stewardship

	Model 1		Model 2		Model 3	
	B	(se)	β	(se)	β	(se)
Slope1973-1991	.099	(.028)**	.099	(.028)**	.092	(.029)**
Slope1973-1991 ²	.004	(.002)*	.004	(.002)*	.004	(.002)*
Slope1993-2014	-.025	(.007)**	-.026	(.007)***	-.034	(.015)*
Fundamentalist			-.425	(.036)****	-.434	(.035)****
Moderate			-.273	(.034)****	-.286	(.033)****
L1Age					-.022	(.001)****
L2Age					.017	(.037)
L3Age					.058	(.081)
L1Age*Fund.					-.002	(.002)
L1Age*Moderate					-.003	(.002)+
L2Age*Fund.					-.048	(.054)
L2Age*Moderate					-.059	(.054)
L3Age*Fund.					.046	(.064)
L3Age*Moderate					.045	(.048)
L1Age*L2Age					-.001	(.001)
L1Age*L3Age					.003	(.001)***
Random Intercept Variances						
Year	.019	(.011)	.034	(.011)	.034	(.011)
ReligID*Year	.048	(.012)	.004	(.003)	.002	(.003)
Constant	.907	(.087)****	1.148	(.089)****	1.186	(.109)****
-2LL	43,543.98		43,468.07		42,099.73	

Note: + $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$ **** $p < .0001$

Stewardship Results

Six distinct stewardship models have been reported below based on model fit criteria. After partitioning the variance in religious group identity and model intercepts (centered at 1991) using random intercepts, Model 1 indicates the slopes for an unconditional time model. The 1973-1991 slope is expected to vary positively, and to become more positive by twice the quadratic slope, or .008 logits with each year. However, since the intercept is 1991, this results in a roughly u-shaped slope, which decelerates until roughly 1980 before rebounding between 1980 and 1991. The 1993-2014 slope indicates a linear negative trend in average stewardship after 1992.

When including religious group identity per Model 2, all three slope effects are attenuated slightly. Fundamentalists hold significantly lower levels of stewardship than theological liberals (the reference group). Theological moderates hold lower levels of stewardship, as well, but higher levels than fundamentalists. This would seem to support the “culture wars” contention, which argues that theological identity has become intertwined with cultural attitudes, and environmental concern has become largely the purview of the culturally progressive, theologically liberal elements of the American cultural and religious landscape. These findings also provide clear support for H₅.

Conditional effects of religious group identity are nonsignificant at $p < .05$ but are generally negative. Religious group identity remains largely unaffected by the addition of age in this model; Level 1 age is a strong negative predictor of stewardship and is nuanced by an interaction between level 3 age and Level 1 age. Younger Americans are more likely than older Americans to express stewardship, regardless of theological orientation. However, the negative

effect of being older than average becomes less negative in years with older persons on average.

Over time, the age gap in stewardship has attenuated, in part as the population has aged.

Table 14: Three-Level Piecewise Random Intercept Fixed Quadratic 1973-1991 Slope, Random Intercept Fixed Linear 1993-2014 Slope Logistic Regression Models, Stewardship, Controls

	Model 4		Model 5		Model 6	
	β	(se)	β	(se)	β	(se)
Slope1973-1991	.080	(.029)*	.091	(.032)**	.091	(.030)**
Slope1973-1991 ²	.004	(.002)*	.004	(.002)*	.004	(.002)*
Slope1993-2014	-.004	(.002)*	-.044	(.016)*	-.041	(.016)*
Fundamentalist	-.438	(.036)****			.685	(.138)****
Moderate	-.290	(.034)****				
L1Age	-.026	(.002)****	-.025	(.002)****	-.023	(.002)****
L2Age	.041	(.038)	-.001	(.020)	.061	(.038)
L3Age	.050	(.081)	.103	(.080)	.026	(.085)
L1Age*Fund.	-.002	(.002)			-.003	(.002)
L1Age*Moderate	-.003	(.002)*			-.004	(.002)**
L2Age*Fund.	-.047	(.055)			-.067	(.054)
L2Age*Moderate	-.104	(.057)+			-.112	(.057)*
L3Age*Fund.	.033	(.065)			.074	(.064)
L3Age*Moderate	.087	(.051)+			.109	(.051)*
L1Age*L2Age	-.001	(.001)	-.000	(.001)	-.000	(.001)
L1Age*L3Age	.001	(.001)	.000	(.001)	-.000	(.001)
Slope93*L1Age	.001	(.000)**	.001	(.000)*	.001	(.000)**
South			-.311	(.036)****	-.295	(.036)****
Midwest			-.238	(.036)****	-.223	(.036)****
Other Region			-.417	(.039)****	-.406	(.039)****
Attend Weekly+			-.177	(.028)****	-.145	(.028)****
High Conf. Rel.			-.168	(.027)****	-.161	(.027)****
High Conf. Sci.			.172	(.025)****	.169	(.025)****
Erucic			.052	(.004)****	.048	(.005)****
Female			.096	(.024)***	.095	(.024)***
Nonwhite			.005	(.036)	.022	(.036)
Below Av. Inc.			.094	(.028)**	.093	(.028)**
Abv. Av. Inc.			-.032	(.032)	-.041	(.032)
Ln_size			.058	(.006)****	.056	(.006)****
Democrat			.184	(.036)****	.193	(.036)****
Republican			-.430	(.038)****	-.418	(.038)****
Random Intercept Variances						
Year	.034	(.011)	.037	(.013)	.039	(.012)
ReligID*Year	.003	(.003)	.017	(.006)	.002	(.003)
Constant	1.164	(.110)****	.768	(.139)****	.726	(.139)****
-2LL		42,094.08		41,004.53		40,948.28

Note: + p < .10 * p < .05 ** p < .01 *** p < .001 **** p < .0001

Turning to Table 14, the pattern is complicated somewhat. Per Model 4, Level 1 age plays the most consistently significant role in predicting stewardship, interacting with theologically moderate identity (but not significantly in the case of level 2 and level 3 age). This

means that the effect of age is noteworthy at the level of individuals (level 1), and is not due to the average age of people belonging to a religious group in a given year (level 2) or the effect of there being more older people in a given year (level 3). Cross-level age interactions are no longer significant with the addition of the slope $_{93}$ *age conditional effect, indicating that the effect of age became less negative beginning in 1993.

Conditional effects in Model 5 (which was included as an additional test of no spuriousness by omitting all religion effects) concur. Here, regional differences play notable roles, as does education, the urban-rural divide, and political party identity. Interestingly, weekly or more religious service attendance, as well as high confidence in organized religion, are negatively correlated with stewardship. Overall, this indirectly suggests that closeness to one's religion is inversely related to stewardship, which was also found in the models in Chapters 3 and 4. Women are more likely to express stewardship than men, overall (which is examined in more detail in the next chapter), as are below average income persons (examined in Chapter 7).

In the final model, Model 6, conditional effects of age are significant and negative among moderates at Level 1 and Level 2 and are positive at Level 3. The Level 1 effect indicates that older theologically moderate persons are less likely to express stewardship than younger theologically moderate persons (logit=-.004, $p < .01$), and the Level 2 contextual effect indicates an additional negative effect in years in which theologically moderates were older on average (logit=-.112, $p < .05$). The positive level 3 effect indicates a positive effect on theological moderates' levels of stewardship in years in which people were older on average (logit=.109, $p < .05$). Given the complexity of these findings, they have been charted in Figure 15 below. In all these calculations, Model 6 coefficients were used, and Level 2 and level 3 age effects were held

constant, providing the change in the person-level context by age and theological orientation across survey years.

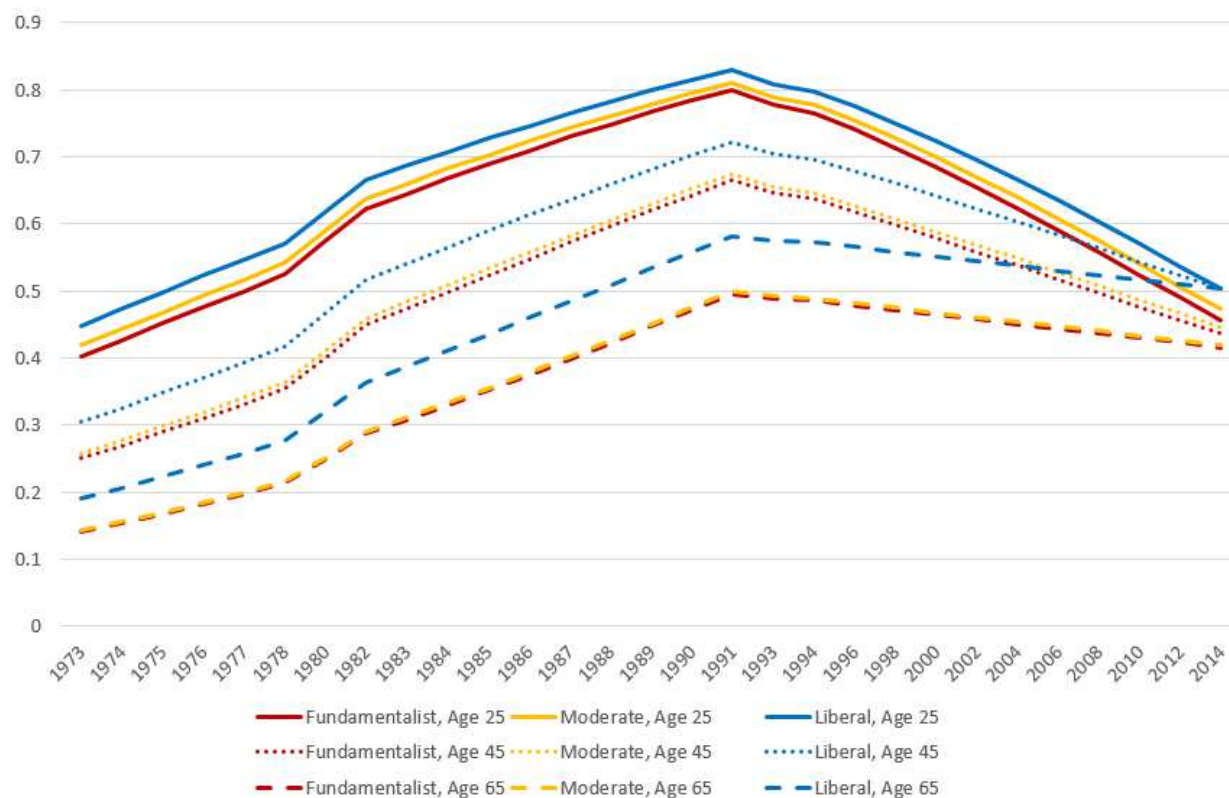


Figure 15: Model-Predicted Fixed Effects Fluctuations in Stewardship, by Theological Orientation and Age

In general, the models estimated predict that the age gap on stewardship has closed over time, but this finding itself does not necessarily denote that ethical change toward greater levels of stewardship has occurred across specific religious groups. In fact, it is noteworthy that the most precipitous *decrease* in stewardship across slope93 has taken place, particularly among younger persons. It may also be that older theologically liberal persons are disproportionately more highly educated, and it is well-established that persons holding advanced degrees are significantly less religious than the less educated on average (Armet 2009; Ecklund, 2010; Ecklund and Long 2011; Ecklund, Park, and Sorrell 2011; Ecklund, Park, and Veliz 2008; Ecklund and Park 2009; Ecklund and Scheitle 2007; Graffin and Provine 2007; Granger and

Price 2007; Gross and Simmons 2009; Larson and Witham 1998; Leuba 1916, 1934; Long 2011; Maryl and Oeur 2009; Masci 2009; Scheitle 2011, 2011a; Schwadel 2010; Sherkat 2011; Smith and Snell 2009; Stark 1963; Wuthnow 1989). Research to clarify how the connection between education, spiritual practice, and identifying as non-religious has changed over time may clarify this phenomenon, as well as the analyses undertaken at the end of Chapter 4 but is beyond the scope of the current project.

On one hand, divides between 1973 and 1991 were primarily between liberals and non-liberals *of the same age*—age played a stronger role than theological orientation before 1991. Growth in stewardship appears to have occurred *across all groups* up to 1991. Whereas liberals held higher levels of stewardship, all age groups and theological orientations became “greener” during this period. On the other hand, both theological orientation and age *decreased* in salience after 1993. If the trend lines present in this model were projected forward five years, then highest levels of stewardship would be found among older liberals, and lowest levels would be found among middle-aged fundamentalists.

In other words, it can be stated with greater confidence after this analysis that stewardship is not inimical to any theological orientation, and that birth cohort probably plays a role not captured by age or year effects in this model. Stewardship appears to have “peaked” in 1991, and both effects declined beginning in 1993, whereas the average level of stewardship in the population declined slightly. Ethical change in the U.S. on environmental issues may well have happened based on the analysis thus far but may have peaked prior to religious groups’ issuing of official doctrinal statements on environmental issues rather than being directly influenced by them. Americans have converged on environmental concern over time, both across age and theological orientation, suggesting that the “culture wars” explanation is probably not

the best way to capture change in stewardship over time. Therefore, the fundamentalist-moderate-liberal coding scheme may not accurately capture more specific differences in change across religious group identities over time.

Table 15: Model Fit Tests, Conservation

MODEL (Three-Category FUND)	(-2LL)	Δ-2LL	df	Δdf	sig.	DECISION
1.2. Three-Level Empty Means	20410.88		3	1	-	three-level base model
1.3. Three-Level Piecewise Linear Time	20410.53	.35	5	2	.839	piecewise slope(s) nonlinear?
1.4. Add Quadratic Slope91	20410.52	.36	6	1	.549	Drop Effect
1.5. Add Quadratic Slope93	20409.04	.49	6	1	.222	Drop Effect
2.1. Add ReligID	FAILED TO CONVERGE					
2.2. Single-Level Conservation	20404.06		3			Single-Level (Model 1)
2.3. Add Age	20252.22	151.84	4	1	<.001	keep Effect (Model 2)
2.4. Add Quadratic Age	20252.22	0	5	1	.999	Drop Effect
2.5. Add age*ReligID	20248	4.22	6	2	.121	Drop Effect
2.6. Add Controls To 2.3	19813.07	439.15	20	14	<.001	Full Model (Model 4)
2.7. Remove ReligID	19818.92	5.85	18	2	.054	Spurious?
2.8. Remove ReligID, Bible	19832.24	19.17	16	4	.001	Nonspurious (Model 3)

Conservation Results

Conservation was measured across 16,687 persons on 20 occasions between 1984 and 2014 (descriptive statistics included in the technical appendix). A two-level empty means model was first estimated as a baseline against which to compare model fit improvement. An additional random intercept (C.2) improved model fit. None of the piecewise slopes improved model fit, nor did the addition of random piecewise slopes. With the addition of religious group identity, all time slopes were rendered nonsignificant (according to both F tests of fixed effects and individual p values).

Given this, a single-level regression model was estimated which was not a worse overall fit than the three-level model. Again, these models are not nested due to differing random effects, but given the lack of convergence with the addition of theological orientation, a single-level model was assumed to be the most parsimonious means by which to capture stewardship. Only

linear age was found to be significant and did not interact with theological orientation. Thus, a main effects only model including age was assumed to be the best-fitting model. Note that tests for spuriousness were conducted. The removal of theological orientation rendered a significance test of .054, indicating that theological orientation did not significantly improve a model with controls. However, when removing both feelings about the Bible and theological orientation, the model fit change was nonspurious. Thus, Model 3 (2.8) is compared to Model 4 (2.6) in the analysis below.

Table 16: Conservation Regressed on Religious Group Identity, Controls

	Model 1		Model 2		Model 3		Model 4	
	β	(se)	β	(se)	β	(se)	β	(se)
Fundamentalist	-.045	(.043)	-.044	(.043)			-.042	(.050)
Moderate	-.161	(.041)****	-.172	(.041)****			-.103	(.044)*
Age (centered at 45)			-.012	(.001)****	-.010	(.001)****	-.010	(.001)****
Attend Weekly+					-.233	(.042)****	-.216	(.043)****
High Conf. Rel.					-.045	(.042)	-.033	(.042)
High Conf. Sci.					-.010	(.036)	.013	(.036)
Educ (Ctr=12)					-.012	(.006)+	-.012	(.006)+
Female					-.147	(.035)****	-.140	(.035)****
Nonwhite					.383	(.045)****	.376	(.046)****
Inc. Bel Av.					.057	(.040)	.048	(.040)
Inc. Ab Av.					.053	(.046)	.045	(.046)
South					-.013	(.049)	-.027	(.051)
Midwest					-.306	(.054)****	-.306	(.054)****
Other Region					-.113	(.055)*	-.123	(.055)*
Ln(Size+1)					.031	(.009)***	.032	(.009)***
Democrat					-.040	(.048)	-.036	(.048)
Republican					-.404	(.052)****	-.389	(.052)****
Literal Word							-.060	(.057)
Inspired Word							-.139	(.049)**
Constant	-.638	(.304)****	-.630	(.031)****	-.895	(.111)****	-.730	(.126)****
-2LL	20,404.06		20,252.22		19,832.24		19,813.07	

Note: + p < .10 * p < .05 ** p < .01 *** p < .001 **** p < .0001

Models 1-4 are reported in Table 16. Model 1 includes only the fixed effects of religious group identity, which differ from stewardship findings in an important regard. Only moderates held significantly lower levels of conservation than liberals; fundamentalists did not differ

significantly. This further challenges the “culture wars” contention on environmental issues.

Turning to Model 2, age plays a significant role in predicting conservation, with higher levels of conservation found among younger persons. Per Model 3, without the theological orientation and Bible belief effects, weekly attenders, Midwesterners, women, and Republicans held lower levels of conservation; nonwhites and persons living in more populous areas held higher levels of conservation. Model 4 indicates a negative effect of being theologically moderate, and a negative effect of considering the Bible the inspired word of God. This also challenges the contention that there is something specific to fundamentalism that predicts environmental concern, as a function of conservation.

Model-predicted effects from Model 4 are charted below in Figure 16. Age plays a consistent, negative role in conservation, but moderates are less likely to express conservation than either fundamentalists or liberals. Given that inspired word Bible belief was also found to be negatively correlated (but not literal word Bible belief), several conclusions are possible. The first, which accords with the results from the previous chapters, is that the fundamentalist-moderate-liberal divide is too broad to capture differences in religious group identity as a function of environmental concern. Emphasis on groups with a history of environmental concern and engagement may be a better approach. The second, which accords with the trend line on conservation as well as the model fit tests conducted in this chapter, is that changes in conservation may have occurred prior to 1984, such that relatively little variation has manifested itself during the period under study. Note that Figure 16 shows approximately a .02 difference in probability across theological orientations. Given that age remains significant, and cohort effects on religious group identity as well as religious upbringing were notable in previous chapters, birth cohort likely plays a role that is not captured by examining changes beginning in 1984. It

may also be that aging persons elect for lower levels of conservation, rather than that positive ethical change has occurred across birth cohorts. Given these possibilities, it can be stated more confidently that conservation is not reducible to broad theological differences (but appears to be a function of religious group identities). Differing levels of conservation are also not likely to be due to period effects occurring because of broader cultural or political shifts, but are captured by birth cohort, or possibly age, effects.

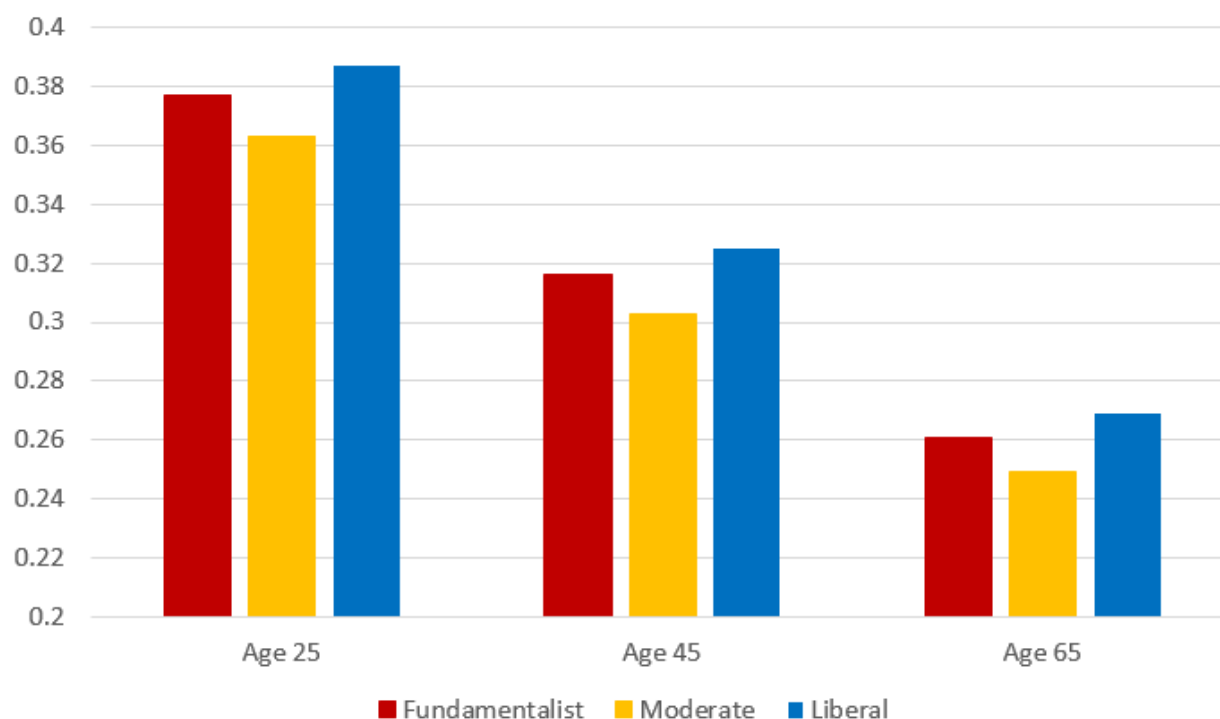


Figure 16: Model Predicted Probability of Expressing Conservation by Theological Orientation and Age

Recapitulation and Conclusions

Two hypotheses were tested in this chapter. Regarding H_5 , that members of religiously fundamentalist groups hold lower levels of environmental concern, this appears to be true only in the context of stewardship. Conservation levels were higher among fundamentalists than among moderates, though liberals held the highest levels of both stewardship and conservation. These

results suggest that the religion-environment connection is not smoothly reducible to cultural conflict in the United States. Regarding H₆, that younger members of the same religious group hold higher levels of environmental concern than older members, this appears to be the case with both measures. In fact, age plays a stronger role than religious group identity (measured here in terms of theological orientation for the sake of model parsimony) on both measures.

Both hypotheses require further qualification. The addition of age further complicates the role of religious group identity in predicting both stewardship and conservation ethics. In terms of stewardship, the “age gap” seems to have decreased over time, particularly beginning in 1993. The general pattern for stewardship is one of *convergence* rather than polarization—*ceteris paribus*, younger and older Americans, as well as fundamentalist, moderate, and liberal Americans, appear to have converged on roughly middling levels of stewardship over time. Thus, the evidence for ethical change—the overarching theme of this dissertation—is mixed. On one hand, at the level of persons, a stewardship ethic rooted in religious group identity has not materialized over the time in question. The American population has converged at somewhat *lower* levels of stewardship than at the high point in 1991. This may betray underlying polarizations along political and other fault lines, but these shifts do not appear to be reducible to the fundamentalist-moderate-liberal divide. Cultural shifts took place as the last decade of the twentieth century arrived—more Americans became less religious on average, traditional religious group identities declined in significance, and the population aged. Higher levels of stewardship among liberals accord with a “greening” among American Christians specifically confined to what Eckberg and Blocker (1996) called the “religious left.” This is decidedly not the case on conservation, however, where age played the most consistent role. Younger persons in the same religious group held higher levels of conservation *and* higher levels of stewardship. As

noted above, this may be due in part to cohort-level changes over time, or due to changes in environmental concern across persons' life courses. Again, the "age gap" began to close after 1991, which also accords with data examined in Chapter 3, which suggested that increases in environmental concern have leveled off in more recent cohorts.

Other factors have manifested themselves across multiple models thus far, which deserve further analysis. There appears to be a gender gap, with women holding slightly higher levels of stewardship, and men, slightly higher levels of conservation. Additionally, race plays a role—in particular, nonwhites express higher levels of conservation across models. Income has not played a significant role in many models but deserves further consideration for theoretical reasons laid out in the introduction. Finally, political party identity plays a consistent role—specifically, Republicans are less likely to express both stewardship and conservation across all models which control for political party. In the next three chapters, I examine the differing salience of gender, income, political party, and race. In doing so, I plan to establish whether, and to what extent, the religion-environment connection is explicable in terms of demographic or ideological factors, as well as whether religion plays a different role based on gender, income, political party identity, and race.

Technical Appendix A5

Table 17: Descriptive Statistics

Variable	Stewardship (N=34,266)		Conservation (N=16,687)		Min	Max
	Mean	SD	Mean	SD		
<i>Dependent Vars.</i>	.63		.33		0	1
Baptist	.20		.19		0	1
Methodist	.09		.08		0	1
Presbyterian	.04		.03		0	1
Lutheran	.07		.05		0	1
Episcopalian	.02		.02		0	1
Fundamentalist Other Protestant	.09		.09		0	1
Other Protestant	.02		.01		0	1
Liberal Other Protestant	.02		.01		0	1
Nondenominational	.05		.06		0	1
Catholic	.25		.25		0	1
Jewish	.02		.02		0	1
Other Religion	.04		.05		0	1
None (ref)	.09		.14		0	1
Birth Cohort (0-6)	3.32	1.362	3.85	1.262	0	6
Cohort ²	12.91	8.881	16.43	9.416	0	36
Attend Services Weekly/More	.27		.26		0	1
High Conf. Science	.43		.42		0	1
High Conf. Religion	.28		.24		0	1
Education Centered at 12	.94	3.048	1.38	2.975	0	20
Nonwhite	.18		.21		0	1
Female	.55		.55		0	1
Below Average Income	.29		.31		0	1
Average Income (ref)	.49		.46		0	1
Above Average Income	.22		.23		0	1
South	.34		.36		0	1
Midwest	.26		.25		0	1
Other Region	.20		.21		0	1
Northeast (ref)	.20		.18		0	1
LnSize/Place in 1000s	3.52	2.068	3.54	2.016	0	8,175
Republican	.35		.36		0	1
Democrat	.50		.48		0	1
Independent/Other (ref)	.15		.16		0	1
Bible is Literal Word	-		.32		0	1
Bible is Inspired Word	-		.48		0	1
Book of Fables (ref)	-		.20		0	1

Chapter 6. Gender, Religion, and Environmental Concern

As noted in Chapter 1, research indicates that women are consistently more concerned with environmental issues than men, and are also more concerned with environmental and technological hazards in general (Bieberstein 2013; Frewer, Miles, and Marsh 2002; Lai and Tao 2003; Stern, Dietz, and Kalof 1993). It has also been well established that, at least in postindustrial countries like the United States, women are more religious on average (Emerson, Mirola, and Monahan 2011:137-41; Norris and Inglehart 2004:69-71) and more likely to be more strictly religious (Darnell and Sherkat 1997; Sherkat and Darnell 1999). In Chapters 3-5 of this dissertation, women were found to be somewhat more likely than men to express a stewardship ethic, but the opposite relationship was found regarding conservation. In this chapter, I test H₇, that religious group identity is more salient among women than among men in explaining environmental concern. Note that the models in this chapter (and in the subsequent two empirical chapters) use the same cohort analysis employed in Chapter 3. However, these models use binary logistic regression rather than linear probability modeling; thus, coefficients in Chapters 6-8 are interpretable as natural log-transformed odds ratios. Figures containing model-predicted probabilities are displayed for interpretability. In addition to reporting -2 log-likelihood (which is a standard likelihood ratio fit test for logistic regression models) I have also reported Nagelkerke adjusted R-squared as a means of assessing differences in explanatory power across models for men and models for women.

Descriptive Results

A great deal of research has been conducted which probes the link between gender and environmental concern, with a recent meta-analysis indicating finding consistent, slightly higher levels of environmental concern among women (McCright and Xiao 2014). Some qualitative

research has also explored the role of intersectionality across gender, race, and class lines in relation to religious environmentalism (Baugh 2017; Nita 2016). In Table 18, I assess differences by gender across multiple environmental, religious, and attitudinal factors.

Table 18: Descriptive Statistics, Stewardship and Conservation by Gender

Variable	Stewardship (N=34,266)				Conservation (N=16,687)			
	Male=15,539		Female=18,727		Male=7,492		Female=9,195	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Stewardship	.62		.63		-		-	
Conservation	-		-		.35		.32	
Baptist	.18		.21		.17		.20	
Methodist	.09		.10		.07		.09	
Presbyterian	.04		.04		.03		.04	
Lutheran	.07		.07		.05		.05	
Episcopalian	.02		.03		.02		.02	
Non-denom	.05		.05		.06		.06	
Fund. Oth Prt	.08		.09		.08		.10	
Other Prot	.02		.02		.01		.01	
Lbrl Other Prot	.02		.02		.01		.01	
Catholic	.25		.25		.24		.25	
Jewish	.02		.02		.02		.02	
Other Rel.	.04		.03		.05		.05	
None (ref)	.13		.07		.19		.10	
Cohort (0-6)	3.34	1.360	3.31	1.364	3.88	1.241	3.83	1.278
Cohort ²	12.99	8.873	12.85	8.889	16.60	9.351	16.286	9.466
Attend Wkly+	.22		.32		.22		.30	
High Con. Sci	.48		.40		.47		.39	
High Con. Rel	.26		.29		.22		.25	
Education	13.04	3.226	12.86	2.890	13.45	3.070	13.32	2.894
White (ref)	.83		.81		.81		.78	
Black	.12		.15		.12		.16	
Other	.05		.04		.07		.06	
Abv Avg Inc	.26		.19		.25		.20	
Avg Inc (ref)	.47		.50		.46		.48	
Bel Avg Inc	.27		.31		.29		.32	
Northeast (ref)	.19		.21		.17		.19	
South	.34		.34		.36		.36	
Midwest	.27		.26		.25		.25	
Other Region	.21		.19		.22		.20	
Ln(Size+1)	3.487	2.0602	3.541	2.0739	3.519	1.9949	3.559	2.0330
Republican	.37		.33		.39		.33	
Democrat	.48		.53		.44		.51	
Other (ref)	.15				.27		.16	
Bible Literal	-		-		.28		.36	
Bible Inspired	-		-		.48		.48	
Fables (ref)	-		-		.24		.16	

Modest but noteworthy differences between men and women in environmental concern are evident, with slightly higher levels of stewardship among women, and higher levels of conservation among men. Regarding gender and religion, several descriptive findings stand out.

Women are slightly overrepresented relative to men in Baptist, Methodist, and fundamentalist other Protestant, groups, while men are substantially more likely to be unaffiliated. These differences may reflect variations in sampling (as there are notably more women sampled than men, likely due to response rates) but it seems more likely that *women are simply more religious than men on average*. This is true across multiple measures: men are not only more likely to identify as unaffiliated—as noted in Chapter 4, men are also about twice as likely to have disaffiliated after the age of 16 relative to women. Women are nearly a third more likely to report attending religious services once a week or more, are more likely to report high confidence in organized religion and are notably both more likely to view the Bible as the literal word of God as well as less likely to view the Bible as a book of fables written by men.

There are also slight but noteworthy variations in the sample: men are more likely to identify as Republicans, and women are more likely to identify as Democrats. Men express higher confidence in the scientific community. Men are on average slightly more educated than women as measured by years of school completed. There is also a larger sampling of Black women than Black men. Finally, women are more likely than men to report being below average income, and less likely than men to report having above average income. These may reflect the institutional barriers that have been well documented by social scientists such as occupational segregation and the persistent gender wage gap (Petersen and Morgan 1995; Weichselbaumer and Winter-Ebmer 2005). Women are also overrepresented relative to men. This may be due to higher response rates among women on the survey, and/or higher response rates on the items included in the models.

Stewardship Multivariate Results

Table 19: Stewardship Logistic Regression Models, by Gender (N=34,266)

	Male (N=15,539)				Female (N=18,727)			
	B	(se)	β	(se)	β	(se)	β	(se)
Baptist	-.376	(.060)***	-.454	(.189)*	-.805	(.065)***	-.428	(.072)***
Methodist	-.565	(.071)***	-.597	(.207)**	-.714	(.074)***	-.257	(.079)**
Presbyterian	-.593	(.094)***	-.397	(.251)	-.599	(.094)***	-.161	(.099)
Lutheran	-.636	(.078)***	-.660	(.225)**	-.818	(.081)***	-.381	(.086)***
Episcopalian	-.399	(.120)**	-.657	(.329)*	-.336	(.113)**	.013	(.119)
Non-denom	-.493	(.084)***	-.479	(.257)+	-.619	(.088)***	-.410	(.090)***
Fund. Oth Prot.	-.675	(.074)***	-.413	(.225)+	-.865	(.074)***	-.421	(.080)***
Prot, other	-.672	(.136)***	-1.268	(.394)**	-.958	(.131)***	-.449	(.137)**
Lib. Prot other	-.023	(.144)	.327	(.351)	-.572	(.126)**	-.145	(.133)
Catholic	-.302	(.056)***	-.375	(.179)*	-.591	(.064)***	-.333	(.068)***
Jewish	-.109	(.127)	.690	(.341)*	-.077	(.133)	-.056	(.139)
Other Religion	.045	(.097)	-.432	(.343)	-.151	(.100)	-.168	(.102)
Cohort(0-6)			.390	(.068)***			.471	(.046)***
Cohort ²			-.033	(.008)***			-.039	(.007)***
BC*Baptist			.101	(.049)*				
BC*Methodist			.151	(.059)*				
BC*Presbyt.			.080	(.075)				
BC*Lutheran			.140	(.064)*				
BC*Episcopal.			.199	(.102)+				
BC*Non-denom			.077	(.066)				
BC*Fund Prt Oth			.044	(.059)				
BC*Prot. Oth.			.333	(.117)**				
BC*Lib Oth Pr.			-.001	(.112)				
BC*Catholic			.073	(.046)				
BC*Jewish			-.265	(.100)**				
BC*Other Rel.			.110	(.083)				
Attend Weekly+			-.189	(.044)***			-.133	(.036)***
Conf. Science			.233	(.036)***			.157	(.034)***
Conf. Religion			-.160	(.040)***			-.174	(.036)***
Educ (Ctr=12)			.026	(.006)***			.066	(.006)***
Black			.167	(.064)**			.032	(.053)
Other			-.119	(.068)			-.361	(.082)***
Inc. Bel Av.			.071	(.042)+			.080	(.037)*
Inc. Ab Av.			-.051	(.044)			-.024	(.045)
Midwest			-.249	(.054)***			-.182	(.049)***
South			-.311	(.054)***			-.306	(.048)***
Other Region			-.425	(.058)***			-.339	(.053)***
Ln(Size+1)			.059	(.009)***			.051	(.008)***
Republican			-.461	(.053)***			-.309	(.051)***
Democrat			.240	(.052)***			.146	(.049)**
Constant	.844	(.045)***	-.190	(.187)	1.180	(.057)***	-.138	(.111)
Nagelkerke R²		.015		.107		.019		.096
-2LL		20,483.146		19,386.812		24,323.760		23,221.936

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

I turn now to Table 19, which features the differing results of stewardship regressed on religious group affiliation and controls by gender. In general, as indicated by differing adjusted R-squared values, the simple regression model, which contains only religious group identity,

better predicts stewardship ethic among females. Among statistically significant differences by religious group affiliation, religious group had a more negative effect on stewardship among women than among men. Full models differed, however—the conditional effects of birth cohort on religious group identity significantly improved model fit for men ($\Delta-2LL=33.735$, $\Delta df=12$, $p=.001$) but not for women ($\Delta-2LL=14.119$, $\Delta df=12$, $p=.293$), and so the more parsimonious model was utilized for predicting stewardship among women. Together, these model fit estimation criteria offer a conflicting picture. On one hand, religious group identity *matters more* for women on the main effects. On the other, religious group identity has a conditional effect across birth cohorts that is present among men but not women. In other words, only men have changed differently by religious group identity across birth cohorts in their levels of stewardship. Women's levels of stewardship by religious group identity are assumed parallel in this model.

The full models, which also controlled for cohort and conditional effects of cohort on religious group (right), indicated several other noteworthy differences in terms of stewardship. For men, political ideology, confidence in science, regional differences, and urban/rural (ln size) played notably greater roles in predicting stewardship than among women. For women, education and birth cohort played a stronger role. The interesting effect, that identifying as Jewish had a conditional positive effect on stewardship (which decreased across birth cohorts) seems to be limited in its significance to men. Black men reported higher levels of stewardship than white men, while women who were classified other race reported lower levels of stewardship relative to white women. Overall, the model for this project appears to be a better fit for men than for women (as judged by both the relative significance in fit improvement by adding interaction effects, as well as the reported Nagelkerke R^2 values). Coupled with the model

fit criteria indicating no significant conditional effect of religious group identity on stewardship by birth cohort among women, this seems to fundamentally challenge H₇.

Selected interaction effects are graphed below. The interactions to be charted were based both on the relative significance of the interactions by gender in Table 19, as well as the findings from previous chapters. Note that axes are model-predicted probability of expressing stewardship and vary between 0.15 and 0.85 across all charts, and the unaffiliated are included (dashed lines) for comparison. Among the 1883-1904 birth cohort, women expressed higher levels of stewardship than men in every group. Beyond that, however, trajectories regarding gender and stewardship across birth cohorts bear important similarities, which are visited below after briefly examining each trajectory separately.

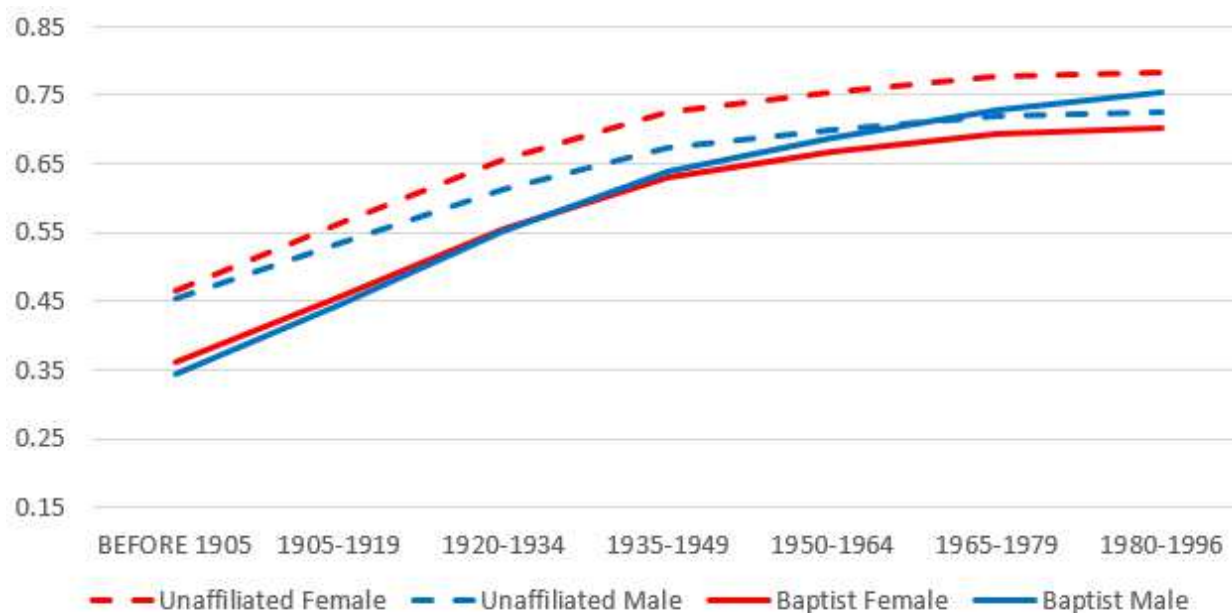


Figure 17: Probability of Expressing Stewardship by Cohort and Gender, Baptist

First, note the differences between Baptists and the unaffiliated, by gender and cohort, as presented in Figure 17. Whereas the unaffiliated “gender gap” on stewardship increases steadily across birth cohorts, the gender gap for Baptists does not materialize until cohort 4 (1950-1964). Among younger Baptists, men are increasingly more likely than women to express

stewardship—precisely the opposite of the trend among the unaffiliated. Men and women are growing apart among both Baptists and the unaffiliated, but Baptist men and unaffiliated women are converging on probability of expressing stewardship, whereas Baptist women and unaffiliated men are converging.

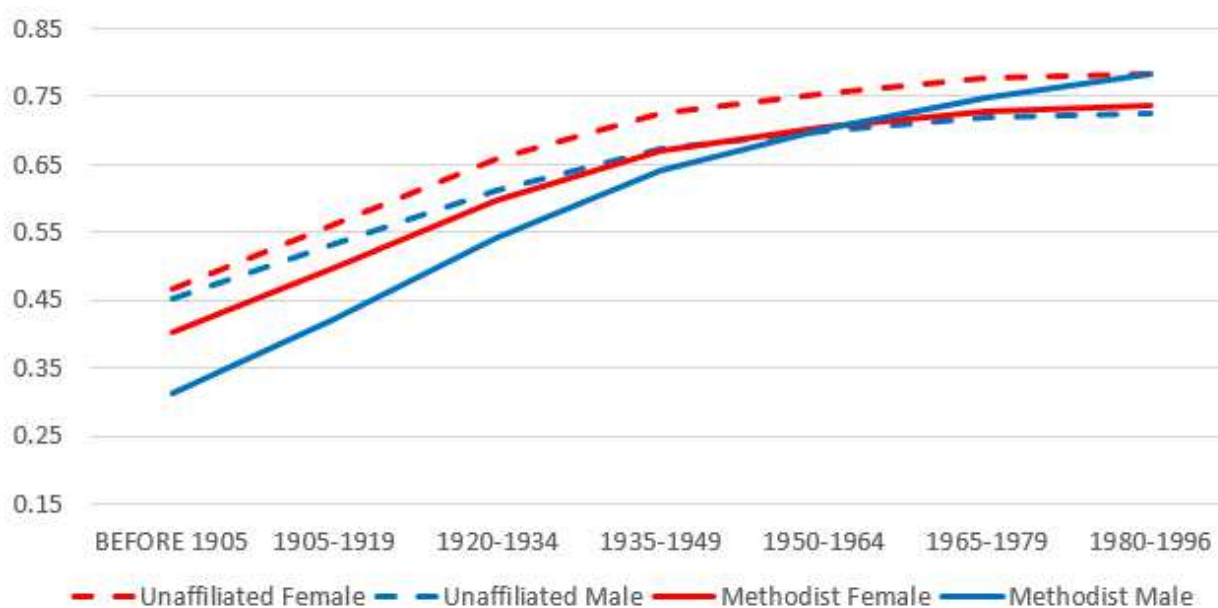


Figure 18: Probability of Expressing Stewardship by Cohort and Gender, Methodist

Figure 18 exhibits some similarities to Figure 17, though the gender gap among Methodists is notably more pronounced in earlier birth cohorts, with low levels of stewardship among men. Overall, however, the pattern is similar—Methodist men have surpassed Methodist women in more recent cohorts, such that Methodist men have converged with unaffiliated women in levels of stewardship by the most recent cohort, whereas Methodist women and unaffiliated men hold very similar levels of stewardship beginning with the 1920-1934 cohort. Note that in Chapter 3, Methodists in the youngest cohort held the highest levels of stewardship, notably surpassing the unaffiliated. It appears that this effect is due to higher levels of stewardship among men relative to unaffiliated men and Methodist women. Lutherans (below,

Figure 19) follow a surprisingly similar trajectory to Methodists across birth cohorts, conditional on gender.

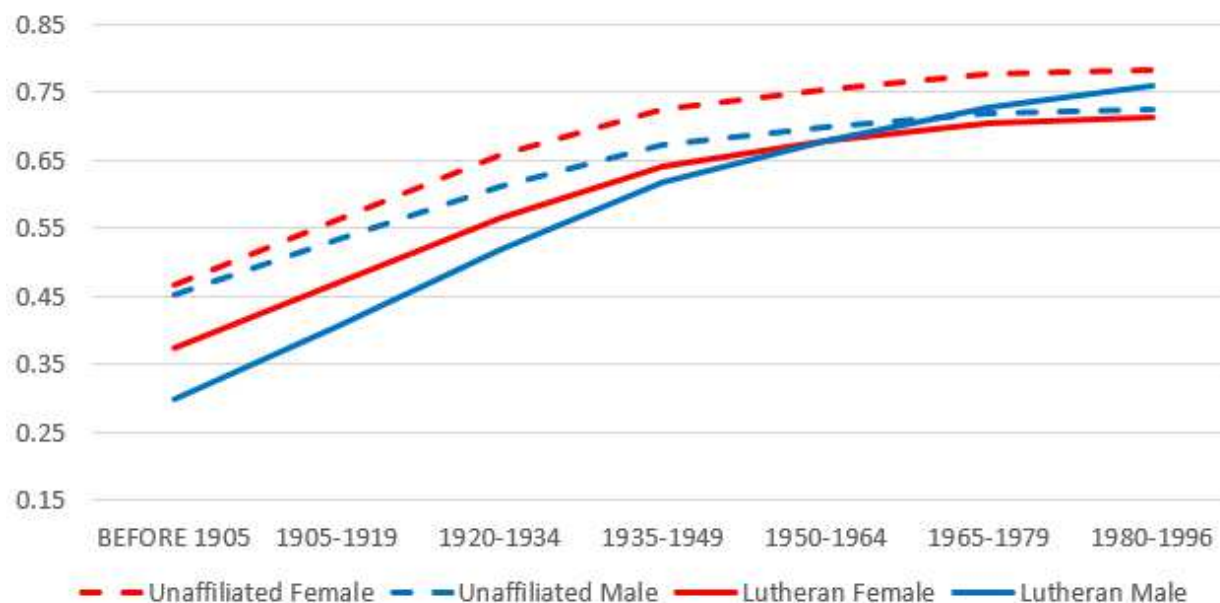


Figure 19: Probability of Expressing Stewardship by Cohort and Gender, Lutheran

Figure 20, which displays the gender gap for (moderate) other Protestants, follows the same trajectory as Lutherans, Methodists, and Baptists, but is far more pronounced. Other Protestant men held the lowest levels of stewardship by far in the oldest cohorts, but increased more rapidly, crossing their female counterparts by the 1935-1949 cohort and exceeding the unaffiliated regardless of gender by the most recent cohort. Meanwhile, other Protestant women were less likely to express stewardship overall but appear to be converging with unaffiliated men in the most recent cohorts. Note that the curve for other Protestant men does not follow the same trajectory as the other curves that have been presented in the cohort analyses in this dissertation—this is likely due to the extreme change across cohorts, and reflects the “s-curve” which is the hallmark of the logit transformations used in logistic regression.

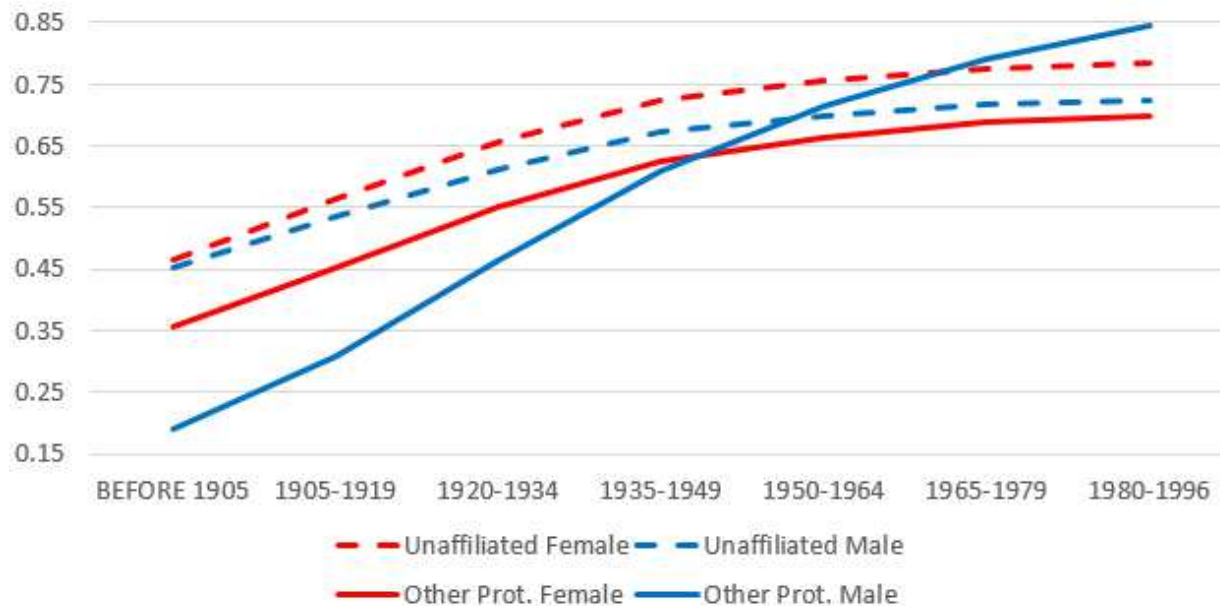


Figure 20: Probability of Expressing Stewardship by Cohort and Gender, Theologically Moderate Other Protestant

Figure 21, fundamentalist other Protestants, depart from other model-predicted change in the probability of expressing stewardship, conditional on gender. Here, both male and female fundamentalist other Protestants hold consistently lower levels of stewardship than the unaffiliated, though there seems to be virtually no gender gap. Fundamentalist other Protestants, as noted in Chapter 3, held the lowest levels of stewardship overall, but the extent to which they differed from levels of stewardship among the unaffiliated appears to have masked the growing gender gap in the unaffiliated. To put it another way, fundamentalist other Protestants, both men and women, have largely “caught up to” unaffiliated men in the youngest cohort, complicating possible explanations as to why fundamentalist other Protestants held consistently lower levels of environmental concern. However, an explanation rooted in social identity may be proffered: both men and women in fundamentalist churches may be more thoroughly ensconced in homogeneous social networks that foster the reproduction and strengthening of their religious identities, mitigating the gender gap on matters of stewardship (see Szrot and Collins 2019).

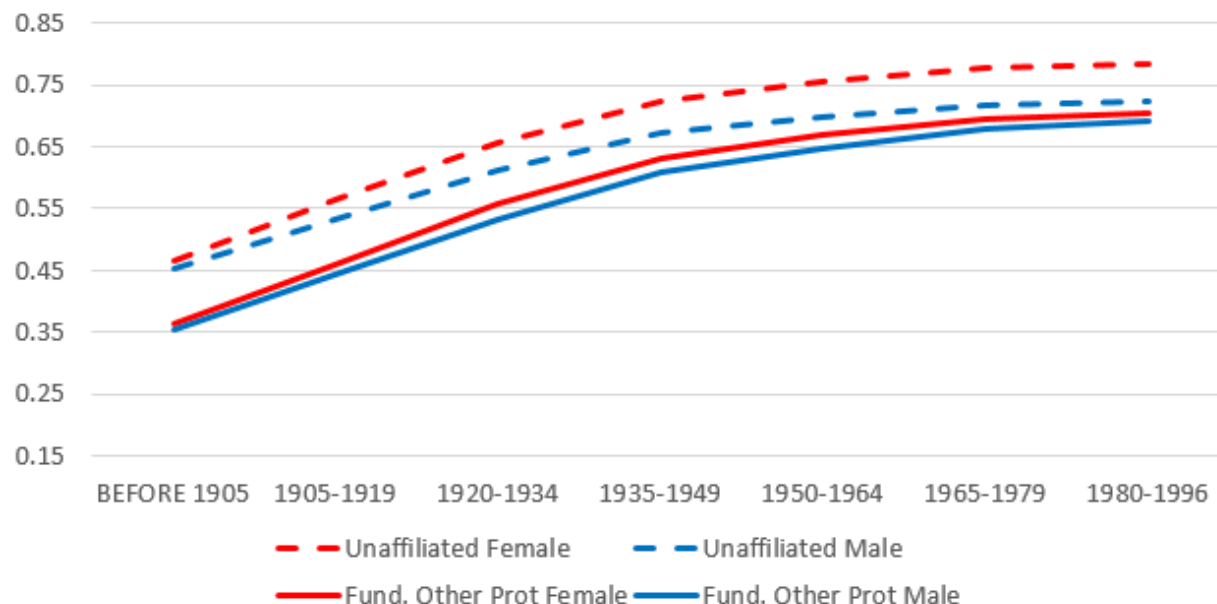


Figure 21: Probability of Expressing Stewardship by Cohort and Gender, Fundamentalist Other Protestant

The pattern found among fundamentalist other Protestants is common to Catholics (Figure 22)—gender does not exhibit much effect across birth cohorts. Given that these two groups together account for more than a third of Americans, this may reveal an association between religious group identity and gender that has not been accounted for in the gender-environmental concern literature to date. The distinctiveness of these two religious group identities in connection to gender and environmental concern warrants further examination.

This pattern may manifest a limitation of the model. The final model seems to fit the trajectories of stewardship via religious group identity for men better than for women, although the main effect of religious group identity appears to be more salient for women than for men. Moreover, given that churches have been a historically patriarchal institution in which certain positions are closed to women, and males have been able to more successfully accumulate “bridging” social capital (Putnam 2000; see also Norris and Inglehart 2010:181) and greater access to social networks and voluntary organizations geared toward environmental issues. The reason similar trends do not materialize among Catholics and fundamentalist other Protestants

would require further explanation, however, for both religious groups tend to be even more patriarchal in their structure, organization, and history. Again, I speculate that the distinctiveness of Catholic and fundamentalist identities helps mitigate gender differences via social networks. These identities render and reinforce the plausibility of core beliefs and principles and have differing influences on issues such as stewardship.

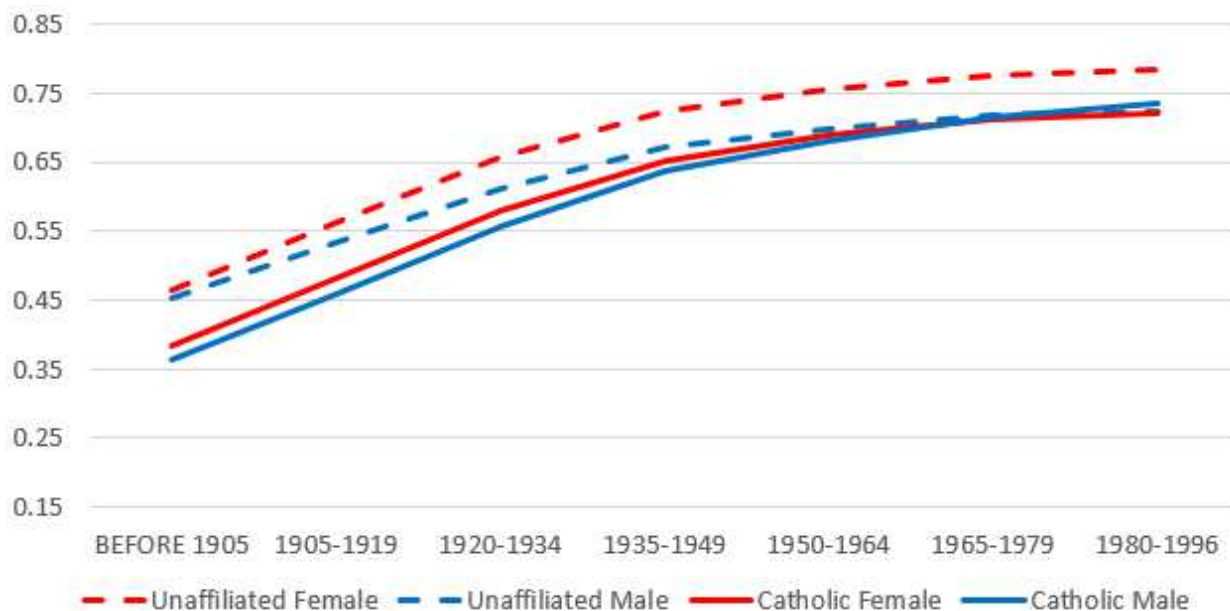


Figure 22: Probability of Expressing Stewardship by Cohort and Gender, Catholic

Conservation Multivariate Results

I turn now to the effects of religious group affiliation on conservation by gender. Examining the regression models in Table 20, there are differences that I should account for before proceeding. Again, for men, the battery of cohort*religious group identity interaction effects significantly improved model fit ($\Delta-2LL=23.674$, $\Delta df=12$, $p=.023$) but not for women ($\Delta-2LL=18.864$, $\Delta df=12$, $p=.096$). It is worth noting that these changes in negative two log-likelihood for men and for women are not that different in absolute terms, so that the significance of conditional cohort changes by religious identity among women has been assumed parallel,

while among men, conditional effects have been included despite their relatively modest improvement in model fit.

Table 20: Conservation Logistic Regression Models, by Gender (N=16,687)

	Male (N=7,492)		Female (N=9,195)	
	B	(se)	B	(se)
Baptist	-.070	(.080)	-1.070	(.304)***
Methodist	-.335	(.107)**	-.732	(.370)*
Presbyterian	-.344	(.151)*	-.102	(.452)
Lutheran	-.531	(.126)***	-1.038	(.443)*
Episcopalian	-.243	(.184)	-.747	(.575)
Non-denom	-.274	(.110)*	-1.246	(.439)**
Fund. Oth Prot.	-.297	(.104)**	-1.239	(.388)**
Prot, other	-.572	(.227)*	-1.612	(.756)*
Lib. Prot other	-.024	(.212)	.193	(.649)
Catholic	-.278	(.074)***	-.810	(.287)**
Jewish	-.264	(.183)	-.495	(.614)
Other Religion	-.043	(.115)	-.080	(.464)
Cohort(0-6)			.192	(.121)
Cohort ²			-.033	(.014)*
BC*Baptist			.239	(.071)**
BC*Methodist			.147	(.094)
BC*Presbyt.			-.014	(.120)
BC*Lutheran			.214	(.111)+
BC*Episcopal.			.175	(.153)
BC*Non-denom			.276	(.100)**
BC*Fund Prot Oth			.267	(.100)**
BC*Prot. Oth.			.325	(.190)+
BC*Lib Oth Pr.			-.035	(.174)
BC*Catholic			.160	(.065)*
BC*Jewish			.053	(.161)
BC*Other Rel.			-.004	(.105)
Attend Weekly+			-.252	(.068)***
Conf. Science			.063	(.052)
Conf. Religion			.088	(.063)
Educ (Ctr=12)			-.023	(.009)*
Black			.448	(.083)***
Other			.085	(.100)
Inc. Bel Av.			.051	(.059)
Inc. Ab Av.			.121	(.065)+
Midwest			-.386	(.080)***
South			-.042	(.075)
Other Region			-.189	(.081)*
Ln(Size+1)			.025	(.013)+
Republican			-.407	(.074)***
Democrat			-.112	(.071)
Literal Word			-.033	(.082)
Inspired Word			-.115	(.068)+
Constant	-.439	(.055)***	-.442	(.314)
-2LL	9,617.105		9,389.709	
Nagelkerke R²	.007		.048	
			11,404.679	
				11,104.443
			.015	.060

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

Here, per H₇, religion does appear to be more salient in predicting conservation for women, as indicated by both the higher R² values on both the simple model, as well as the full model. That religious group identity significantly—and negatively—predicted conservation relative to the unaffiliated would seem to suggest that religion plays a negative role in explaining conservation among women (but not as clearly so among men). However, full models offer a more nuanced picture. Among women, where and when religious group identity is significantly associated with conservation, such associations are negative. While this is also true for men, the conditional effects of religious group identity on cohort indicate that Baptist, Non-denominational, Fundamentalist Other Protestant, and Catholic identities for men indicate positive change across birth cohorts beyond that accounted for by the main effect of birth cohort (which is, for men, nonsignificantly positive after controlling for conditional effects of religious group identity). This would seem to suggest that, while religious identity plays a notable negative role in conservation among women, its role among men is rather more complex. Furthermore, weekly or more attendance is more strongly negatively associated with conservation among men than among women. Midwesterners, whether male or female, hold lower levels of conservation on average, while women who live in more populous areas hold higher levels of conservation. For men (but not for women) education plays a negative role, and Republicans of both genders are less likely to embrace conservation, *ceteris paribus*. Interestingly, blacks, whether male or female, are more likely to embrace conservation—indeed, the effect of race is among the stronger effects on conservation, stronger than identifying as Republican (more on this in Chapter 8). Bible belief does not play a significant role, but there are modest negative associations (significant at $p < .10$) for inspired word believers but not Biblical literalists, implying that conservation may be more explicable for both men and women in terms of

religious identity rather than Bible belief. Again, statistically significant changes in conservation by religious group identity, across birth cohorts, conditional on gender, are each examined briefly below.

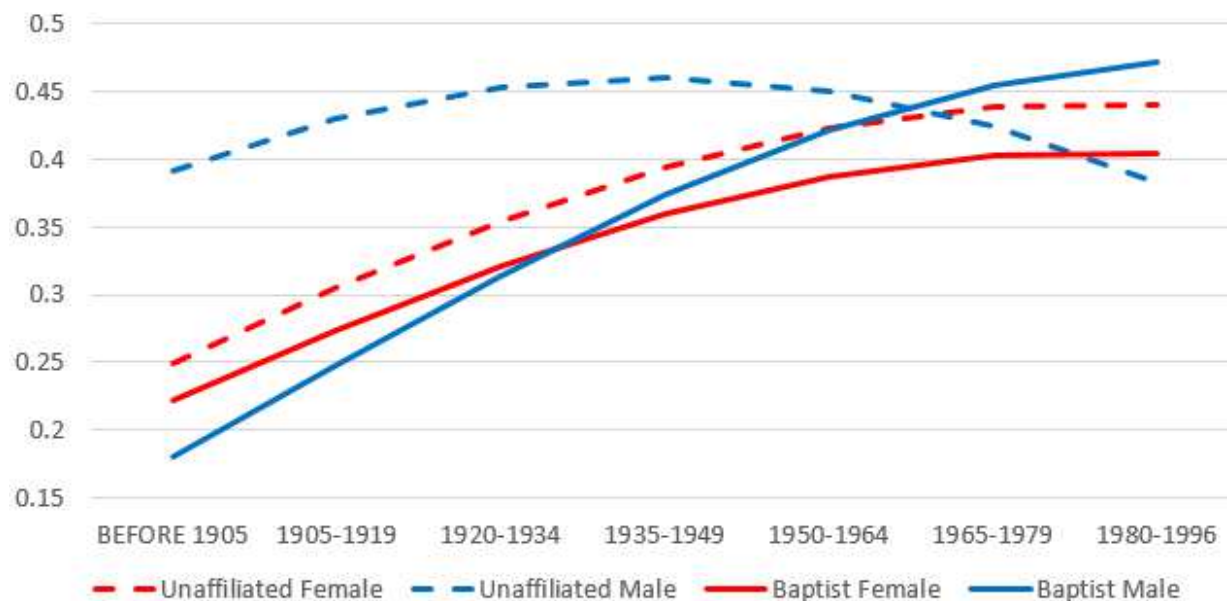


Figure 23: Probability of Expressing Conservation by Cohort and Gender, Baptist

Figure 23 indicates the trajectory of conservation for Baptists compared to the unaffiliated, conditional on gender. Note the dissimilarities—whereas Baptist men in the oldest cohorts held the lowest levels of conservation, but surpassed Baptist women in the 1920-1934 cohort, unaffiliated women in the oldest cohorts held much lower levels of conservation, but surpassed unaffiliated men in the 1965-1979 cohort. It may be that conservation (as measured in terms of “national parks”) taps differing ecological imaginations (see Purdy 2015) over time, and across religious, gender, and cultural divides, for no clear pattern by gender, cohort, or religious group identity emerges in Figure 23. The gender gap among Baptists appears, at present, to be widening among Baptists, however. Turning to Figure 24, Methodists differ in that Methodist women hold consistently lower levels of conservation, whereas unaffiliated women and

Methodist men hold relatively similar levels of conservatism. The gender gap has gradually widened among Methodists.

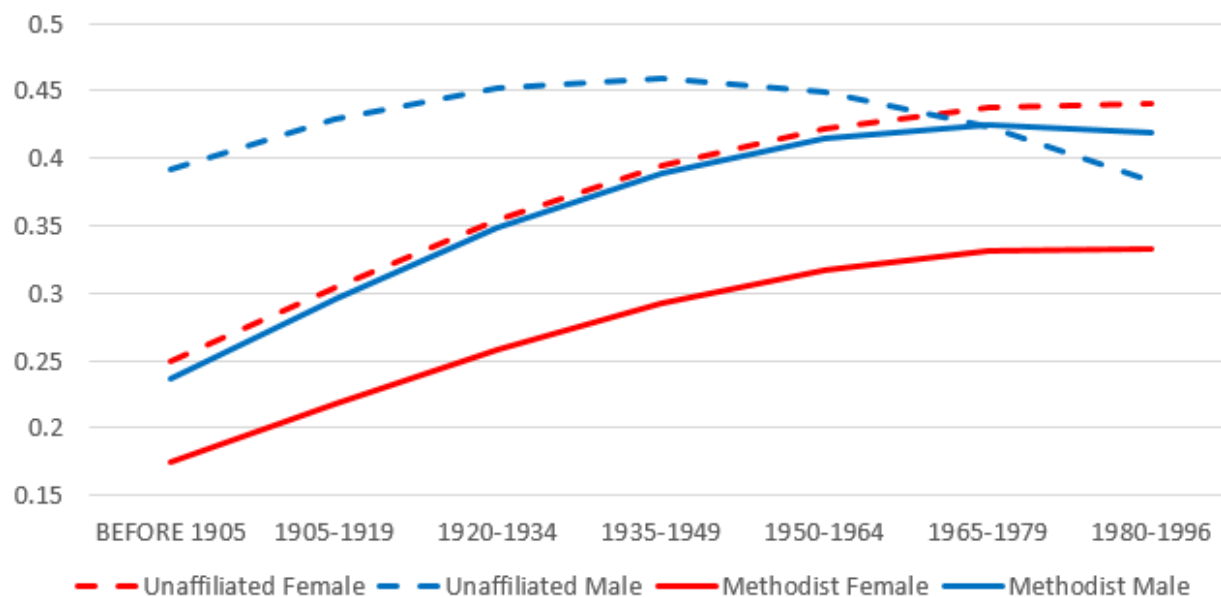


Figure 24: Probability of Expressing Conservation by Cohort and Gender, Methodist

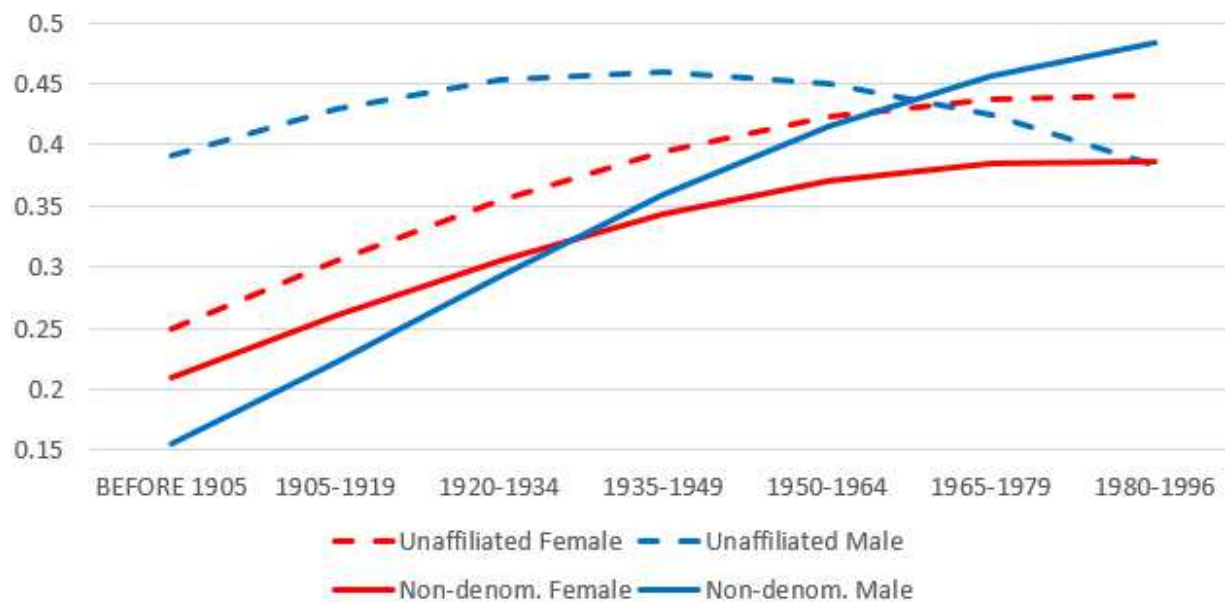


Figure 25: Probability of Expressing Conservation by Cohort and Gender, Non-denominational

Figure 25 indicates that non-denominational men started with some of the lowest levels of conservatism of any group in the oldest cohorts but hold the highest levels of

conservation among the youngest cohorts, surpassing unaffiliated men and women in the 1965-1979 cohort, and non-denominational women by the 1935-1949 cohort. This pattern closely resembles the pattern for Baptists. Figure 26—fundamentalist other Protestants, also closely resembles both Baptists and Methodists in terms of conservation. Catholics, however (Figure 27) more closely resemble the non-denominational, though the gender gap for Catholics is much narrower (and is, in fact, narrower for Catholics than it is for other groups examined here.

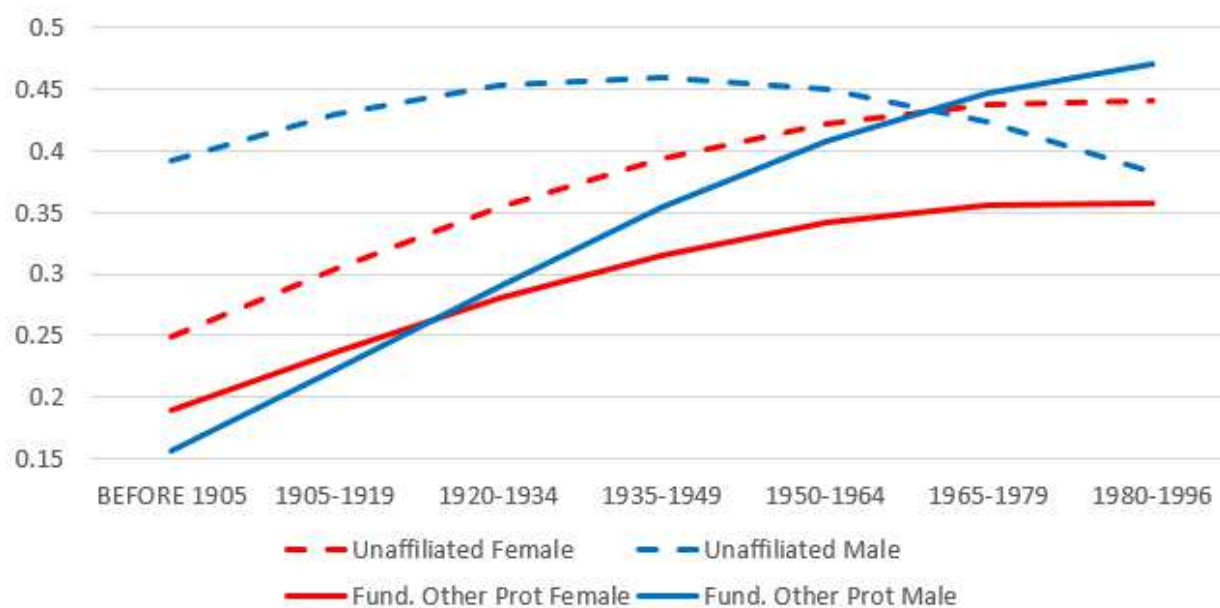


Figure 26: Probability of Expressing Conservation by Cohort and Gender, Fundamentalist Other Protestant

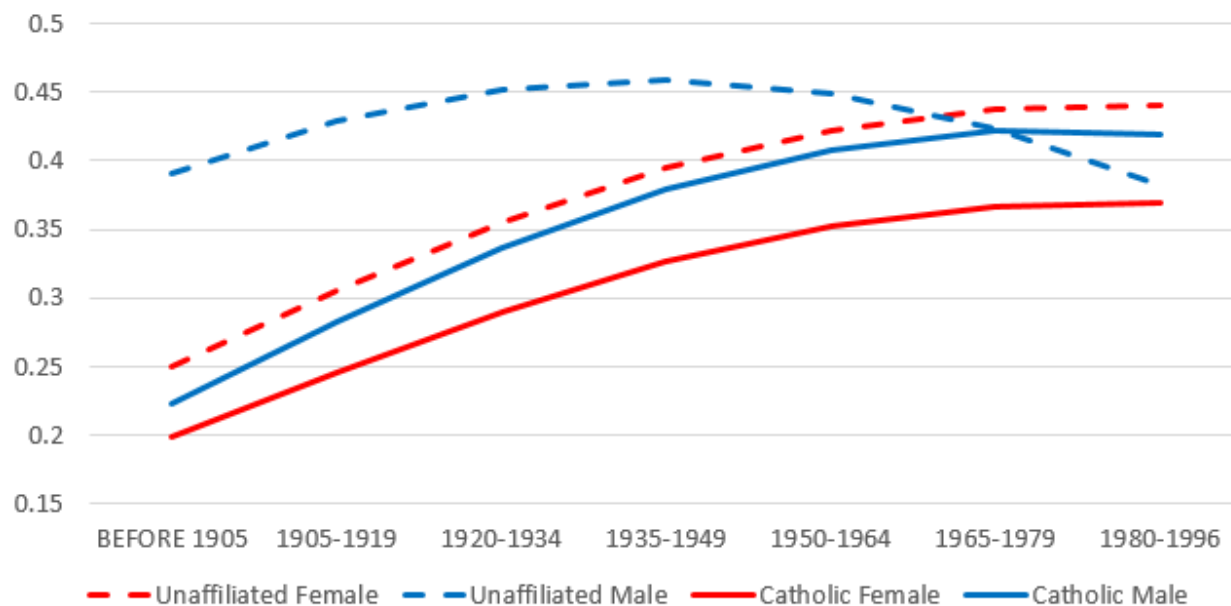


Figure 27: Probability of Expressing Conservation by Cohort and Gender, Catholic

There is a clear gender gap on conservation, which cuts counter to the direction found in the literature as a function of gender. The straightforward positive association between men and conservation obscures a gender gap which has shifted notably over time among most groups. Among Baptists, Methodists, and the non-denominational, it may simply be that men see “parks and recreation” differently than women—that the concept has undergone cultural and temporal changes across birth cohorts. Among Methodists and Catholics, for whom men have consistently held higher levels of conservation than women. I am uncertain as to the drivers of this pattern, but it may be one of the few genuinely deep and enduring gender divides present in this entire chapter. In most cases, men and women held similar levels of environmental concern, whether by stewardship or conservation, at some point along the spectrum of birth cohorts surveyed, though, again, the reason for this convergence is similarly unclear.

In many cases, men came to outpace women in conservation somewhere around the 1920-1934 birth cohort. This may, once again, have to do with a changing cultural significance of conservation. Perhaps there is something distinctively masculinized about the image of “the

outdoors” which occurred after the decline of some of the early conservation efforts put forth by the Progressive and Transcendentalist advocates of the early twentieth century (see Purdy 2015). If, and when, conservation became linked to outdoor activities such as hunting, fishing, and camping may have something to do with the upswing of male conservation ethic relative to women among Baptists, the Non-denominational, and fundamentalist other Protestants, three groups that are theologically moderate to fundamentalist. That is, many people after 1920 grew up in a society in which national parks existed and were increasingly part of the American cultural landscape. Given the significance of race, there may be some unobserved set of religious, racial, and political identities bound up in the concept of conservation as measured here, the possibility of which is addressed in greater detail in Chapter 8.

Summing Up

In this chapter, I tested H_7 , that religious group identity is more salient among women than among men. Findings are mixed—regarding both measures, the model put forth showed conditional cohort-change among men but not among women. However, religious group identity explained more variance in stewardship among women than among men. In other words, men were more likely to change in levels of environmental concern as a function of religious group identity, but the (often negative) effect of belonging to a religious group was stronger among women.

I have put forth several possible explanations for specific findings, but clearly the “gender divide” further complicates the religion-environment connection. Further research is needed to parse out the extent to which men and women live and practice their respective faiths—and/or view “nature” or “the environment”—differently based on their religious views and identities. Much more research remains to be done on the connection between gender,

religion, and environmental concern. Overall, across many measures, it appears that both men and women hold differing views of environmental concern based on their religious group identity, and that, particularly regarding stewardship, both men and women's levels of environmental concern have changed over time, in part as a function of their membership in differing religious groups. This chapter seems to establish yet another reason to "bring religion in" when assessing changes in levels of environmental concern in the U.S., although there undoubtedly remains much more to be done at the intersection of gender, religion, and environmental concern.

Chapter 7. Income, Religion, and Environmental Concern

Having examined the gender gap in environmental concern as it relates to religious group identity, I turn to differences across income. As noted in the previous chapter, Norris and Inglehart (2011) posited that religious participation and belief decline over time relative to the development of a society (53-79), and this contention is particularly salient at the level of the nation or the society (69-71). Theories of religious change have struggled to explain why the United States remains more religious than other countries with similar levels of human development. “Post-industrial” societies such as France, Denmark, and Great Britain have quite low levels of religiosity (85), while in countries such as Ireland, Italy, and the U.S., religiosity remains high.

The “religious market” model, predicated on a “free-market” assumptions, is a popular attempt to explain religious change, particularly in the U.S., which assumes steady demand for the rewards of faith (such as life after death, as promised by many, if not all, faiths). Extending this metaphor, countries with historically established religions, such as those in Western Europe, have secularized because state-sponsored, “monopolistic” religion stymies free competition in the religious market place (Finke and Stark 2007; Iannaccone 1994; Scheitle and Adamczyk 2009; Stark and Finke 2000; Norris and Inglehart 2011:95-103). As an effort to explain differences in religious change in the U.S., this model was touted as promising, highlighting the positive role that separation of church and state in preserving religiosity. Whatever the ultimate merits of market theory regarding research on religious change (see Szrot and Collins 2019), it falls short on various empirical, methodological, and theoretical grounds. Empirically, global data have failed to demonstrate significant relationships between key measures of religious market theory and religiosity (Norris and Inglehart 2011:97-103), and meta-analyses of relevant

literature have failed to demonstrate the expected linkages (Chaves and Gorski 2001; Voas, Olson, and Crockett 2002).

A rival explanation arises out of existential security theory. First, however, the relationship of this theory of religious change to political, economic, and environmental dimensions invites further explanation. One momentous, and much-debated, development in the United States over the past century, which bears upon both the strength of religious faith and practice as well as environmental concern, is the transition to *post-industrial society*. Bell (1996), theorizes the rise of post-industrial society as a development can be distinguished from both “pre-industrial societies” in which continued survival “is primarily a *game against nature*” as well as “industrial societies,” which, by “producing goods, play a *game against fabricated nature*” (147, italics in original). By contrast, “A post-industrial society, because it centers on services—human services, professional and technical services—is a *game between persons* (147-8). For Bell, this new era re-contextualizes society on a ground that is increasingly socially constructed and expressed in terms of human relations as opposed to material artifacts and nature, to an unprecedented extent (148-55). This conceptualization of the present era has been contested by those who argue that the apparent cultural shifts conceal a “speeding up” or a “doubling down” of existing economic relations that characterize industrial societies (see, for example, Harvey 1990; Jameson 1984).

Norris and Inglehart (2011) contend that this new era is characterized by secularization—specifically, standards of human development (prominently including health, wealth, and education) are correlated with declines in religious belief and practice. The United States has, according to the lights of the above theorists (though they differ on explanations and foci), undergone a notable transformation since approximately the 1970s. With this transformation,

however, levels of economic inequality have increased in the United States. According to their existential security theory:

Populations typically at risk in industrialized nations, capable of falling through the welfare safety net, include the elderly and children, single-parent female-headed households, the long-term disabled, homeless, and unemployed, and ethnic minorities. If we are correct that feelings of vulnerability are driving religiosity, even in rich nations, then this should be evident by comparing levels of economic inequality across societies, as well as looking at how far religiosity is strongest among the poorer sectors of society (Norris and Inglehart 2011:106-7).

Put succinctly, religiosity is expected to be higher among groups in the U.S. which are more vulnerable to existential (including but not limited to economic) shocks, and the U.S. is more religious in part because, “The entrepreneurial culture and the emphasis on personal responsibility has delivered overall prosperity but one trade-off is that the United States has greater income inequality than any other advanced industrial democracy” (Norris and Inglehart 2011:108).

Regarding environmental concern, another suite of vulnerabilities is introduced. Sociological literature has demonstrated that wealth is a strong predictor of vulnerability to environmental shocks—that is, those with the least wealth are likely to suffer disproportionately from environmental degradation in the form of climate change, pollution, or species extinction. Environmental hazards are also disproportionately positioned in low income areas (Harlan et al. 2015). These connections may suggest that religion likely plays a more prominent role in predicting environmental concern among those who *report to have* below average income (and therefore less protected from adverse environmental events) and a less prominent role among those who report they have average income. How religion and environmental concern are related

to one another as a function of income should reveal new insights regarding the religion-environment connection.

Based on existing theory and research, the poor are expected to be more religious in the U.S., leading to H₈: Religious group affiliation is more salient among those of lower incomes in explaining environmental concern. Dividing the sample into high, middle, and low incomes based on self-reported income level is a crude measure of existential security but should allow meaningful comparisons in how religious group identity and other predictors explain environmental concern across both stewardship and conservation measures.

Table 21: Descriptive Statistics by Self-Reported Income, Stewardship (N=34,266)

Variable	Below Avg. (N=9,916)		Average (N=16,873)		Above Avg. (N=7,477)		Min	Max
	Mean	SD	Mean	SD	Mean	SD		
Stewardship	.64		.62		.63		0	1
Baptist	.23		.21		.12		0	1
Methodist	.08		.10		.10		0	1
Presbyterian	.03		.04		.06		0	1
Lutheran	.05		.07		.07		0	1
Episcopalian	.02		.02		.04		0	1
Nondenominational	.05		.05		.05		0	1
Fund. Oth Prot.	.10		.10		.07		0	1
Other Protestant	.01		.00		.00		0	1
Liberal Other Prot.	.01		.02		.03		0	1
Catholic	.23		.26		.25		0	1
Jewish	.01		.01		.05		0	1
Other Religion	.04		.03		.04		0	1
None (ref)	.14		.09		.12		0	1
Cohort (0-6)	3.40	1.402	3.28	1.391	3.32	1.231	0	6
Cohort ²	13.55	9.248	12.71	8.943	12.52	8.174	0	36
Attend Weekly+	.25		.29		.27		0	1
High Conf. Sci.	.38		.41		.55		0	1
High Conf. Rel.	.27		.29		.26		0	1
Education	12.09	3.044	12.67	2.825	14.67	2.857	0	20
White (ref)	.75		.83		.91		0	1
Black	.20		.13		.06		0	1
Other	.05		.04		.03		0	1
Female	.58		.56		.47		0	1
Northeast (ref)	.17		.20		.23		0	1
South	.36		.35		.30		0	1
Midwest	.26		.27		.25		0	1
Other Region	.21		.18		.22		0	1
Ln(size+1)	3.594	2.1578	3.415	2.0539	3.644	1.9635	0	8,175
Republican	.27		.34		.45		0	1
Democrat	.55		.51		.43		0	1
Other (ref)	.18		.15		.12		0	1

Stewardship Results

Table 21 indicates the differences by perceived family income in stewardship, religiosity, and other measures. While overall, differences in stewardship values are quite modest between perceived income groups (with slightly higher stewardship among those reporting below average perceived income), there are numerous noteworthy differences across the predictors. For instance, those who report above average income are far less likely to be Baptist or fundamentalist other Protestant (the two groups which contain most theologically fundamentalist respondents) as well as moderate other Protestant. Largely theologically liberal groups such as the Presbyterians, Episcopalians, liberal other Protestants, and Jews are more likely to report above average income. Methodists, Lutherans, and Catholics are less likely to report below average income, while those of average income are slightly less likely to identify as other religion or unaffiliated.

Contra existential security theory, those of below average perceived income are *less* likely to attend religious services at least once a week, and express lower levels of confidence in organized religion. They are also younger, as indicated by the cohort mean. Both education and confidence in science vary in the same direction—those with higher levels of perceived income are more educated, and more likely to express high levels of confidence in the scientific community. Those reporting below average reported income are disproportionately black and female, more likely to identify as Democrats, and less likely to identify as Republicans. Regression findings in Table 22 are surprising, given the hypothesis about the religion-environment connection as a function of class difference. Model fit criteria indicated that the conditional effects of birth cohort were only significant among those of average income (Δ -2LL=23.405, Δ df=12, $p=.024$) compared to below average income (Δ -2LL=10.976, Δ df=12,

$p=.531$) and above average income ($\Delta-2LL=21.037$, $\Delta df=12$, $p=.050$). Additionally, the Nagelkerke R^2 term indicates that the model (without conditional effects) is a better fit for those of above average reported income—even the average income model with conditional effects does not match the explanatory power of the above average income model. The specifics of each model indicate, once again contrary to my hypothesis, that religious group identity is more salient among those of average and above average incomes. In the case of above average incomes, all statistically significant associations between religious group identity and stewardship are negative, strongly suggesting that the highest levels of stewardship ethic among above average incomes are among the unaffiliated. Among Baptists, Lutherans, and fundamentalist other Protestants, consistent negative main effects of group identity on stewardship are present, although among average incomes these are expected to change at different rates relative to birth cohort (see figures below).

Additionally, weekly or more attendance is negatively associated with stewardship in all groups, though notably weaker among above average incomes. Confidence in science and education are stronger predictors among below average incomes, though as noted in the descriptive results, those with below average perceived incomes have lower levels of education as well as confidence in science overall. Women are more likely to express stewardship than men, but only in average and above average income groups, further nuancing the gender-environment connection, which was assessed to be a function of religious group identity in the previous chapter. Regional differences, as well as the urban/rural divide vary in their intensity and significance across income groups—regional effects are strongest overall among average incomes. Though identifying as Republican was consistently negatively associated with stewardship across all three groups, and identifying as Democrat was positively associated, these

differences grew stronger with higher perceived incomes. Among below average incomes, Democrats did not significantly differ from other, non-Republican affiliates in levels of stewardship.

Table 22: Stewardship Regression Models, by Income (N=34,266)

	Below Average		Average		Above Average	
	β	(se)	β	(se)	β	(se)
Baptist	-.188	(.085)*	-.587	(.205)**	-.466	(.111)***
Methodist	-.159	(.101)	-.406	(.218)+	-.316	(.113)**
Presbyterian	-.024	(.147)	-.278	(.260)	-.306	(.129)*
Lutheran	-.318	(.115)**	-.664	(.234)**	-.346	(.124)**
Episcopalian	-.030	(.194)	.033	(.314)	-.257	(.144)+
Non-denominational	-.282	(.113)*	-.492	(.279)+	-.523	(.130)***
Fund. Other Prot.	-.189	(.095)*	-.537	(.236)*	-.626	(.130)***
Protestant other	-.178	(.198)	-.929	(.346)**	-.772	(.214)***
Liberal Protestant other	.083	(.209)	-.360	(.334)	.181	(.188)
Catholic	-.174	(.081)*	-.297	(.200)	-.292	(.095)**
Jewish	-.434	(.219)*	.538	(.335)	-.103	(.151)
Other Religion	-.028	(.126)	-.095	(.364)	-.071	(.157)
Cohort(0-6)	.437	(.062)***	.421	(.068)***	.406	(.083)***
Cohort ²	-.032	(.009)**	-.039	(.008)***	-.028	(.013)*
BC*Baptist			.110	(.051)*		
BC*Methodist			.096	(.059)		
BC*Presbyterian			.076	(.076)		
BC*Lutheran			.143	(.064)*		
BC*Episcopal.			.076	(.097)		
BC*Non-denomination			.085	(.069)		
BC*Fund. Other Prot.			.072	(.060)		
BC*Prot. Other			.237	(.102)*		
BC*Liberal Oth Prot			.148	(.108)		
BC*Catholic			.032	(.049)		
BC*Jewish			-.212	(.105)*		
BC*Other Religion.			-.004	(.084)		
Attend Weekly+	-.197	(.053)***	-.144	(.039)***	-.143	(.060)*
Conf. Science	.254	(.046)***	.144	(.035)***	.206	(.052)***
Conf. Religion	-.141	(.050)**	-.194	(.037)***	-.111	(.059)+
Education (Ctr=12)	.057	(.008)***	.039	(.006)***	.037	(.009)***
Black	.072	(.066)	.097	(.058)+	.118	(.120)
Other	-.371	(.101)***	-.164	(.086)+	-.111	(.152)
Female	.041	(.045)	.066	(.034)*	.225	(.051)***
Midwest	-.049	(.071)	-.300	(.051)***	-.165	(.076)*
South	-.214	(.069)**	-.362	(.051)***	-.232	(.076)**
Other Region	-.228	(.074)**	-.461	(.056)***	-.319	(.079)***
Ln(Size+1)	.068	(.011)***	.060	(.009)***	.023	(.014)+
Republican	-.376	(.067)***	-.322	(.052)***	-.446	(.082)***
Democrat	.112	(.062)+	.138	(.050)**	.445	(.084)***
Constant	-.379	(.146)**	-.118	(.207)	-.242	(.182)
-2LL	12,220.293		21,237.261		9,151.305	
Nagelkerke R²	.098		.094		.118	

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

I have charted interaction terms across several notable groups in the figures below. As in Chapter 6, each figure is briefly examined before summarizing overall trends and findings. Regarding Figure 28, it is noteworthy that the unaffiliated do not differ much by income. The average income unaffiliated have not climbed in stewardship at the same rate as the above average or below average income unaffiliated, such that both groups have higher levels of stewardship by the youngest cohorts. Among Baptists, however, the trajectory differs greatly, with average income Baptists holding the *highest* levels of stewardship in the most recent cohorts, distancing themselves increasingly from above average income Baptists. Levels of stewardship among average income Baptists are roughly equivalent to those found among the unaffiliated in the two youngest cohorts. In other words, evidence indicates that a stewardship ethic among Baptists has been cultivated primarily among Baptists of average income.

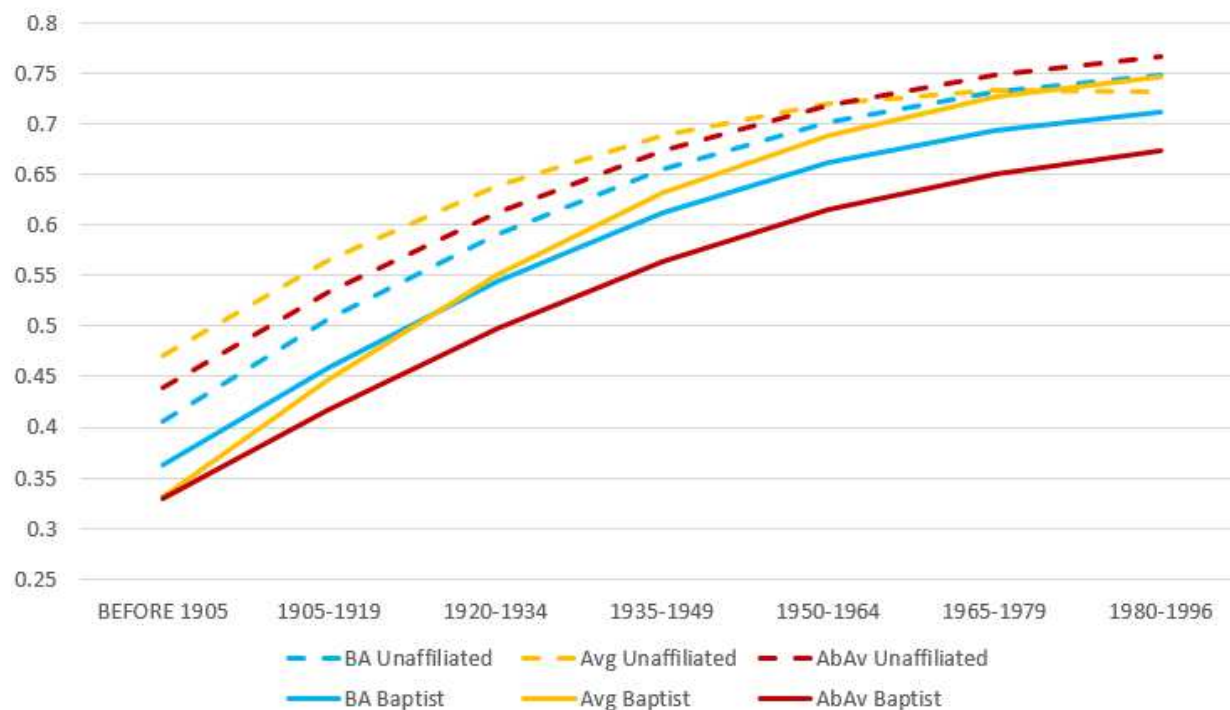


Figure 28: Probability of Expressing Stewardship by Cohort and Income, Baptist

Per Figure 29, Methodists follow similar a similar trajectory. Again, growth in stewardship has taken place among average income Methodists (as opposed to above average or

below average income Methodists) who have come to rival the unaffiliated in levels of stewardship by the most recent cohorts. Methodists hold higher levels of stewardship overall relative to Baptists. As with Baptists, it appears that growth in levels of stewardship appears to be limited to those reporting average incomes.

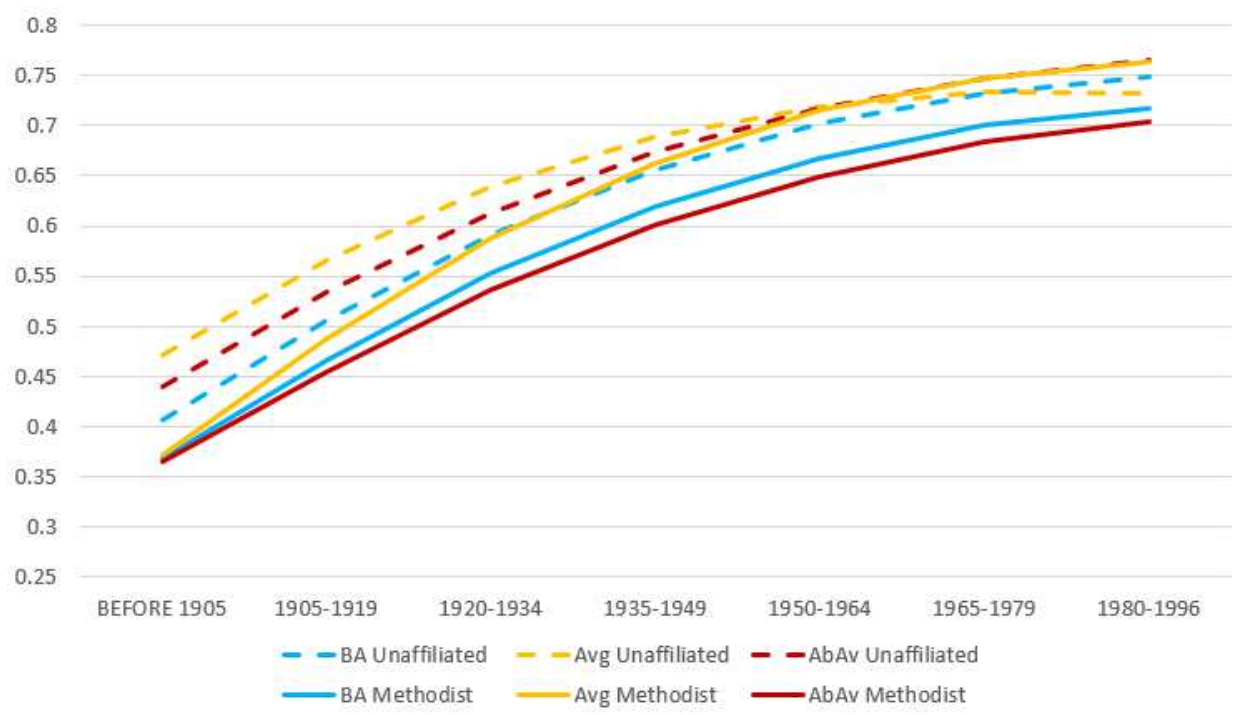


Figure 29: Probability of Expressing Stewardship by Cohort and Income, Methodist

Lutherans follow a similar pattern (Figure 30), closely resembling the Methodists in changes in levels of stewardship across birth cohorts, as a function of income. Figure 31 indicates that the same pattern generally holds for the non-denominational, as well, though levels of stewardship are slightly lower than Methodists or Lutherans, overall, and more closely approximate Baptists.

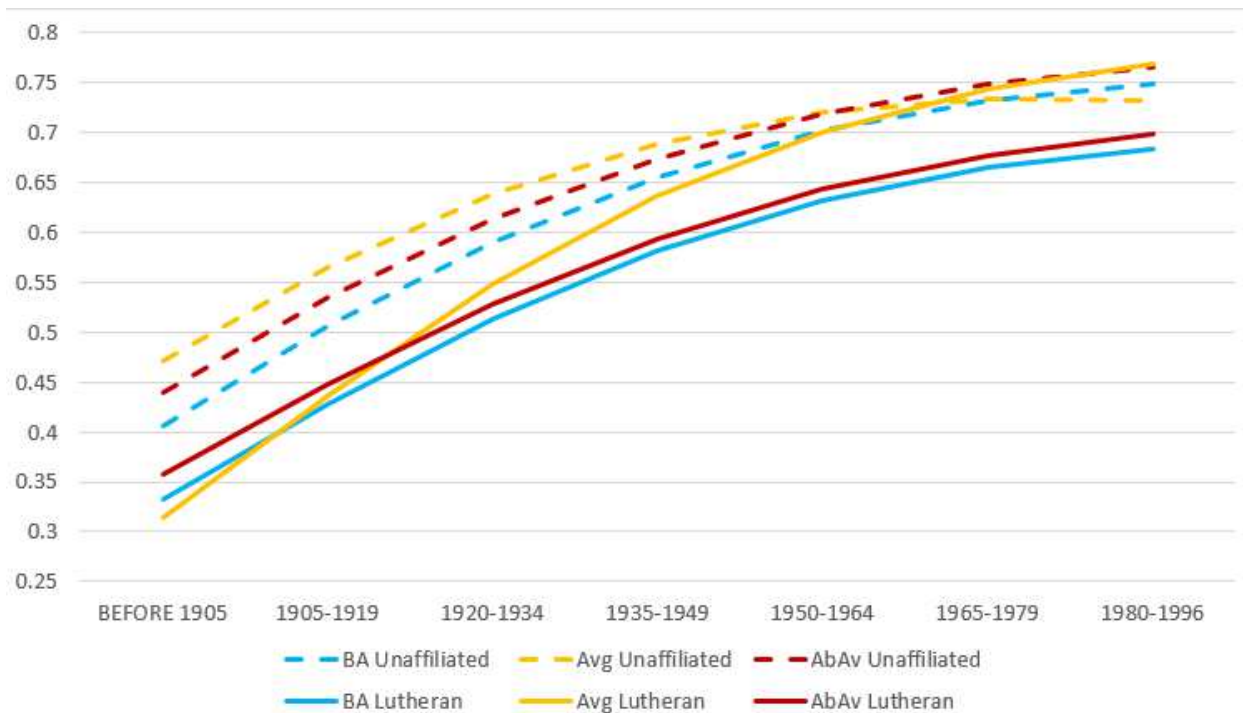


Figure 30: Probability of Expressing Stewardship by Cohort and Income, Lutheran

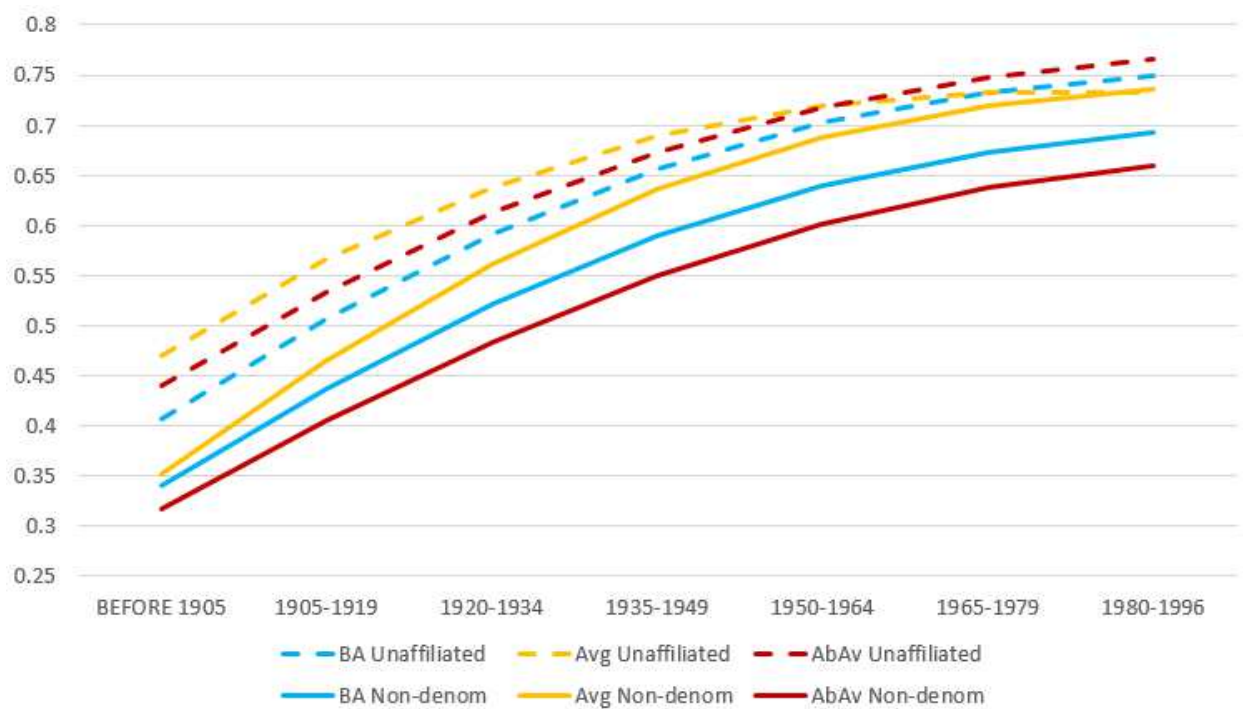


Figure 31: Probability of Expressing Stewardship by Cohort and Income, Non-denominational

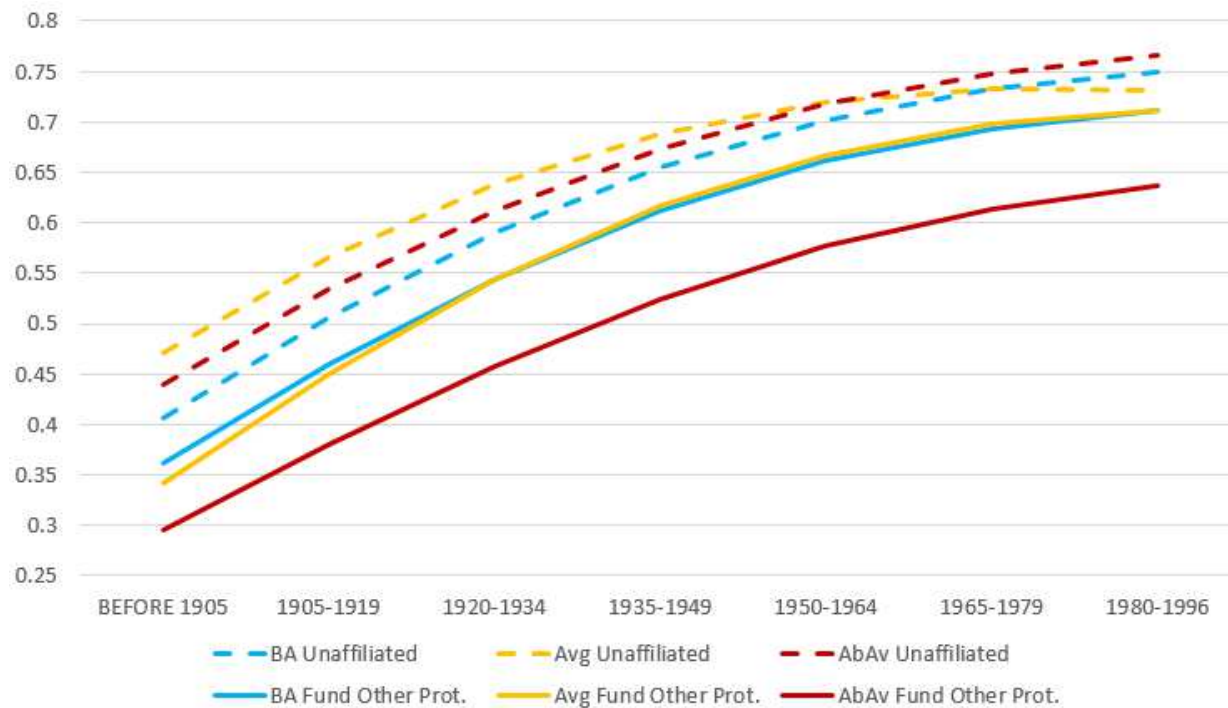


Figure 32: Probability of Expressing Stewardship by Cohort and Income, Fundamentalist Other Protestant

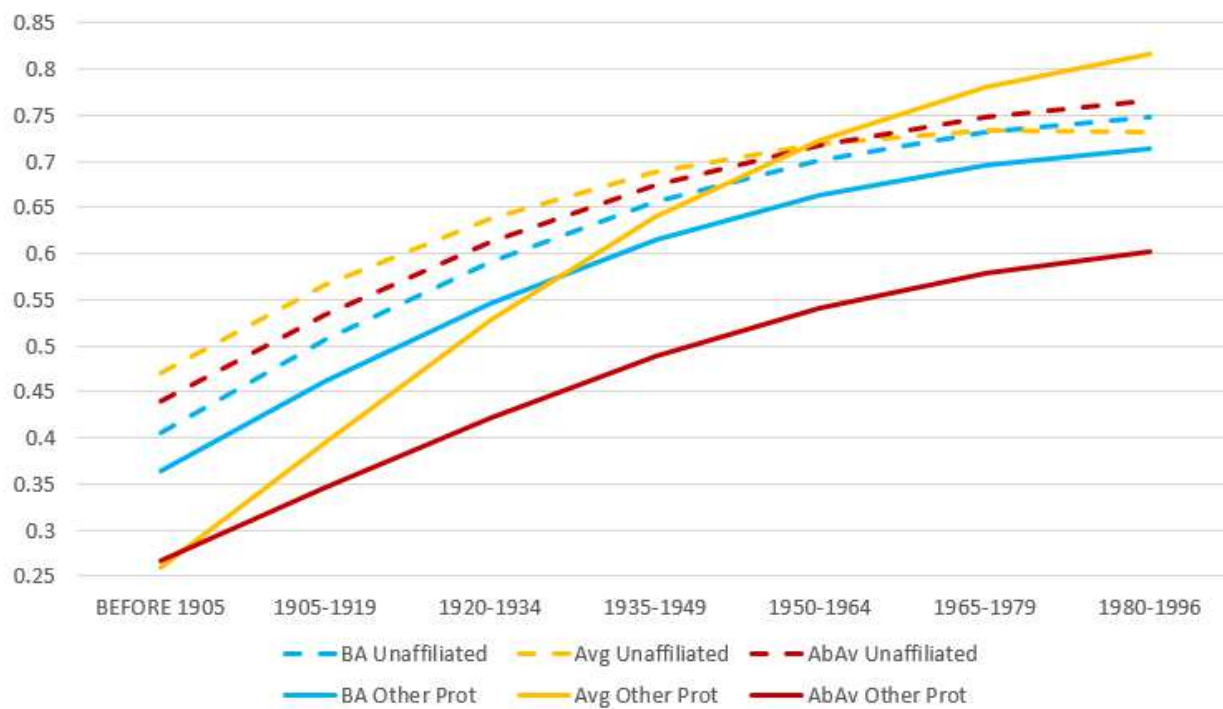


Figure 33: Probability of Expressing Stewardship by Cohort and Income, Moderate Other Protestant

Theologically moderate other Protestants also exhibit similar trajectories, except for the contrasts by income are stark. Lowest levels of stewardship are consistently found among above average income other Protestants; however, average income other Protestants have increased in levels of stewardship across cohorts from a rough parity with above average income other Protestants to levels that exceed the unaffiliated in the youngest cohorts. Below average income other Protestants remain below the unaffiliated in stewardship across all cohorts.

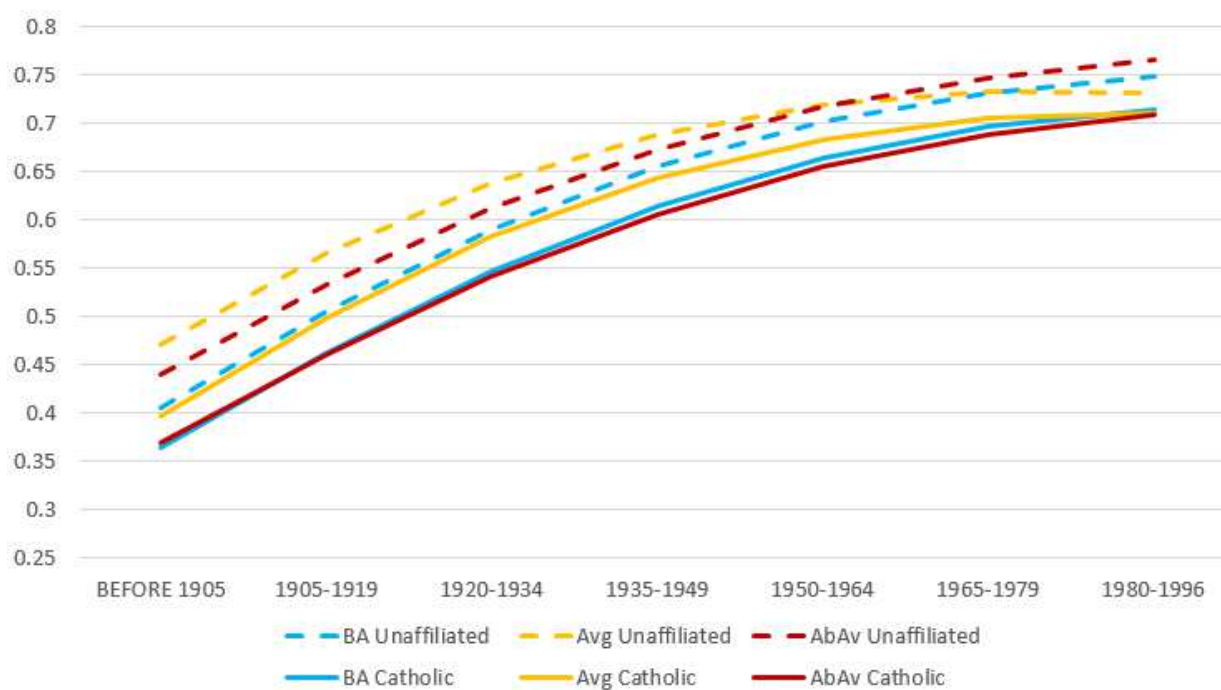


Figure 34: Probability of Expressing Stewardship by Cohort and Income, Catholic

Catholics are the exception, holding roughly similar levels of stewardship across cohorts, which are slightly lower than stewardship levels among the unaffiliated. In fact, except for the unaffiliated, Catholics (Figure 34) and arguably, fundamentalist other Protestants (Figure 32, for whom there is little difference between average and below average incomes), stewardship is a disproportionately “middle-class” phenomenon, manifesting itself to among those of average incomes, rather than those who perceive themselves to be above or below average income. These findings do not support H₈, whereby those who were most vulnerable to existential shocks would

be more religious, and more environmentally concerned due to their relative vulnerability. However, also per existential security theory, increases in stewardship across groups are likely due in part to a transition, around the mid-twentieth century, toward a *post-industrial* civilization, whereby individualistic, liberal, secular *self-expression values* (including environmental concern) probabilistically manifest themselves over collectivistic, religious *traditional values* (which may include a less “green” outlook). At the level of the individual—the *ego-tropic* level—it may then be the case that traditional values are more likely to persist among lower-income individuals within a society, particularly within religious groups and particularly in a society such as the United States, which has exceptionally high levels of socioeconomic inequality can be found (FRED Economic Data 2018; Norris and Inglehart 2011).

Proportionately stronger traditional values among those of below average incomes may in part account for the divide between average and below-average incomes but falls short as an explanation on several fronts. The explanation for the lack of class divide among Catholics may have to do with the same reasoning offered in the previous chapter—identity as a Catholic may simply be more salient than other demographic considerations such as gender or perceived income. It also does not readily account for the relatively *higher* levels of stewardship among the unaffiliated of above average incomes, but this I suspect may be a proxy effect of education. To wit, given the mean (14.67 years) and standard deviation (2.857) among the unaffiliated, and the correlation between advanced degree holders and lack of religious identity noted in existing literature (Gross and Simmons 2009; Leuba 1916, 1934; Masci 2009; Wuthnow 1989:146-7), it seems likely that a disproportionate number of above average income unaffiliated Americans are advanced degree holders.

This, in turn, does not explain the generally lower cross-cohort favor for stewardship among those of above average incomes, including among groups that are more theologically fundamentalist and disproportionately below-average or average income such as Baptists and fundamentalist other Protestants. This apparent trend, I speculate, is explicable in terms of something like Hunter's (1991) culture wars thesis—cultural polarization, both among more theologically fundamentalist groups, as well as, to some extent, among groups that have been split by some of the “hot-button” culture wars issues. In this case, lower levels of stewardship among younger persons with above average perceived incomes may be related to the extent to which “environmentalism” has become a casualty of the culture wars in recent decades.

Religiously affiliated people with higher incomes, via education, social networks, or simply the fact that they are more likely to identify as Republicans, may be more likely to see environmental concern as part of a broader, culturally progressive “agenda.” A greater awareness of how ideas such as environmentalism conflict with existing beliefs about religion, culture, and politics has resulted in what Reichart and Saari (2015) call the “Bible Believers effect.”

Republicans with higher educations were *more* likely to reject anthropogenic climate change; literal Bible believers with higher education were *more* likely to reject evolution than their less educated counterparts. While reported income is at best an indirect measure of education (those of above average income have, on average, 14.7 years of education versus 12.7 among average incomes and 12.1 among below average incomes), something like this may be at work. This seems more plausible given that disproportionately above average income, theologically liberal groups such as Jews, liberal other Protestants, and Episcopalians did not differ significantly in terms of environmental concern—these groups may be more likely to favor, and cultivate, the selfsame culturally progressive “agenda” that others reject.

In short, it is possible that something like *traditional* values may explain lower levels of stewardship both below average and above average income persons, but that values relate to each respective set of religious group identities in different ways, and for different reasons. For those of below average incomes, traditional values may reflect a latent dimension of religiosity as it relates to existential security—those of below average incomes have enjoyed fewer fruits of the transition toward higher standards of living and expected with the emergence of a post-industrial civilization. Thus, environmental stewardship may be a secondary concern. Among those of above average income, a familiarity with the implications of environmental issues as framed in the context of the culture wars may lead members of some religious groups (especially those with larger proportions of theologically fundamentalist adherents) to appraise environmental stewardship as a slippery slope toward a broader *culturally progressive* agenda and thus reject it outright (Palmer 2018). In short, changes in stewardship have taken place across all income groups, but average income persons are the most dynamic. Stewardship, then, appears to be a disproportionately middle-class phenomenon.

Conservation Results

Turning to conservation by religious group identity, the role of perceived income differs across groups. In this case, supporting H₇, below average income respondents report higher levels of conservation (35%) than average income (33%) or above average income (31%) respondents. Relative to the 1973-2014 data covered in the stewardship section above, these data, beginning in 1984, indicate some meaningful religious changes in the U.S. cultural landscape. For instance, below average income fundamentalist other Protestants increased by one percentage point, while those identifying as Non-denominational increased by one percentage point across all income groups. Many of the more recognizable “traditional” religious groups,

such as Baptists, Episcopalians, and Methodists, lost ground. Perhaps the unaffiliated have had the most remarkable change.

Table 23: Descriptive Statistics, Income, Conservation (N=16,687)

Variable	Below Avg. (N=5,143)		Average Inc. (N=7,762)		Above Avg. (N=3,782)		Min	Max
	Mean	SD	Mean	SD	Mean	SD		
Wild. Conservation	.35		.32		.31		0	1
Baptist	.22		.20		.12		0	1
Methodist	.07		.08		.08		0	1
Presbyterian	.02		.03		.05		0	1
Lutheran	.04		.06		.06		0	1
Episcopalian	.01		.02		.04		0	1
Fund. Other Prot.	.11		.09		.07		0	1
Other Protestant	.01		.01		.01		0	1
Liberal Other Prot.	.01		.01		.02		0	1
Nondenominational	.06		.06		.06		0	1
Catholic	.23		.26		.24		0	1
Jewish	.01		.01		.05		0	1
Other Religion	.06		.05		.05		0	1
None (ref)	.15		.18		.15		0	1
Cohort (0-6)	3.93	1.277	3.84	1.291	3.76	1.172	0	6
Cohort ²	17.07	9.641	16.44	9.556	15.54	8.721	0	36
Attend Weekly +	.24		.28		.27		0	1
High Conf. Science	.37		.41		.54		0	1
High Conf. Rel.	.23		.25		.23		0	1
Education	12.46	2.936	13.18	2.825	15.04	2.780	0	20
White (ref)	.72		.79		.89		0	1
Black	.20		.14		.07		0	1
Other	.08		.07		.04		0	1
Female	.58		.57		.48		0	1
Northeast (ref)	.16		.19		.20		0	1
South	.37		.37		.33		0	1
Midwest	.25		.25		.23		0	1
Other Region	.22		.19		.24		0	1
Ln (Size+1)	3.600	2.0953	3.456	2.0124	3.636	1.9036	0	8,175
Republican	.28		.36		.46		0	1
Democrat	.52		.48		.41		0	1
Other (ref)	.20		.16		.13		0	1
Literal Bible	.38		.35		.19		0	1
Inspired Word	.43		.49		.55		0	1
Book of Fables	.19		.16		.26		0	1

While there was a slight increase in the proportion of unaffiliated among those of below average incomes, there was a substantial increase in the unaffiliated in the above average income category, and a doubling (from 9% to 18%) in the average income category. Note also the different proportions across perceived income groups in feelings about the Bible. Less than one-fifth of those in the above average income category believe the Bible is the literal word of God, and more than a quarter of this group consider the Bible a book of fables written by men. Inspired word belief is higher among the above average income group, and literal Bible belief is highest among the below average income group. Other general descriptive results are similar to those discussed previously.

When examining the role of religious group identity as related to conservation by income groups, religious identity plays relatively little significant role. None of the models tested indicated significant birth cohort*religious group identity interaction terms. Cohort effects are not significant in above average incomes, and only the linear effect is significant among average incomes. Where and when religious group identity exhibits a statistically meaningful role, results are negative, and most are not significant above the $p < .01$ threshold, indicating a relatively large standard error relative to the coefficient. Religious service attendance is significantly negative among average incomes, and education is negatively associated with conservation among below average incomes. Women in the above average income category are less likely to express conservation than men, which adds additional nuance to the previous chapter regarding the gender divide on conservation. Only those in the Midwest are consistently less likely to express conservation than those in the Northeast, and Republicans are less likely to express conservation than other groups across the income divide. However, the most interesting finding is the connection between race and conservation. Blacks hold higher levels of conservation

across all income groups, and the effect among below average and average incomes is among the strongest of all effects in the model. I will test the significance of this further in the next chapter.

Table 24: Conservation Regressed on Religious Group by Income (N=16,687)

	Below Average		Average		Above Average	
	β	(se)	β	(se)	β	(se)
Baptist	-.052	(.108)	-.062	(.098)	-.279	(.159)+
Methodist	-.284	(.146)+	-.251	(.118)*	-.316	(.165)+
Presbyterian	-.101	(.212)	-.017	(.159)	.179	(.187)
Lutheran	-.427	(.188)*	-.149	(.136)	.036	(.180)
Episcopalian	.210	(.260)	-.012	(.204)	-.099	(.205)
Non-denominational	-.084	(.140)	-.008	(.119)	-.499	(.181)**
Fund. Other Prot.	-.317	(.126)*	-.118	(.119)	-.277	(.186)
Protestant other	-.837	(.347)*	-.207	(.226)	-.088	(.366)
Liberal Protestant other	-.025	(.342)	.066	(.231)	.115	(.248)
Catholic	-.217	(.102)*	-.147	(.089)+	-.245	(.125)+
Jewish	-.109	(.325)	-.625	(.256)*	-.287	(.188)
Other Religion	-.077	(.136)	-.128	(.124)	-.154	(.185)
Cohort(0-6)	.580	(.123)***	.218	(.096)*	.181	(.157)
Cohort ²	-.062	(.016)***	-.016	(.013)	-.013	(.021)
Attend Weekly+	-.154	(.077)*	-.297	(.063)***	-.167	(.093)+
Conf. Science	-.013	(.064)	-.031	(.053)	.068	(.075)
Conf. Religion	.010	(.075)	-.018	(.061)	-.068	(.093)
Education (Ctr=12)	-.029	(.011)*	-.019	(.010)+	.003	(.014)
Black	.498	(.087)***	.587	(.079)***	.294	(.147)*
Other	.190	(.113)+	.107	(.099)	.163	(.173)
Female	-.075	(.062)	-.088	(.051)+	-.273	(.074)***
Midwest	-.201	(.098)*	-.357	(.079)***	-.360	(.113)**
South	-.105	(.093)	-.051	(.074)	.076	(.105)
Other Region	-.072	(.099)	-.140	(.082)+	-.073	(.111)
Ln(Size+1)	.012	(.015)	.042	(.013)**	.024	(.020)
Republican	-.246	(.090)**	-.342	(.076)***	-.652	(.116)***
Democrat	-.103	(.080)	-.043	(.071)	-.095	(.112)
Literal Word	-.070	(.095)	.076	(.086)	.084	(.134)
Inspired Word	-.198	(.087)*	-.083	(.075)	-.039	(.097)
Constant	-1.416	(.270)***	-.962	(.214)***	-.654	(.329)*
Nagelkerke R²		.049		.057		.060

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

Figure 35 offers some dimension to the relationship between religious group identity, perceived income, and conservation, converted to percentages for ease of interpretation. Note that some of the coefficients used to create this bar chart were not statistically significant, so that some caution is in order regarding the interpretation of findings. A general trend is evident here: higher levels of conservation are almost without exception found among the highest income groups, whereas lowest levels of conservation appear without exception among the lowest

income groups. This may seem counterintuitive given that descriptive results pointed to conservation being higher among lower incomes, and lower among higher incomes. This seeming discrepancy is explicable in terms of the logistic regression coefficients, which are notably more negative among below average incomes. This means that religion is statistically more salient in predicting conservation among lower incomes, but that religion is *more negatively* associated with conservation among lower incomes. Among higher incomes, the story changes: Presbyterians, Lutherans, and theologically liberal other Protestants (not shown in Figure 35) did not differ significantly from the unaffiliated in any of the income groups; however, all these groups were (nonsignificantly) positively associated with conservation relative to the unaffiliated. Among average and below average perceived incomes, however, religious group identity was generally negatively associated with conservation.

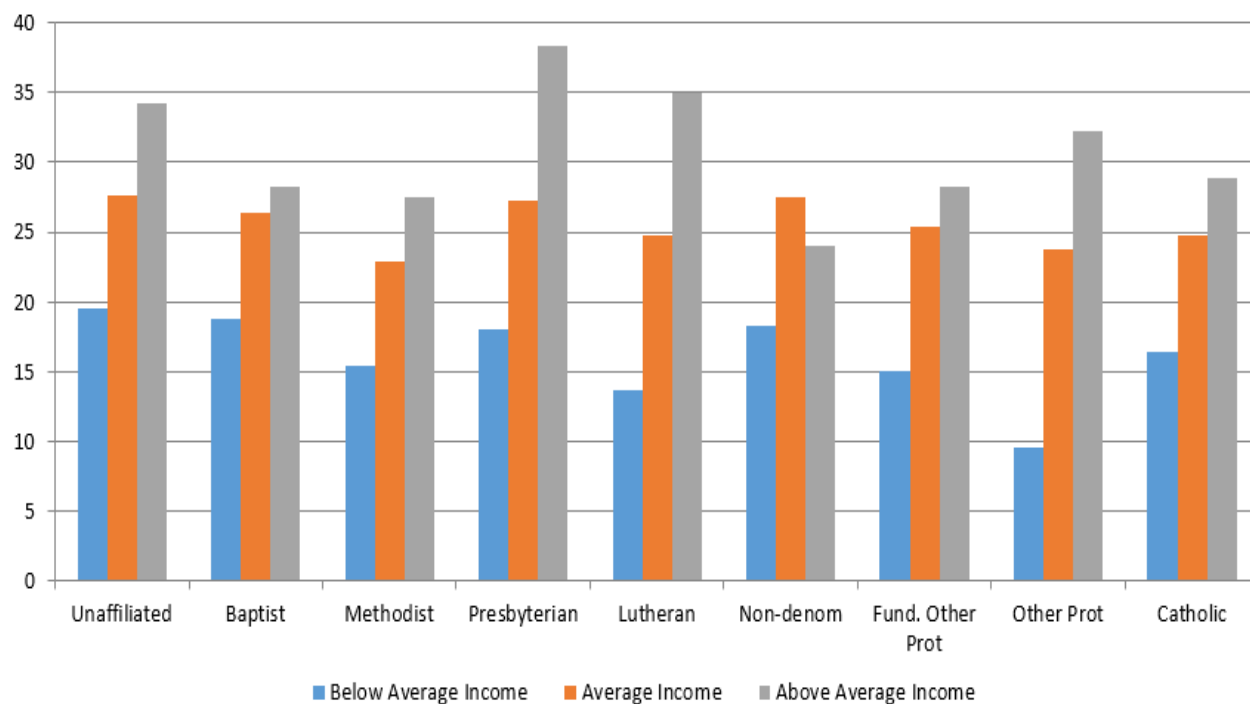


Figure 35: Conservation by Religious Group Identity, Income

I expect that social class—particularly access to leisure and disposable income—conditions how people understand, and participate in conservation, which in part accounts for the unevenness of these findings. It may be that those who report average incomes view wilderness as a “vacation spot” or even a “spiritual retreat,” an escape from urban realities—hence the notable urban/rural divide—whereas those who are average income and attend religious services once a week or more may seek a different sort of retreat from urban life. Given the negative association with being from the Midwest, farmers and farming communities may be suspicious of “conservation” efforts as federal meddling in local spaces and efforts and may thus be less likely to support such efforts. Perhaps the most interesting findings are related to race. I investigate whether the substantial black-white “green divide” has specific salience regarding religious group identity further in the next chapter.

Summing Up

Based on the analyses conducted in this chapter, H₇, that religious group identity is more salient among those of lower income when predicting environmental concern, is rejected. The findings of this chapter generally failed to confirm the expected relationships between environmental concern and religious group identity as a function of income but were nonetheless interesting in that they were surprising. Regarding income, it appears that stewardship is a “middle-class” phenomenon, and that conservation, at least its religious facet, is more likely to be found among the more affluent. Given the model-predicted changes in stewardship by income, in general, the highest levels of environmental concern in the most recent cohort are found not among those who believe themselves to be wealthier or poorer than others, but among those who view themselves as “middle class.” I have offered potential explanations for these developments, drawing upon existential security theory to account for below average income

differences, and culture wars to account for above average income differences. However, there are discrepancies with both theories, as they make slightly different predictions. For example, if traditional values are more often found among the poor in a postindustrial society such as the United States (as existential security would have it), then why so many negative associations among above average incomes, where “self-expression values” may be more prominent? And if cultural polarization underpins these divides, why have some theologically fundamentalist groups changed notably on these measures across birth cohorts? Neither explanation, I think, is wholly satisfactory, though I have speculated that both have something to contribute. Future research should take both economic sociology and cultural theories of religious change into account order to make sense of whether, and to what extent, religious group-level environmental concern is a function of some permutation of “middle-class” cultural values or economic standpoint.

Finally, I must admit that something has occurred to me over the course of this chapter, a rather major factor that stands to explain some of the variation in environmental concern by religious group: education. Is it possible that many of the changes in environmental concern documented throughout this dissertation have occurred as a function of differential levels of education by region, between urban and rural populations, or across regional divides? Research findings suggest that averages in congregation-level education impact the cultural and theological orientation of the congregation (Stroope 2011), and vice versa (Stroope, Franzen, and Uecker 2015). Perhaps higher levels of environmental concern among some religious groups but not others reflect average congregation-level average educational attainment. Such a thesis would roughly accord with both existential security theory and the “culture wars” thesis. Regarding the former, education is a major factor in human development, with which religiosity

probabilistically is expected to vary inversely. In the case of the latter, Hunter (1991) associates cultural progressivism at least in part with a “cultural elite” that includes the intelligentsia.

Further research to assess whether education mediates the relationships found throughout this dissertation is warranted. For now, however, I simply reiterate that education plays a statistically significant role in some (if not all) measures of environmental concern here and move toward the discussion of racial and political divides regarding environmental concern and religious group identity.

Chapter 8. Political Party and Race

“Those who say religion has nothing to do with politics do not know what religion is.”
 –Mahatma Gandhi

This final quantitative chapter is devoted to a complex and contentious set of features of American civic life, which, as will be shown, bears disproportionately on environmental concern. Measuring the confounding effects of race and political ideology on the religion-environment connection is substantially more complicated than assessing gender or income differences in the role of religion in predicting environmental concern. *I submit that race, politics, and religion in the United States are sufficiently entangled, both historically and in the present, that they should be addressed in conjunction with one another rather than separately.* I proceed in this chapter under this theoretical contention, testing two specific hypotheses as outlined in Chapter 1. The primary hypothesis tested here is H_0 : *Religious group affiliation will be more salient among blacks than among whites.* In this chapter, I also test the “alternative hypothesis,” H_A , that *the connection between religious group affiliation and environmental concern is spurious, explicable in terms of differences in political party affiliation.* Insofar as significant differences in stewardship and/or conservation by religious group identity are erased by making such relationships conditional upon political party identity, H_A is considered supported.

The distinctiveness of religious beliefs, affiliations, and practices by race is well established conceptually, historically, and statistically, as have the relationships between race and political ideology (Emerson and Smith 2000; Jones 2016; Roof and McKinney 1992:139-44; Shelton and Emerson 2012). The typology of religious group identity used in the previous chapters, then is likely inapplicable or even misleads in ascertaining differences in environmental concern by race as a function of religion. Additionally, sharp political divides underpin the connections that may manifest themselves as differences between environmental concern and

religion along racial lines. To deal with these complexities, I devote this chapter to ascertaining the distinctive roles of Democratic and Republican political identities in shaping environmental concern *as a function of both religious tradition and racial identity*.

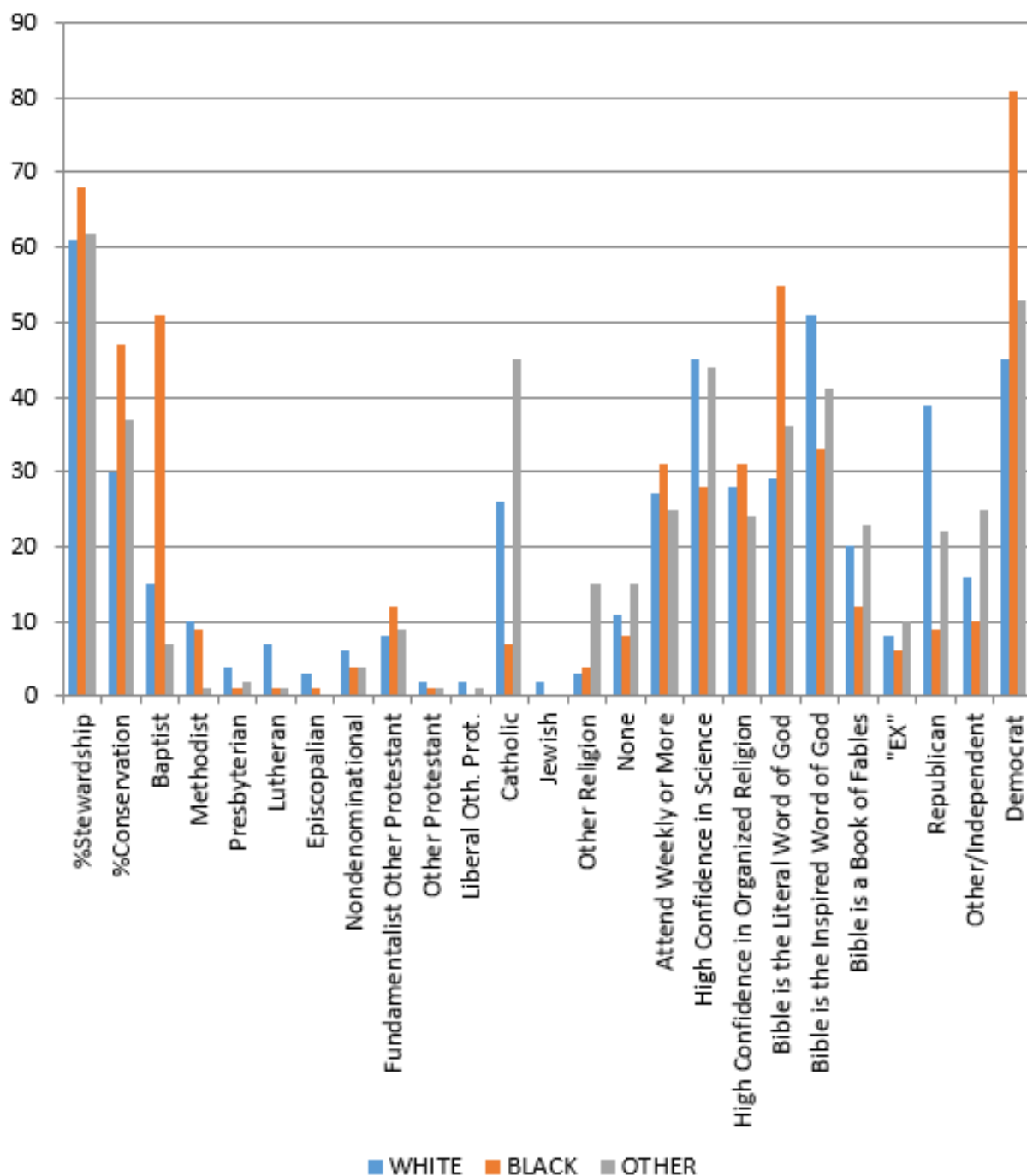


Figure 36: Religious Group Identity, Attitudes by Race (%)

Racial and Party Divides across Measures

The first step in this analysis requires garnering descriptive comparisons of measures included in the model, by race. Though the GSS provides only a rudimentary trichotomous measure of race (white, black, other), distinctions are evident: the highest levels of environmental concern across both measures is among blacks, with other race outperforming whites in wilderness conservation. Religiously, more than half of blacks identify as Baptist, with smaller numbers among Methodists, Nondenominational, Catholic, Other Religion, and the unaffiliated. Several mainline Protestant denominations (Presbyterian, Lutheran, Episcopalian, liberal other Protestant) which differed significantly from the unaffiliated in environmental concern in previous chapters, are largely, and in some cases, almost entirely, white. Noting also that blacks are also overwhelmingly Democrats (over 80%) suggests that differing explanations for environmental concern across racial groups may be in order.

Consistent with existing literature, blacks are notably more religious across all measures: they are less likely to self-report no religious affiliation and are slightly more likely to report attending religious services at least once a week, and to have high confidence in organized religion. Furthermore, blacks are far more likely to be Biblical literalists, less than half as likely as whites or other racial groups to believe the Bible is a book of fables, and less likely to report disaffiliating from religion after the age of 16. Among the other race category, nearly half are Catholics, with the rest embracing non-Judeo-Christian, unaffiliated, and Baptist religious group identity. They are comparable to whites in religious service attendance, confidence in science, confidence in organized religion, and have lower levels of Bible belief overall (which is likely due, at least in part, to being more than ten percent non-Judeo-Christian religious identity) as well as slightly higher levels of disaffiliation. Politically, the other religious groups fall between

whites and blacks, being more likely to be Democrats or Independent/Other party, but also only about half as likely to identify as Republicans, relative to whites.

This picture is indeed complex and offers a starting-point for examining racial differences in the relationship between religious group affiliation and environmental concern: it would not be fruitful, for example, to examine racial differences across religious traditions that are relatively racially homogeneous. I can use a relatively small number of interaction effects to compare the religious groups rather than dividing the data set three ways by race. Additionally, given the established role of political ideology in predicting levels of environmental concern, as well as the racial disparities in political party affiliation, I can examine these interaction effects in the context of political party affiliation, simultaneously testing whether, and to what extent, racial and political differences affect the relationship between religious group affiliation and environmental concern. Before conducting such an analysis, however, I digress briefly to examine the role of political ideology as related to environmental concern.

Political Party and Environmental Concern over Time

For this section, and the remainder of the chapter, I have omitted the Independent/Other Party category from the analysis. It is sufficiently broad (containing truly “independent” centrists, libertarians, Green party members, and others) that such a distinction is unlikely to be analytically useful for testing the hypotheses at hand. Figures 37-8 indicate the increase of an already wide cultural gap between Democrats and Republicans during the years surveyed for this study. I also found consistently higher levels of environmental concern across both measures among Democrats and consistently lower levels among Republicans. However, both parties were within a few percentage points of one another in both stewardship and conservation in 1990. After 1991, Republicans began to move away from Democrats.

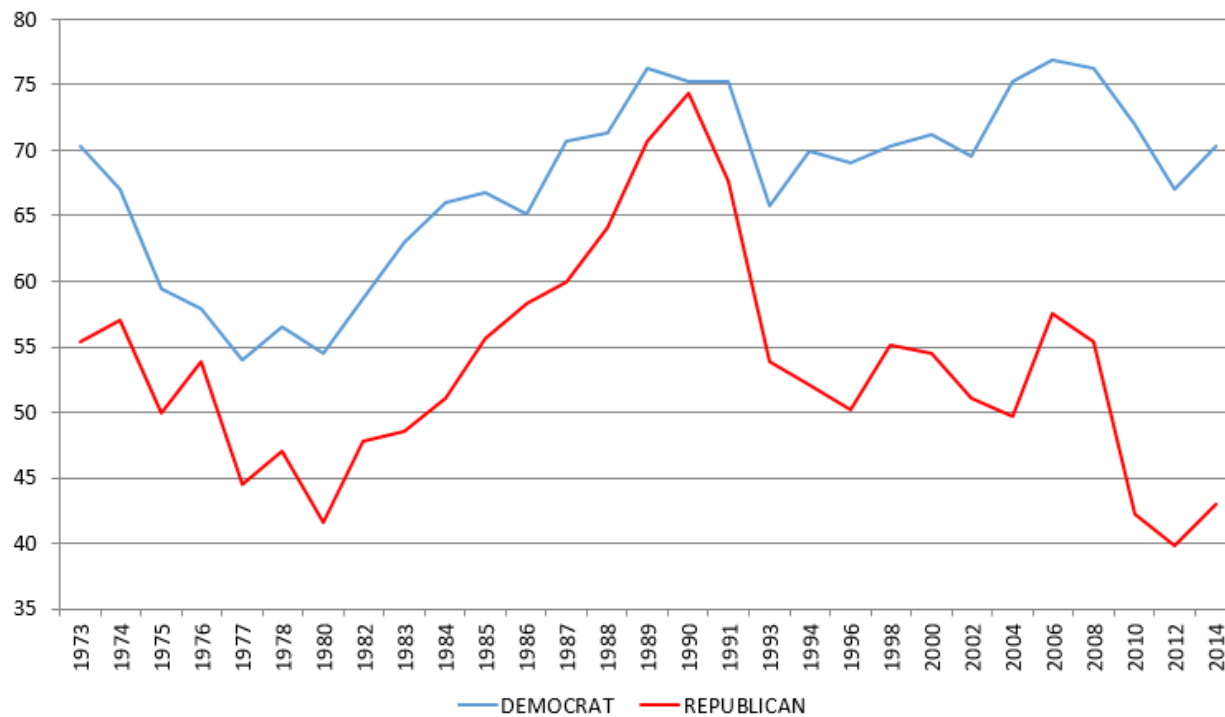


Figure 37: Partisan Polarization on Stewardship, 1973-2014

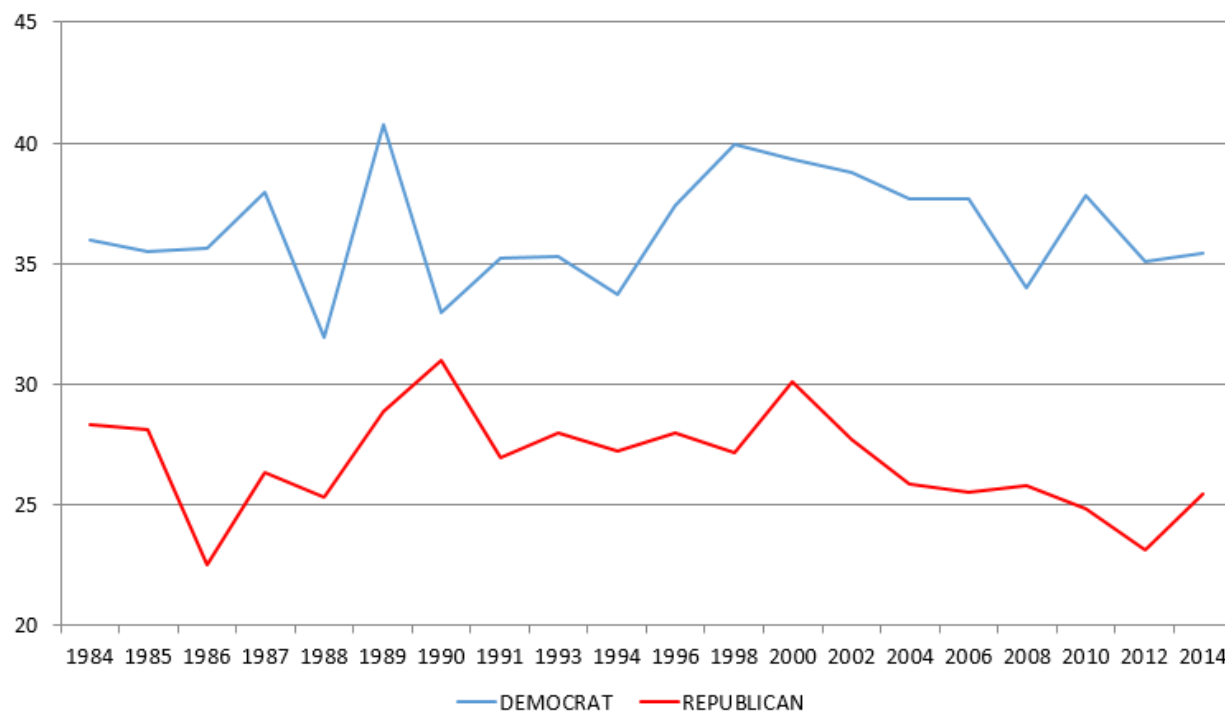


Figure 38: Partisan Polarization on Conservation, 1984-2014

Though people in both parties may have been affected by background factors in some ways across the years, Republicans became increasingly *less* likely to express either stewardship or conservation, whereas Democrats have grown substantially and consistently in levels of stewardship and conservation over time. In 2012, Republicans and Democrats were fully 30 percentage points apart on stewardship (40 versus 70 percent, respectively), and 12 percentage points apart on conservation (23 versus 35 percent, respectively). These gaps are broad, but they also indicate that political party affiliation is not the only factor in predicting environmental concern.

Table 25: Descriptive Statistics by Political Party, Stewardship (N=29,159)

Variable	Democrat (N=17,295)		Republican (N=11,864)		Min	Max
	Mean	SD	Mean	SD		
Stewardship	.68		.54		0	1
Baptist	.22		.17		0	1
Methodist	.09		.12		0	1
Presbyterian	.03		.06		0	1
Lutheran	.05		.09		0	1
Episcopalian	.02		.03		0	1
Nondenominational	.04		.06		0	1
Fund. Other Prot.	.08		.10		0	1
Other Protestant	.01		.02		0	1
Liberal Other Prot.	.01		.02		0	1
Catholic	.27		.22		0	1
Jewish	.03		.01		0	1
Other Religion	.04		.03		0	1
None (ref)	.11		.07		0	1
Birth Year Cohort (0-6)	3.25	1.350	3.27	1.379	0	6
Cohort ²	12.60	8.757	12.37	8.725	0	36
Attend Weekly or More	.26		.32		0	1
High Conf. Science	.43		.46		0	1
High Conf. Religion	.27		.31		0	1
Education	12.75		13.35	2.892	0	20
White (ref)	.74		.94		0	1
Black	.21		.03		0	1
Other	.05		.03		0	1
Female	.57		.52		0	1
Below Av. Inc.	.31		.23		0	1
Average Inc. (ref)	.50		.49		0	1
Above Av. Inc.	.19		.28		0	1
Northeast (ref)	.20		.19		0	1
South	.35		.34		0	8,175
Midwest	.26		.27		0	1
Other Region	.19		.20		0	1
LnSize/Place in 1000s	3.746	2.1645	3.198	1.8801	0	1

somethingStewardship Results

Descriptive Results

Per Table 25, Republicans outpace Democrats in all religious groups except Baptists (likely in part because blacks disproportionately identify as Democrat, and Baptist). Catholics, other religion, Jewish, and None. Republicans are also far less likely to be religiously unaffiliated, and to consider the Bible a book of fables. Republicans are more likely to have high confidence in organized religion and more likely to report attendance at religious services at least once a week. Additionally, Republicans are more likely to have high confidence in both organized religion and the scientific community. However, current research suggests that confidence in science may be a statistical artifact and is been in decline among Republicans since the 1970s (Gauchat 2012). Republicans are also slightly older, more highly educated, more likely white, male, and affluent than Democrats. They are also more likely to live in less populated areas than Democrats. Overall, Republican levels of stewardship are a full 14 percentage points lower than those of Democrats, which, as noted above, obscures a trend which shows that Republicans have declined on both measures of environmental concern, particularly during the last 25 years.

Multivariate Results, Stewardship, Democrats

Examining Table 26, Model 1, which contains only simple regression effects, it appears as though every Judeo-Christian religious group identity save for Lutherans and Episcopalians differs significantly, and negatively, among Democrats. Controlling for birth cohort alters this pattern slightly—Jews, Episcopalians, and the Non-denominational no longer significantly differ from the unaffiliated. Adding in controls (Model 3) attenuates some of these effects, but generally does not notably change the overall picture. These models would seem to suggest that

Table 26: Stewardship Regressed on Religion, Controls, Democrats (N=17,295)

	Model 1		Model 2		Model 3		Model 4	
	β	(se)	β	(se)	β	(se)	β	(se)
Baptist	-.883	(.065)***	-.700	(.066)***	-.420	(.073)***	-.979	(.220)***
Methodist	-.898	(.077)***	-.609	(.080)***	-.404	(.083)***	-.899	(.226)***
Presbyterian	-.714	(.109)***	-.440	(.112)***	-.330	(.114)**	-.975	(.298)**
Lutheran	-.834	(.088)	-.589	(.091)***	-.357	(.094)***	-1.028	(.251)***
Episcopalian	-.131	(.144)	.121	(.147)	.063	(.149)	-.336	(.373)
Fund. Prot. Other	-.461	(.099)**	-.385	(.101)***	-.243	(.102)*	-1.105	(.302)***
Prot, other	-.951	(.079)***	-.789	(.081)***	-.466	(.086)***	-1.128	(.257)***
Lib. Prot other	-.310	(.154)*	-.520	(.148)***	-.267	(.151)+	-1.133	(.362)**
Non-denom	-.724	(.063)***	-.043	(.158)	-.026	(.161)	-.491	(.406)
Catholic	-.724	(.063)***	-.542	(.065)***	-.383	(.068)***	-.727	(.199)***
Jewish	-.254	(.120)*	.048	(.123)	-.212	(.126)+	.000	(.301)
Other Religion	-.204	(.106)+	-.297	(.107)**	-.254	(.109)*	-.289	(.369)
Cohort(0-6)			.647	(.047)***	.470	(.049)***	.342	(.072)***
Cohort ²			-.055	(.008)***	-.038	(.008)***	-.032	(.008)***
Attends Wkly +					-.065	(.040)	-.068	(.041)+
High Conf Sci.					.210	(.036)***	.209	(.036)***
High Conf Rel					-.210	(.039)***	-.211	(.039)***
Female					-.035	(.035)	-.035	(.035)
Black					.094	(.050)+	-.098	(.090)
Other Race					-.270	(.086)**	-.240	(.100)*
Education					.081	(.006)***	.082	(.006)***
Inc. Below Avg.					.092	(.039)*	.093	(.039)*
Inc. Above Avg.					.097	(.050)+	.097	(.050)+
Midwest					-.223	(.053)***	-.216	(.053)***
South					-.286	(.053)***	-.273	(.053)***
Other Region					-.282	(.058)***	-.259	(.058)***
Ln (Size+1)					.066	(.009)***	.064	(.009)***
BC*Baptist							.146	(.059)*
BC*Methodist							.121	(.063)+
BC*Presbyterian							.195	(.091)*
BC*Lutheran							.200	(.073)**
BC*Episcopalian							.109	(.117)
BC*Non-denom							.266	(.082)**
BC*Fund. OP							.166	(.072)*
BC*Mod. OP							.279	(.114)*
BC*Lib Oth Prot							.130	(.131)
BC*Catholic							.084	(.051)+
BC*Jewish							-.119	(.087)
BC*Other Rel							.009	(.087)
Black*Baptist							.700	(.201)***
Black*Methodist							.327	(.161)*
Black*Non-dnm							-.199	(.261)
Black*Fund. OP							1.144	(.380)**
Other*Baptist							-.142	(.291)
Other*Methodist							.758	(.792)
Other*Non-den.							-1.466	(.473)**
Other*Fund OP							.064	(.288)
BC*Blk*Bptst							-.146	(.054)**
BC*Blk*Fnd OP							-.230	(.103)*
Constant	1.419	(.055)***	-.149	(.090)+	-.086	(.111)	.333	(.205)
-2LL	21,437.152		20,760.316		20,328.431		20,268.510	
Nagelkerke R²	.026		.078		.111		.115	

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

among Democrats, religious group identity, particularly among most Christian groups, is generally negatively associated with stewardship.

Among Democrats (per Model 3), the coefficients for confidence in science and confidence in organized religion essentially cancel each other out. Education plays a notable positive role, and regional as well as urban-rural differences persist, but only the main effect of other race is significant (and negative). These patterns strongly suggest that party identity among Democrats does not render the religion-environment connection spurious. In fact, many of the patterns seen in earlier analyses (e.g., see Chapter 3) persist, even when just examining Democrats. This model challenges the alternative hypothesis (H_A)—that the religion-environment connection is spurious—at least among Democrats.

Disentangling conditional effects for Democrats proved quite challenging and required a great deal of experimentation with model fit. The resulting best-fitting conditional-effects model (Model 4) is noted. Baptists, Presbyterians, Lutherans, the Non-denominational, and both fundamentalist and moderate other Protestants changed differently over time relative to the unaffiliated (as noted by the statistically significant conditional birth cohort*religious group identity effects). As noted by the Nagelkerke R^2 and -2LL, contributions of conditional effects in Model 4 are relatively modest—again, birth cohort and controls seem to play a stronger role. The complexities of these conditional effects, which are also presented in log-transformed odds ratios, is examined in the figures below.

Multivariate Results, Stewardship, Republicans

Among Republicans, I employ only three models (Table 27). The models reported are based on the same series of regressions that resulted in the models for Democrats above. In other words, dividing the sample among Republicans and Democrats, and then running the same sets

of regressions for each to check model fit criteria resulted in the four models above for

Democrats and the three models below for Republicans.

Table 27: Stewardship Regressed on Religion, Controls, Republicans (N=11,864)

	Model 1		Model 2		Model 3	
	β	(se)	B	(se)	β	(se)
Baptist	-.179	(.081)*	-.091	(.082)	-.036	(.086)
Methodist	-.054	(.086)	.187	(.088)*	.208	(.091)*
Presbyterian	-.103	(.100)	.160	(.103)	.156	(.105)
Lutheran	-.277	(.091)**	-.077	(.093)	-.080	(.095)
Episcopalian	-.106	(.120)	.160	(.122)	.119	(.125)
Non-denominational	-.351	(.098)***	-.336	(.099)**	-.252	(.101)
Fund. Protestant Other	-.402	(.089)***	-.321	(.090)***	-.162	(.095)+
Protestant other	-.451	(.149)**	-.276	(.152)+	-.194	(.154)
Liberal Protestant other	.017	(.138)	.357	(.142)*	.297	(.144)*
Catholic	.053	(.078)	.124	(.079)	.095	(.081)
Jewish	-.029	(.184)	.106	(.187)	-.018	(.190)
Other Religion	.222	(.124)+	.147	(.125)	.147	(.127)
Cohort(0-6)			.417	(.053)***	.438	(.055)***
Cohort ²			-.027	(.008)**	-.030	(.009)***
Attend Weekly+					-.210	(.044)***
Conf. Science					.186	(.039)***
Conf. Religion					-.105	(.042)*
Education (Ctr=12)					-.006	(.008)
Black					.084	(.110)
Other					.031	(.119)
Female					.233	(.039)***
Inc. Below Average					.052	(.048)
Inc. Above Average					-.127	(.047)**
Midwest					-.244	(.058)***
South					-.324	(.058)***
Other Region					-.522	(.064)***
Ln(Size+1)					.050	(.011)***
Constant	.292	(.067)***	-.855	(.106)***	-.854	(.125)***
-2LL	16,283.770		15,952.072		15,770.946	
Nagelkerke R²	.009		.045		.065	

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

The differences in best-fitting models alone are telling. Race and birth cohort exert differing effects among Democrats that do not appear among Republicans. Though there are some statistically significant negative associations among religious group identities in Models 1 and 2, these are largely absent in Model 3 (save for a small negative effect among fundamentalist other Protestants, significant at $p < .10$). After adding controls, both Methodists and liberal other Protestant Republicans hold higher levels of stewardship ethic than unaffiliated Republicans, an interesting finding particularly given that otherwise, among Republicans, stewardship levels

across religious group identities do not significantly differ from the unaffiliated. Nonsignificant positive effects also appear among Presbyterians, Episcopalians, Catholics, and non-Judeo-Christian religious group identities. In other words, where religious group identity appears to play a generally negative role among Democrats, it plays a positive role among Republicans, especially the more theologically liberal ones as well as Catholics. I do not want to exaggerate the salience of these findings, however, given that several of them are nonsignificant and that, in some cases, the standard errors are larger than the effect sizes. These findings may simply be noise. However, this political party divide regarding religious group identity remains interesting.

Cohort plays a more significant, positive role among Republicans than among Democrats, suggesting that younger Republicans are more likely to express stewardship than their parents or grandparents. This raises the possibility that the rather stark partisan divides noted in Figures 37 and 38 may reflect a shift among older Republicans away from environmental concern, rather than a retreat of all Republicans as against Democrats on such issues. Revisiting previous findings, Chapter 3 findings indicated that Americans have become “greener” overall across birth cohorts, but this increase has begun to level off in more recent cohorts. Chapter 5 indicates that both age and religious group identity have become less salient over time in relation to stewardship, but that younger members of the same religious groups are more environmentally concerned than older members overall.

Weekly or more religious service attendance, and high confidence in organized religion, exert negative effects on stewardship among Republicans, while confidence in science exerts a positive effect. Republicans of above average income are less likely to express stewardship, an interesting finding given that these variables were measures of *spending*—this may have to do with a sense of existential security (see Chapter 7) relative to those of middle incomes and/or

mistrust of “big government,” coupled with greater suspicion of federal regulation. Women who identify as Republican hold higher levels of stewardship than men; regional differences are significant, and Republicans living in more populated areas are also stronger in stewardship views. Overall, though there is some noteworthy evidence that identifying as a Republican has an impact eclipsing many of the impacts of religion, I hesitate to declare the relationship “spurious.” Numerous, modestly positive effects of religious group identity are present (though many are not significant at $p < .05$), and fundamentalist other Protestants, weekly or more church attenders, and those with high levels of confidence in organized religion are negatively associated with stewardship among Republicans.

Religion, Party, Race, and Stewardship: Illustrated

The seven models featured above tell a rather complicated story. Rather than attempting to summarize that story based on the coefficients, I have graphed the model-predicted stewardship by religious group identity, comparing for race and political ideology, across birth cohorts below. Each will be examined in turn. First, I examine the relatively more racially diverse groups, in which whites and blacks differ in their trajectories regarding stewardship, as a function of religious group identity and political party affiliation. Then, I examine the groups for which race did not meaningfully interact with religious group identity after separating Democrats from Republicans. Finally, I will summarize the findings from this section before moving on to conservation.

Where race matters when predicting stewardship

Figure 39 illustrates the party and racial divide among the unaffiliated. Across race and political party, younger unaffiliated persons in the U.S. regardless of political party identity or race have grown closer to one another in terms of environmental concern, which belies the

polarization evidenced in Figure 37. Furthermore, this change is due to young Republicans being more likely to express stewardship relative to Democrats. White unaffiliated Democrats still hold slightly higher levels of stewardship than black unaffiliated Democrats, followed by other race Democrats and Republicans.

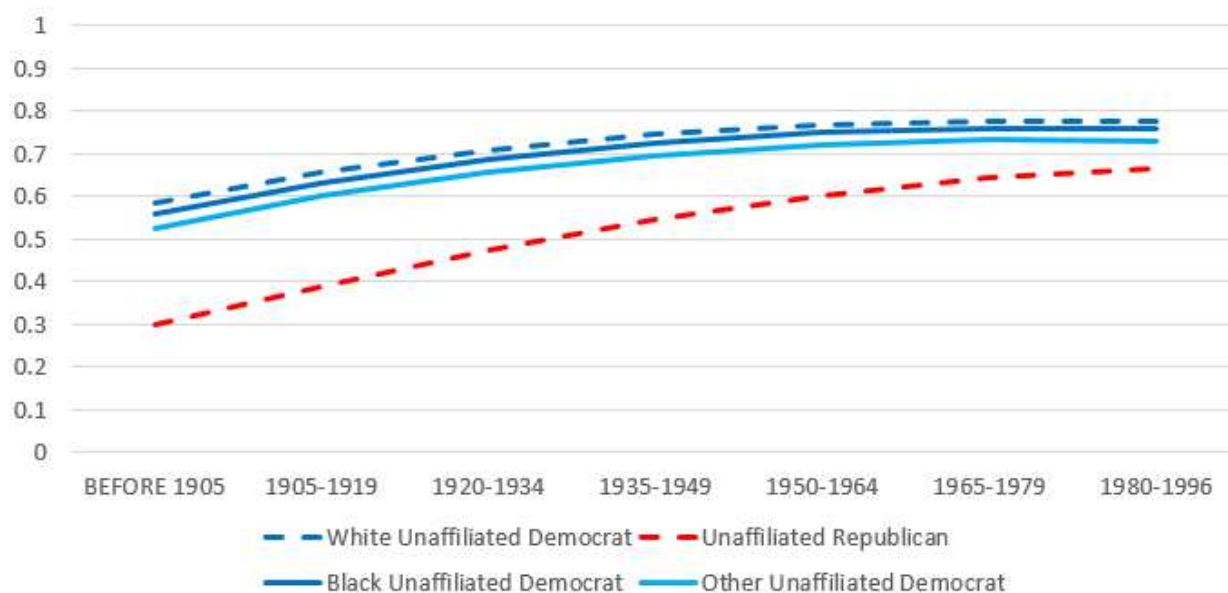


Figure 39: Stewardship by Party and Race, Unaffiliated

Among Baptists (Figure 40), the race divide interacts with the political divide in an interesting manner. While there is evidence of convergence overall, again, younger Baptists hold higher levels of stewardship than older Baptists. However, among Republicans, Baptists scarcely differ from unaffiliated Republicans. Among Democrats, white Baptists born after 1980 hold roughly similar levels of stewardship to unaffiliated Democrats, whereas younger black and other race Democrats more closely approximate Republicans in their levels of stewardship. In short, Baptist identity and race nuance the partisan divide over time, with white Democrats converging in the more recent cohorts.

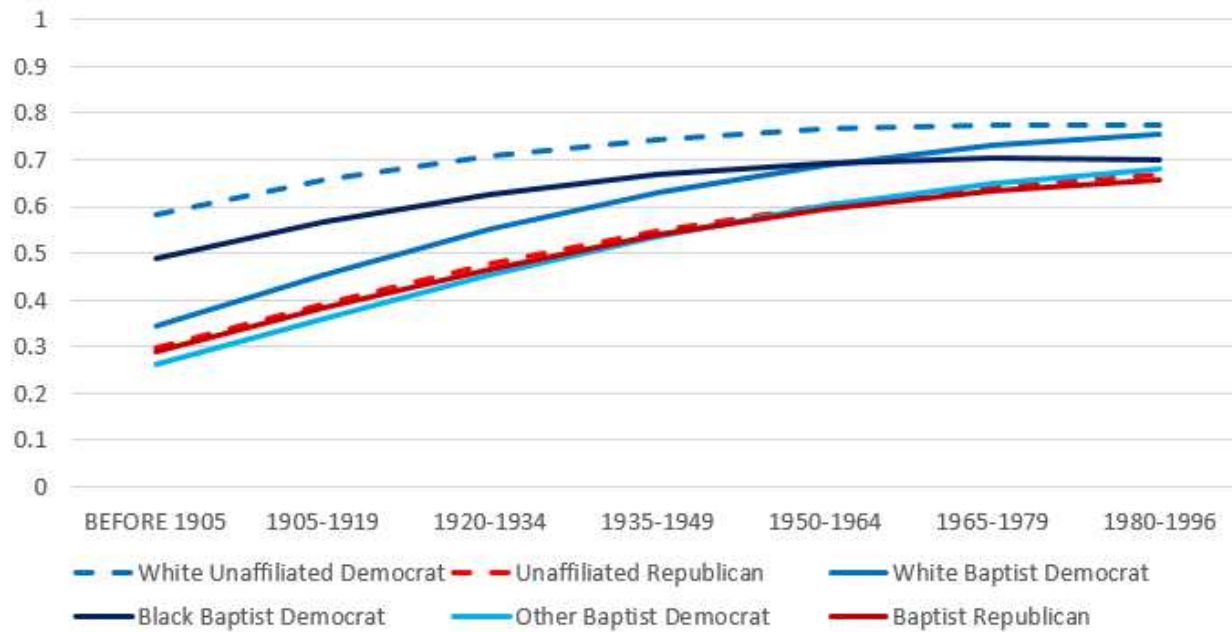


Figure 40: Stewardship by Party and Race, Baptists

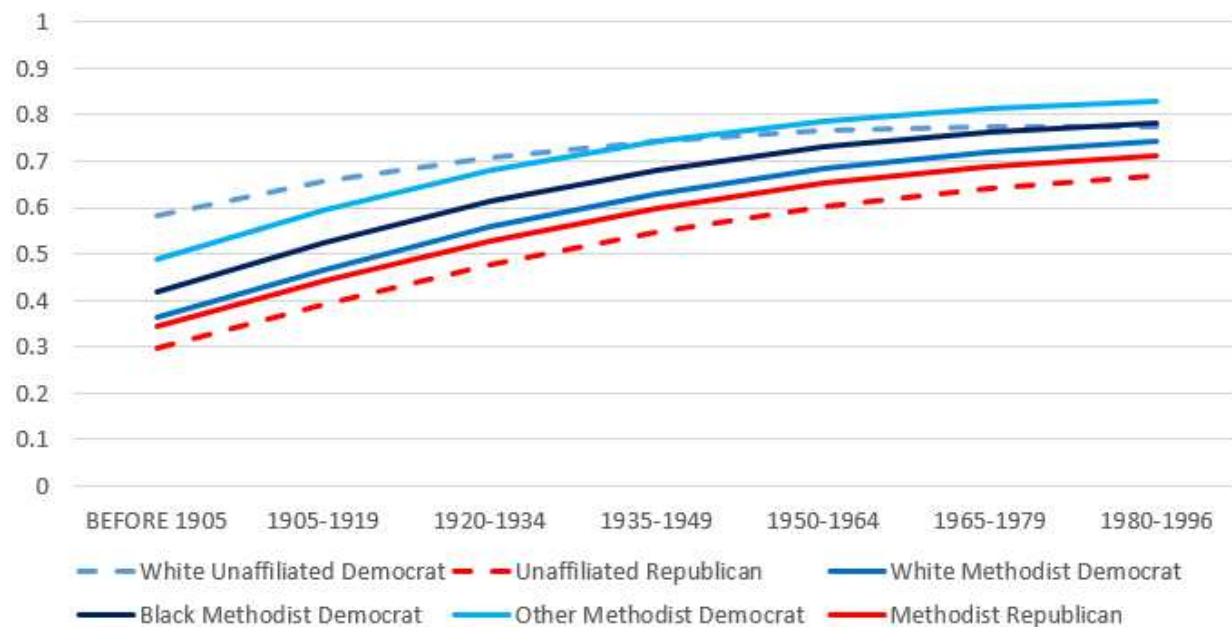


Figure 41: Stewardship by Party and Race, Methodists

Only Methodists have remained roughly in parallel, with highest levels among other race Methodists, followed by black Methodists, and the lowest among white Democrats and Republicans (who also appear to be moving apart slowly). In Chapter 3, Methodists reported the

highest levels of stewardship of any group, particularly in the youngest cohorts. Figure 38 suggests that these relatively higher levels of stewardship are driven by multiple factors: first, Methodists exhibit more modest differences by party than other groups—Methodist Republicans and Methodist Democrats do not differ as notably on the probability of expressing stewardship compared to other groups and appear to have converged slightly in younger cohorts. Second, Methodist Republicans hold higher levels of stewardship across all cohorts than their unaffiliated counterparts, which is statistically significant at $p < .05$. Third, non-white Methodists have exceeded levels of stewardship relative to the unaffiliated in the youngest cohort.

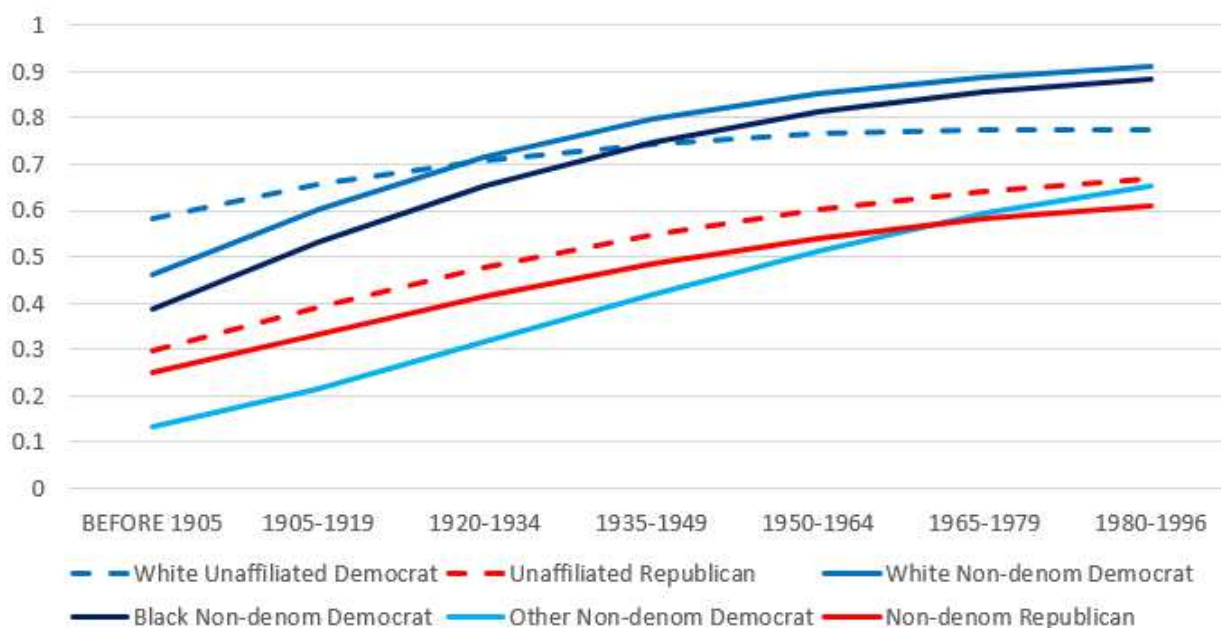


Figure 42: Stewardship by Party and Race, Non-denominational

Among the Non-denominational, white and black Democrats have moved together, but have also moved away from both other race and Republican Non-denominational adherents. The racial divide among Democrats here is not between blacks and whites, but between blacks *and* whites relative to other race persons. Given that “Non-denominational” is a heterogeneous category, likely comprising diverse sets of beliefs and practices, perhaps it is unsurprising that political party difference more strongly predict stewardship than religious group identity.

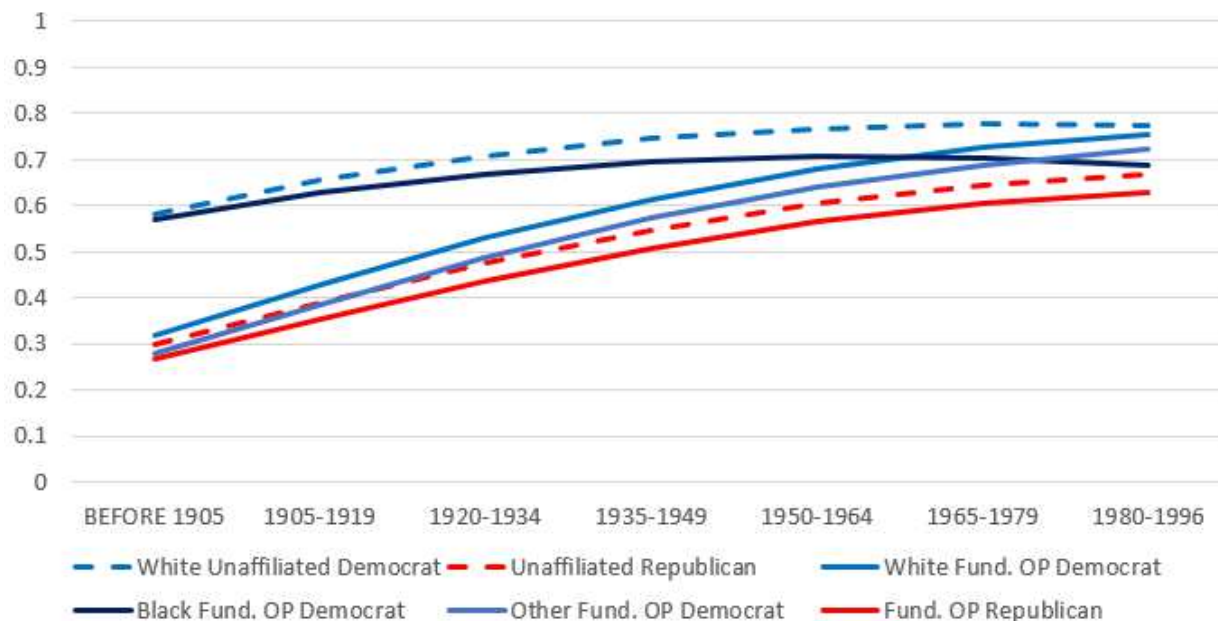


Figure 43: Stewardship by Party and Race, Fundamentalist Other Protestant

Fundamentalist other Protestants make for an interesting case, given that in Chapter 3, they held the lowest levels of stewardship in more recent cohorts. Relatively lower levels of stewardship are found among Republican fundamentalist other Protestants, whereas white and other race fundamentalist other Protestants have reached similar levels of stewardship relative to the unaffiliated. Black fundamentalist other Protestants' trajectory on stewardship has been negative among younger cohorts. Thus, lower levels of stewardship among fundamentalist other Protestants are likely driven by a combination of lower levels among black Democrats as well as by a disproportionate share of fundamentalist other Protestants identifying as Republicans. I speculate that theological differences by race may have been significant in the past, but do not seem to be as salient in the present. Additionally, there does not seem to be any overt reason why fundamentalist other Protestants could not cultivate a stewardship ethic, given that the Democrats among them express stewardship roughly as often as unaffiliated Democrats.

Overall, political party affiliation plays a strong role in conditioning attitudes toward stewardship—this, again, is not particularly surprising. What *is* surprising is that bringing race

and religious group identity into the equation mediates the apparent polarization. Some religious groups, such as Methodists, hold relatively higher levels of stewardship across the party line. Those groups with some history of engaging with environmental issues (Methodists and Baptists, here) seem to have converged across birth cohort and race. Convergence is also evident among fundamentalist other Protestants, though given their lower levels of stewardship overall, I have offered reasons why this is likely the case. The non-denominational exhibit growing divides, perhaps predominantly because non-denominational churches are theologically and culturally diverse. It may be that those who do not identify with a specific religious group choose to attend, or leave, a congregation based at least in part on the political and cultural orientation of that congregation. I turn now to some of the predominantly white religious groups which exhibit differences in stewardship by party and race.

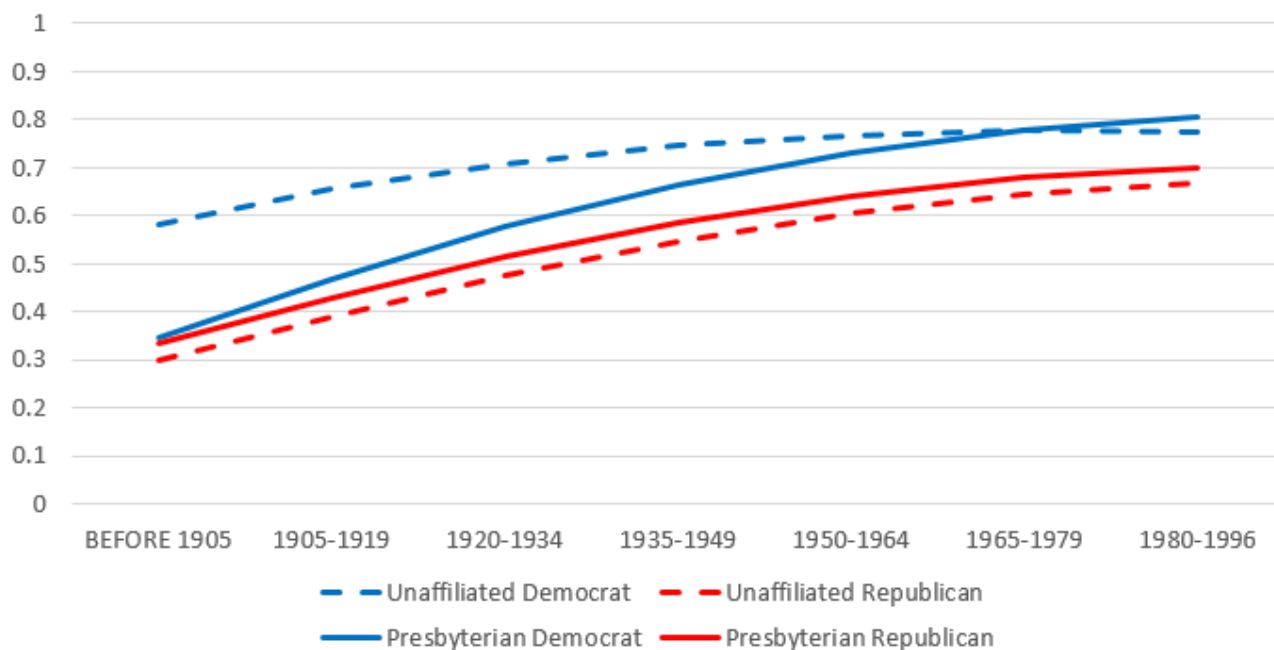


Figure 44: Stewardship by Party, Presbyterians

The white Protestant divides

Whereas convergence appears to have taken place among many of the more racially diverse religious group identities, roughly the opposite is largely the case among the largely white Protestant groups. Presbyterian Democrats in the most recent cohort express higher levels of stewardship than their unaffiliated counterparts. Presbyterian Republicans express higher levels of stewardship relative to unaffiliated Republicans. Though the unaffiliated party divide has decreased across birth cohorts, the partisan divide among Presbyterians has grown. Lutherans follow an almost identical pattern, as shown below, with the exception that Lutheran and unaffiliated Republicans differ only slightly, with Republicans holding lower levels of stewardship. Presbyterians, Lutherans, and other Protestants appear to be following the trajectory of their respective political parties with successive birth cohorts, moving ever farther apart.

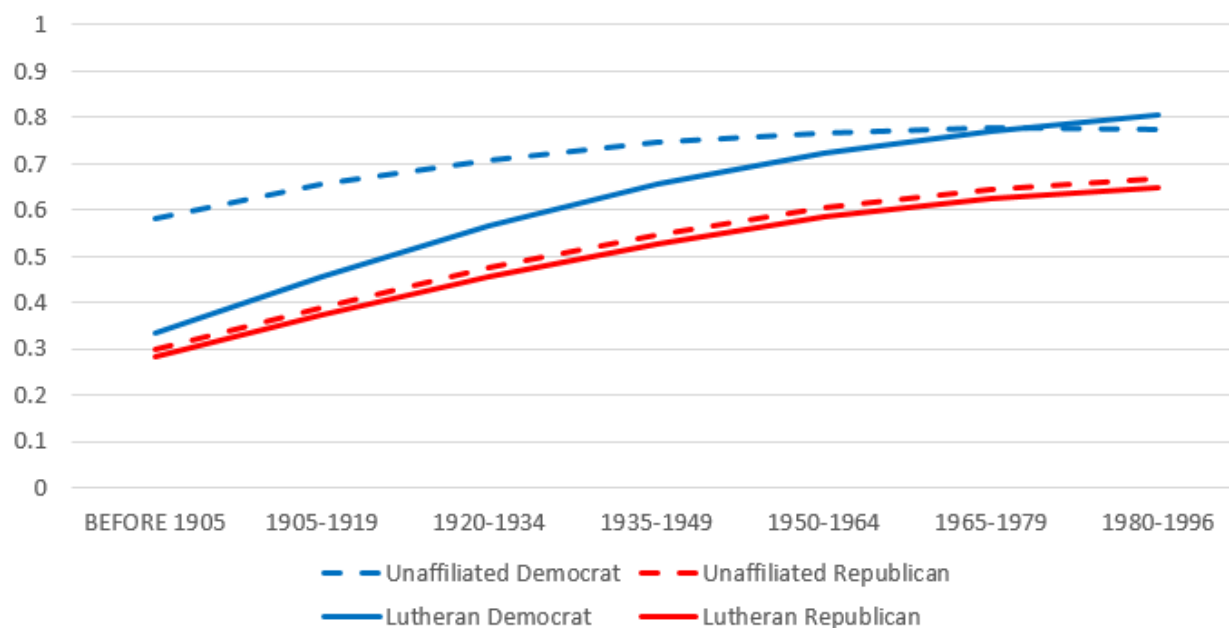


Figure 45: Stewardship by Party, Lutherans

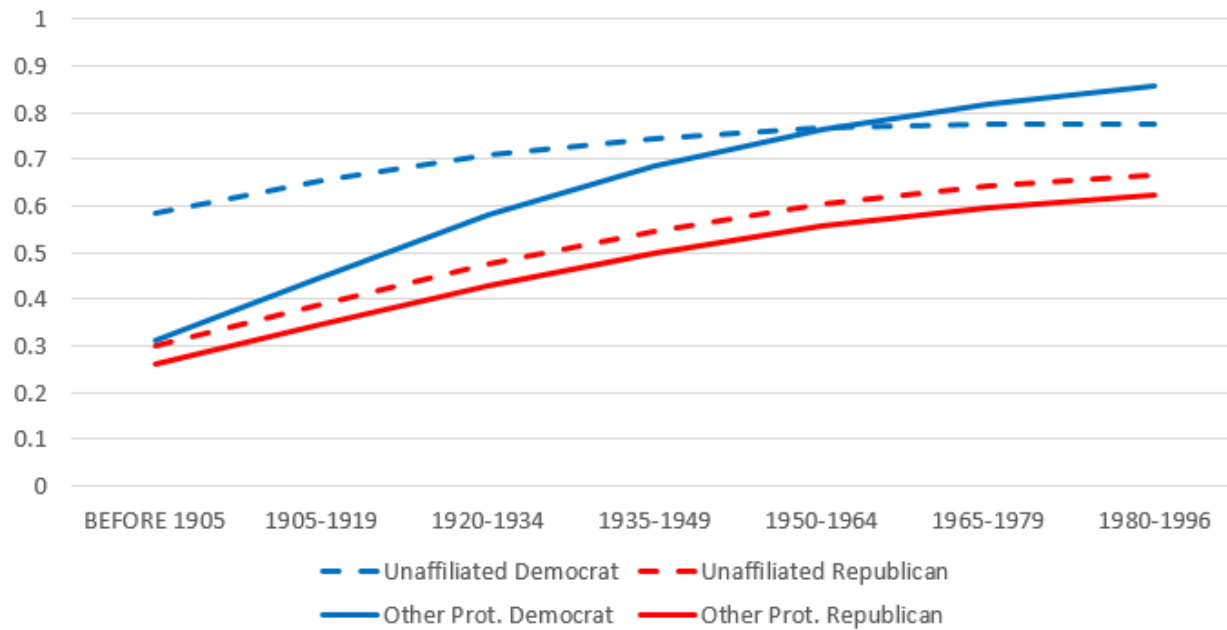


Figure 46: Stewardship by Party, Other Protestant

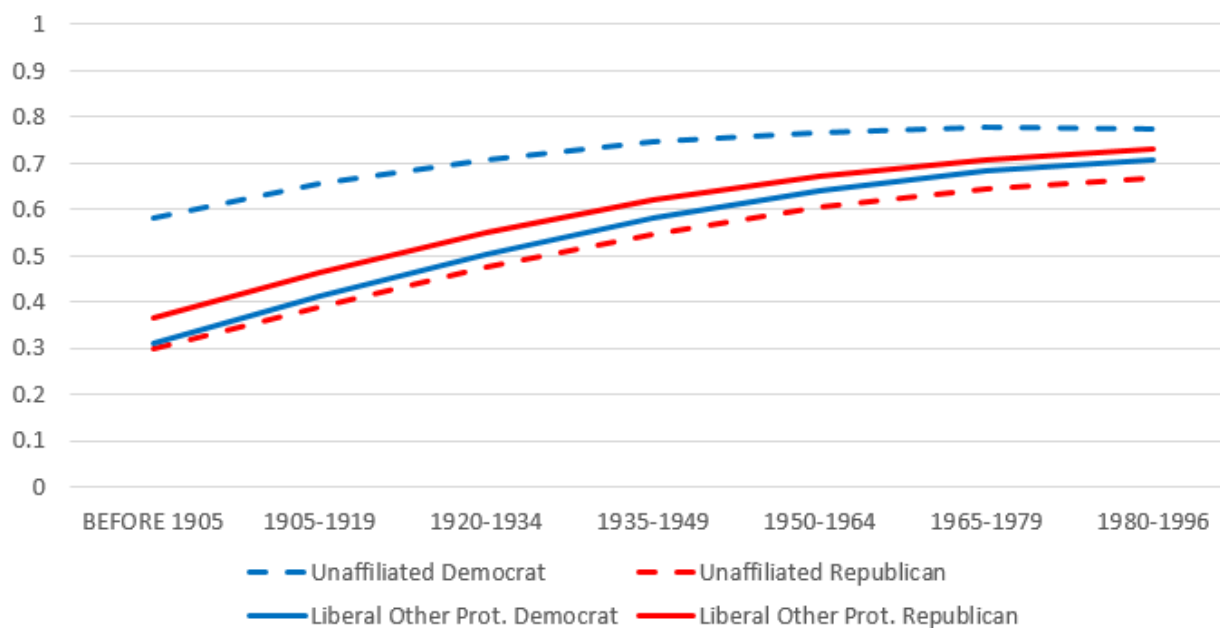


Figure 47: Stewardship by Party, Liberal Other Protestant

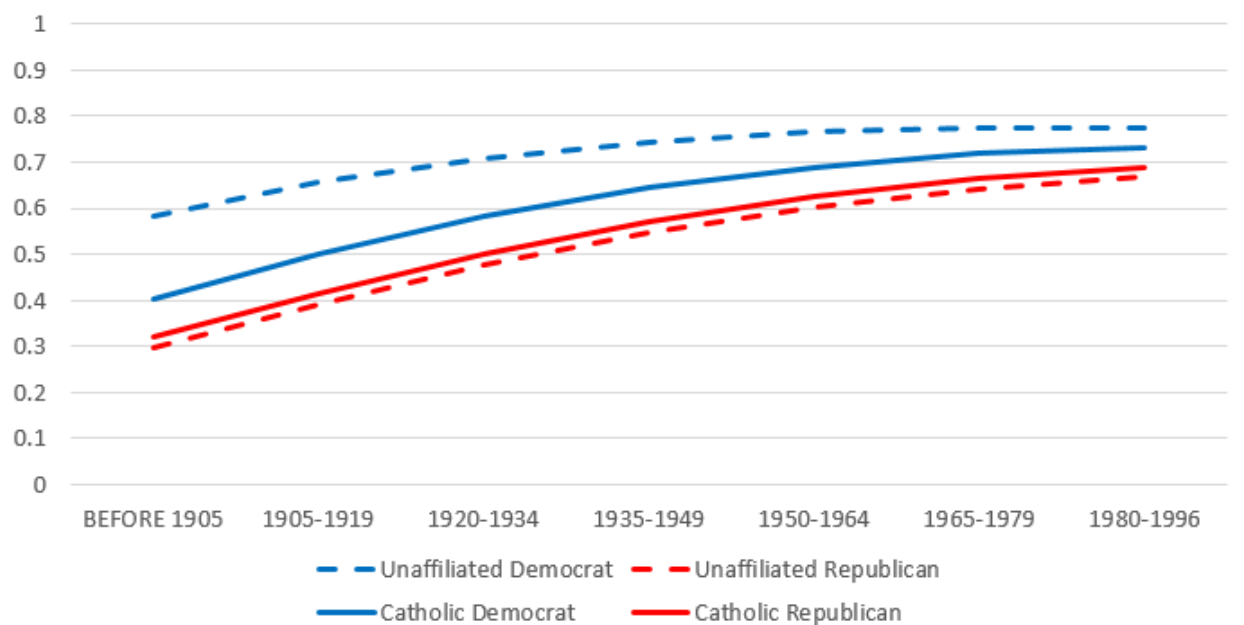


Figure 48: Stewardship by Party, Catholic

In general, political polarization on stewardship is being driven specifically by growing partisan divisions among white Protestants of the same religious identity. Political party has become a more salient indicator of stewardship than traditional affiliation. If “cultural orthodoxy” and “cultural progressivism” have been increasingly cultivated by Republicans and Democrats, respectively, then this finding provides support for Hunter’s (1991) “culture wars” thesis. However, Catholics, the unaffiliated of all races and party affiliations as well as theologically liberal other Protestants are converging on higher levels of environmental concern over time, which suggests that polarization along party lines is not the norm among more than a third of Americans on such issues. This suggests a more nuanced explanation emerging from the cultural sociology of religion, which acknowledges that cultural fault lines increasingly cut across religious group identities, but that such divides are not necessarily reducible to a bifurcation (see Edgell 2012:251-52). This suggests the continued salience of religious group identity in the U.S., particularly in relation to the groups which have historical expressions of environmental commitment—among members of these groups, polarization by party appears to

be less pronounced. Trajectories for blacks and other race respondents differ for Democrats but not for Republicans. Overall, however, they tell a rather inconsistent story—this may be due to the measurement limitations of having only three race categories. It may also be that historically-contextualized religious group identities are often specified in terms which make more sense among whites than among other racial/ethnic identities.

Table 28: Descriptive Statistics by Political Party, Conservation (N=13,942)

Variable	Democrat (N=7,940)		Republican (N=6,002)		Min	Max
	Mean	SD	Mean	SD		
Conservation	.37		.26		0	1
Baptist	.21		.17		0	1
Methodist	.07		.10		0	1
Presbyterian	.03		.05		0	1
Lutheran	.04		.07		0	1
Episcopalian	.02		.03		0	1
Nondenominational	.05		.08		0	1
Fund. Other Prot.	.07		.11		0	1
Other Protestant	.01		.02		0	1
Liberal Other Prot.	.01		.02		0	1
Catholic	.26		.24		0	1
Jewish	.03		.01		0	1
Other Religion	.05		.04		0	1
None (ref)	.15		.06		0	1
Birth Year Cohort (0-6)	3.80	1.269	3.76	1.258	0	6
Cohort ²	16.05	9.432	15.71	9.141	0	36
Attend Weekly or More	.24		.32		0	1
High Conf. Science	.43		.44		0	1
High Conf. Religion	.22		.28		0	1
Education	12.75		13.72	2.892	0	20
White (ref)	.74		.93		0	1
Black	.24		.03		0	1
Other	.07		.04		0	1
Female	.59		.51		0	1
Below Av. Inc.	.33		.24		0	1
Average Inc. (ref)	.47		.47		0	1
Above Av. Inc.	.20		.29		0	1
Northeast (ref)	.20		.17		0	1
South	.36		.37		0	8,175
Midwest	.24		.25		0	1
Other Region	.20		.21		0	1
LnSize/Place in 1000s	3.786	2.1301	3.230	1.8060	0	1
Literal Word	.32		.33		0	1
Inspired Word	.46		.53		0	1

Conservation Results

Descriptive Results

Contrasting Table 28 to Table 25, some notable shifts have taken place (recall that conservation is measured beginning in 1984, whereas stewardship is measured beginning in 1973). Eleven percentage points separate Democrats from Republicans on conservation. Baptists, Catholics, Jews, other religious groups, and the unaffiliated are more popular religious group affiliations among Democrats, whereas every other group (all Protestant identities except Baptists) is more popular among Republicans. Fully 93 out of 100 Republicans are white, compared to 74 out of 100 Democrats, and Democrats are nearly three times more likely to identify as religiously unaffiliated than Republicans. This is interesting, suggesting the re-organization of the American cultural landscape, to a degree, along intersecting racial, religious identity, and party lines. Most of the trends, however, remain roughly like those presented in the previous descriptive statistics table, and so I shall move on to the multivariate analysis.

Multivariate Results, Conservation, Democrats

Table 29 indicates levels of conservation among Democrats. The relative complexity of the models required to accurately assess both stewardship and conservation among Democrats seem to indirectly reinforce the aforementioned “fracture thesis” (Rodgers 2011) and may validate criticisms of the fragmentation of the American left (see Rorty 1998). Conversely, these models also indicate the relative potency of religion and race over and above party identity in predicting environmental concern. Turning to Table 29, similarities to the previous models for Democrats emerge. Religious group identity is negatively associated with conservation across Models 1 and 2, but when adding in controls, many of the indicators lose statistical significance.

Table 29: Conservation Regressed on Religion, Controls, Democrats (N=7,940)

	Model 1		Model 2		Model 3		Model 4	
	β	(se)	β	(se)	β	(se)	β	(se)
Baptist	-.106	(.075)	-.045	(.077)	-.199	(.092)*	-1.130	(.294)***
Methodist	-.566	(.106)***	-.487	(.108)***	-.422	(.116)***	-1.096	(.377)**
Presbyterian	-.218	(.151)	-.124	(.153)	.015	(.157)	-.055	(.158)
Lutheran	-.476	(.131)***	-.406	(.132)**	-.154	(.138)	-1.054	(.411)*
Episcopalian	-.152	(.174)	-.071	(.175)	-.017	(.179)	-.068	(.179)
Non-denom	-.278	(.117)*	-.261	(.117)*	-.171	(.122)	.476	(.462)
Fund. Prot. Other	-.478	(.105)***	-.424	(.106)***	-.436	(.118)***	-2.130	(.437)***
Prot, other	-.819	(.234)***	-.738	(.235)**	-.619	(.240)*	-.669	(.240)**
Lib. Prot other	-.128	(.206)	-.048	(.207)	.067	(.211)	.008	(.211)
Catholic	-.484	(.074)***	-.431	(.075)***	-.314	(.083)***	-.356	(.084)***
Jewish	-.539	(.158)**	-.477	(.159)**	-.481	(.162)**	-.530	(.163)**
Other Religion	-.237	(.114)*	-.245	(.114)*	-.283	(.117)*	-.287	(.119)*
Cohort(0-6)			.455	(.092)***	.422	(.096)***	.343	(.101)**
Cohort ²			-.048	(.012)***	-.048	(.013)***	-.045	(.013)***
Attends Wkly +					-.222	(.062)***	-.234	(.062)***
High Conf Sci					.012	(.050)	.007	(.050)
High Conf Rel					.092	(.061)	.085	(.061)
Female					-.070	(.049)	-.064	(.049)
Black					.503	(.067)***	.422	(.107)***
Other Race					.171	(.094)+	.176	(.095)+
Education					-.009	(.009)	-.011	(.009)
Inc. Below Avg.					-.010	(.055)	-.012	(.055)
Inc. Above Avg.					.075	(.067)	.068	(.067)
Midwest					-.328	(.075)***	-.325	(.075)***
South					-.063	(.070)	-.040	(.071)
Other Region					-.166	(.077)*	-.157	(.077)*
Ln (Size+1)					.045	(.012)***	.045	(.012)***
Literal Word					-.071	(.080)	-.058	(.080)
Inspired Word					-.174	(.067)*	-.177	(.068)**
BC*Baptist							.211	(.073)**
BC*Methodist							.185	(.100)+
BC*Lutheran							.233	(.104)*
BC*Non-denom							.089	(.108)
BC*Fund. OP							.419	(.104)***
Black*Baptist							1.040	(.349)**
Black*Methodist							1.109	(.665)+
Black*Nondnm							-2.801	(1.220)*
Black*Fund. OP							1.932	(.683)**
BC*Black*Bptst							-.218	(.086)*
BC*Blk*Mthdst							-.327	(.177)+
BC*Blk*Nndnm							.543	(.260)*
BC*Blk*Fnd OP							-.460	(.165)**
Constant	-.254	(.057)***	-1.260	(.179)***	-1.177	(.201)***	-.871	(.222)***
-2LL	10,339.417		10,296.201		10,143.146		10,097.613	
Nagelkerke R²	.014		.022		.047		.055	

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

Among the strongest predictors of conservation is race—specifically, blacks are much more likely to express conservation than whites. Among other race Democrats, however, the

effect is not significant at $p < .05$. Weekly or more religious service attendance, inspired word Bible belief, and living in the Midwest, are negatively associated with conservation, while living in a more populated area is positively associated. Note that Model 4 is a result of the same experimentation that resulted in the models for stewardship and is the result of numerous model fit tests. Conditional effects exert a relatively stronger influence than in previous models. Note that only conditional effects for certain religious groups and for blacks have been included. The statistically significant conservation divide appears to be between blacks and whites. This may be due, once again, to the rather rudimentary trichotomous measure of race available in the GSS. I examine these effects in detail, and compare them to the effects for Republicans, in the figures displayed below.

Multivariate Results, Conservation, Republicans

Table 30 displays results for Republicans. It is noteworthy from Model 1 on that the differences for Republicans are not statistically significant across any of the models. In fact, Model 1 includes the cohort effect (quadratic cohort was omitted due to lack of significant model fit improvement for Republicans) because religious group identities did not significantly improve model fit over an empty model ($\Delta-2LL=17.571$, $\Delta df=12$, $p=.129$ for simple regression versus $\Delta-2LL=50.923$, $\Delta df=13$, $p=.000$ for Model 1 below). Taken together, these results suggest rather compellingly that the religious group identity-conservation relationship may be spurious among Republicans. This provides some support for the alternative hypothesis (H_A), but that support is conditional. The addition of the conditional birth cohort*religious group effects did result in statistically significant model fit improvement over Model 2 ($\Delta-2LL=26.092$, $\Delta df=12$, $p=.010$) indicating that while the main effects of religious group identity were not significant among Republicans, the conditional effect of religious group identity on birth cohort was.

Table 30: Conservation Regressed on Religion, Controls, Republicans (N=6,002)

	Model 1		Model 2		Model 3	
	β	(se)	β	(se)	β	(se)
Baptist	.124	(.118)	.160	(.129)	-.694	(.436)
Methodist	-.036	(.136)	.096	(.142)	-.495	(.458)
Presbyterian	-.019	(.164)	.159	(.169)	.699	(.488)
Lutheran	-.166	(.149)	.035	(.156)	-.962	(.522)+
Episcopalian	-.003	(.205)	.134	(.209)	.267	(.592)
Non-denominational	-.186	(.138)	-.055	(.143)	-.403	(.527)
Fund. Protestant Other	-.103	(.132)	.033	(.143)	-.307	(.469)
Protestant other	-.011	(.256)	.156	(.261)	-.650	(.894)
Liberal Protestant other	-.024	(.264)	.148	(.268)	.619	(.712)
Catholic	.032	(.112)	.147	(.118)	-.676	(.421)
Jewish	.062	(.285)	.206	(.288)	-.603	(1.069)
Other Religion	.271	(.157)+	.302	(.160)+	-.699	(.659)
Cohort(0-6)	.141	(.025)***	.126	(.026)***	.008	(.080)
Attend Weekly+			-.206	(.072)**	-.195	(.073)**
Conf. Science			.026	(.063)	.030	(.063)
Conf. Religion			-.080	(.070)	-.092	(.070)
Education (Ctr=12)			-.041	(.012)**	-.042	(.012)**
Black			.691	(.154)***	.686	(.154)***
Other			.239	(.146)	.222	(.147)
Female			-.223	(.061)***	-.226	(.061)
Inc. Below Average			.153	(.074)*	.152	(.074)*
Inc. Above Average			-.004	(.075)	.004	(.075)
Midwest			-.277	(.097)**	-.296	(.097)**
South			-.021	(.091)	-.023	(.092)
Other Region			-.041	(.100)	-.052	(.100)
Ln(Size+1)			-.001	(.017)	.000	(.017)
Literal Word			.046	(.109)	.059	(.110)
Inspired Word			.072	(.095)	.078	(.096)
BC*Baptist					.203	(.100)*
BC*Methodist					.141	(.112)
BC*Presbyterian					-.213	(.128)+
BC*Lutheran					.252	(.127)*
BC*Episcopalian					-.086	(.162)
BC*Non-denominational					.073	(.120)
BC*Fund. Prot Other					.072	(.109)
BC*Protestant other					.195	(.221)
BC*Liberal Prot other					-.206	(.210)
BC*Catholic					.195	(.096)*
BC*Jewish					.199	(.279)
BC*Other Religion					.226	(.143)
Constant	-1.573	(.141)***	-1.409	(.177)***	-.900	(.369)*
-2LL		6,856.095		6,765.491		6,739.399
Nagelkerke R²		.012		.034		.040

Note: + p < .10 * p < .05 ** p < .01 *** p < .001

Statistically significant positive differences in change across birth cohort appear among Baptists, Lutherans, and Catholics, suggesting that these groups may be able to reach out to

Republicans on issues related to conservation. Weekly or more religious service attendance is negatively associated with conservation as were education and living in the Midwest. Black Republicans hold higher levels of conservation than white Republicans overall. As with the models for stewardship, there are difficulties that inhere in interpretation directly from the tables. Therefore, I have graphed significant effects and presented them in the figures below.

Religion, Party, Race, and Conservation: Illustrated

Some caveats: first, given that many of the effects for Republicans were nonsignificant, I present some slopes as parallel to the x-axis in the graphs. Second, where and when positive change took root, it was accounted for using the main effect and the conditional effect, regardless of whether the main effect was significant. Additionally, white unaffiliated Democrats and Republicans are used as the reference group in each figure.

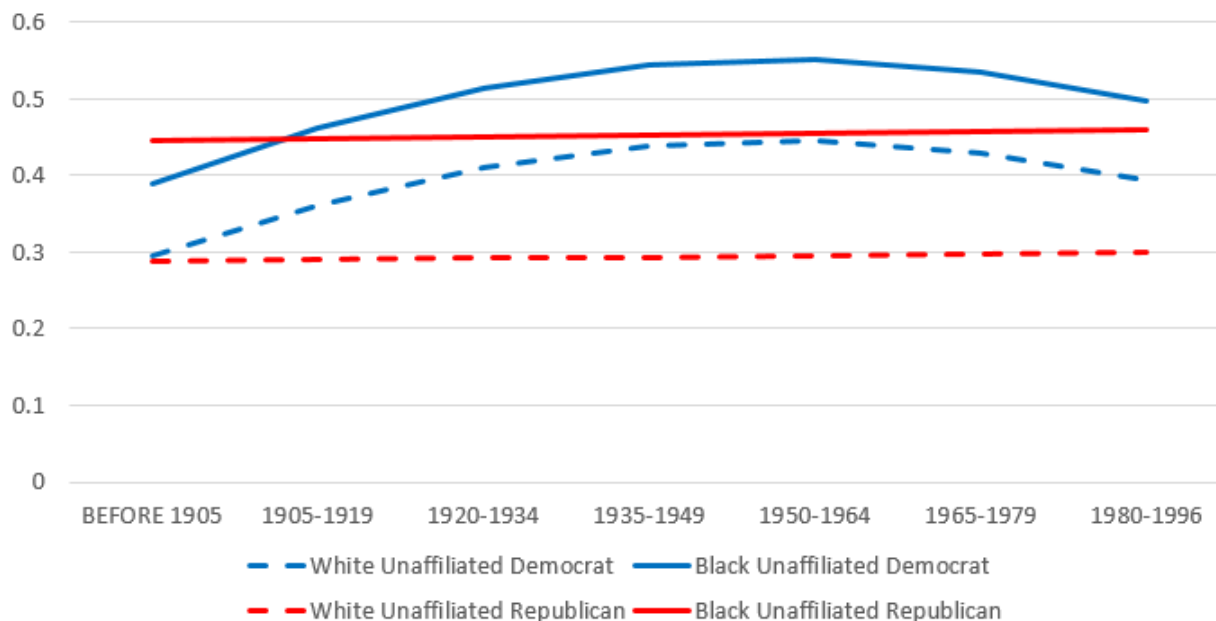


Figure 49: Conservation by Party and Race, Unaffiliated

Where race matters when predicting conservation

Turning to Figure 49: the black-white divide is such that black Republicans hold higher levels of average conservation than white Democrats. Black Democrats hold the highest levels of

conservation of all. Though model-predicted conservation declines among Democrats, this may be in part a statistical artifact—fitting a quadratic effect to a model implies that the curve must decline at some point. However, it does seem that Democrats have become less likely to express conservation in the most recent cohorts.

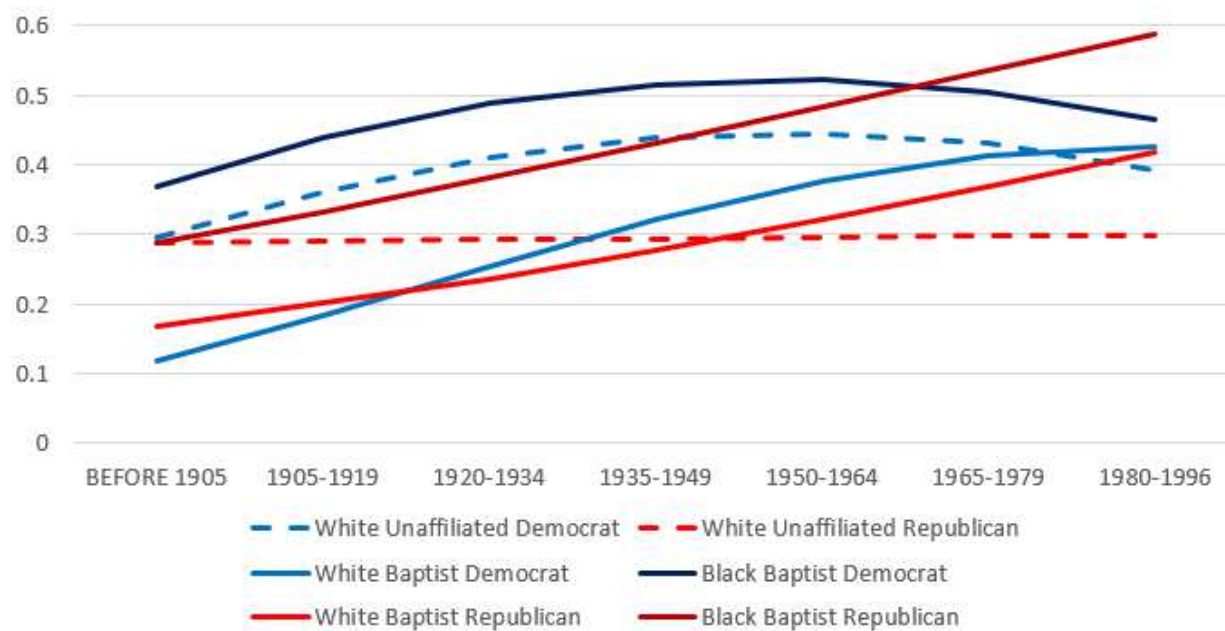


Figure 50: Conservation by Party and Race, Baptist

Among Baptists, the youngest cohort white Baptists have converged on conservation across party lines, and with unaffiliated Democrats. Among Black Baptists, convergence occurred between the 1950-1964 and the 1965-1979 cohorts, with black Baptist Republicans holding significantly higher levels of conservation among the youngest cohorts relative to any other Baptist group as well as the unaffiliated. Though an explanation for this would require further analysis, some speculation seems to be in order. In Chapter 7, findings indicated that conservation took root disproportionately among more affluent religious persons. Above in this chapter, it was indicated that Republicans are more affluent than Democrats. It may be, then, that black Baptist Republicans are more affluent on average than their black Democrat counterparts, and that this in part explains the gap in conservation attitudes.

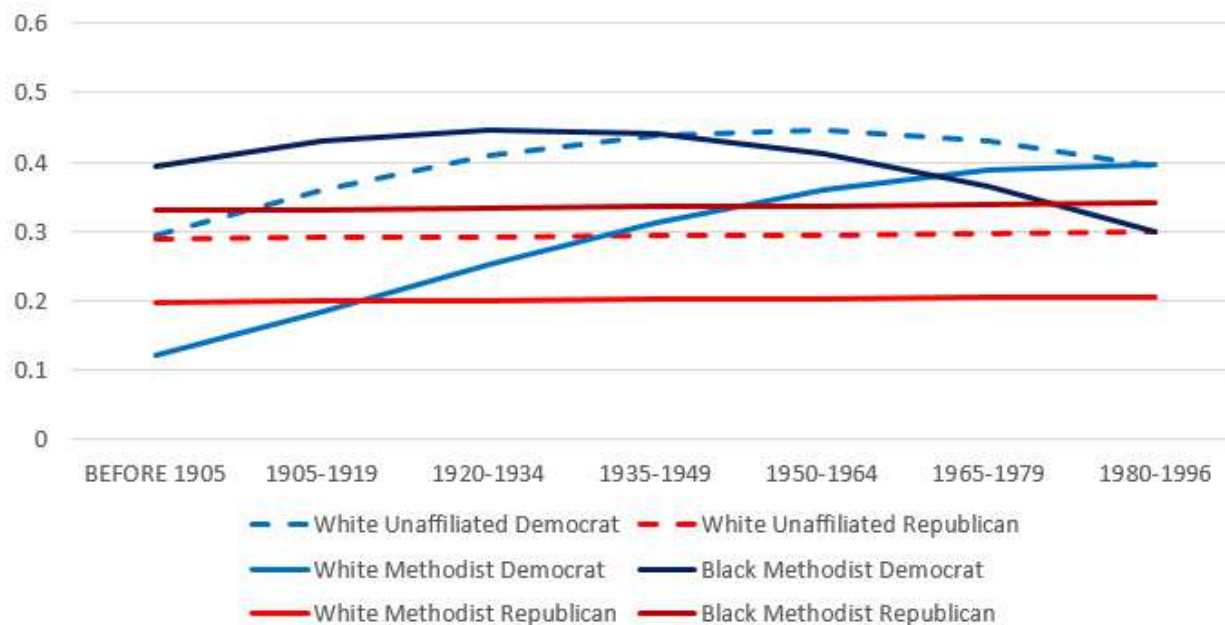


Figure 51: Conservation by Party and Race, Methodist

The pattern among Methodists differs notably. Black Methodist Democrats are less likely to express conservation over time, holding similar views as white unaffiliated Republicans in the youngest cohort. Relatively higher levels of conservation are found among white Methodist Democrats. Turning to the non-denominational, the pattern is still different, with Black non-denominational Democrats holding the highest levels of conservation by far. White non-denominational Democrats hold somewhat lower levels of conservation, but levels much higher than any of the Republicans or unaffiliated. Given that “the non-denominational” do not fit the argument that historical doctrinal involvement elicits increases in environmental concern in some religious groups relative to others, these findings deserve further attention and consideration. Among fundamentalist other Protestants, however, the youngest cohorts, both Republican and Democrat, hold the highest levels of conservation, whereas black fundamentalist other Protestants hold notably lower levels. This may be due to theological differences anchored in historical racial and cultural divides that cut across this broader fundamentalist identity.

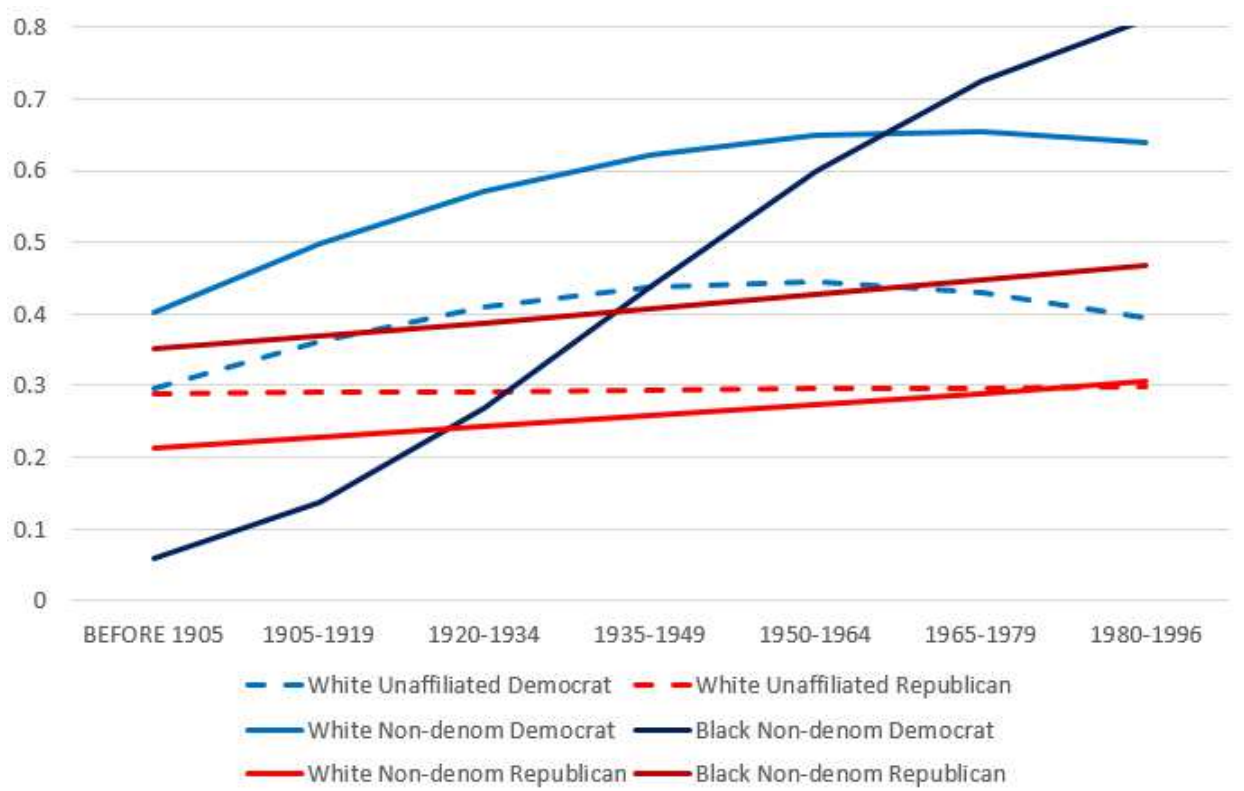


Figure 52: Conservation by Party and Race, Non-denominational

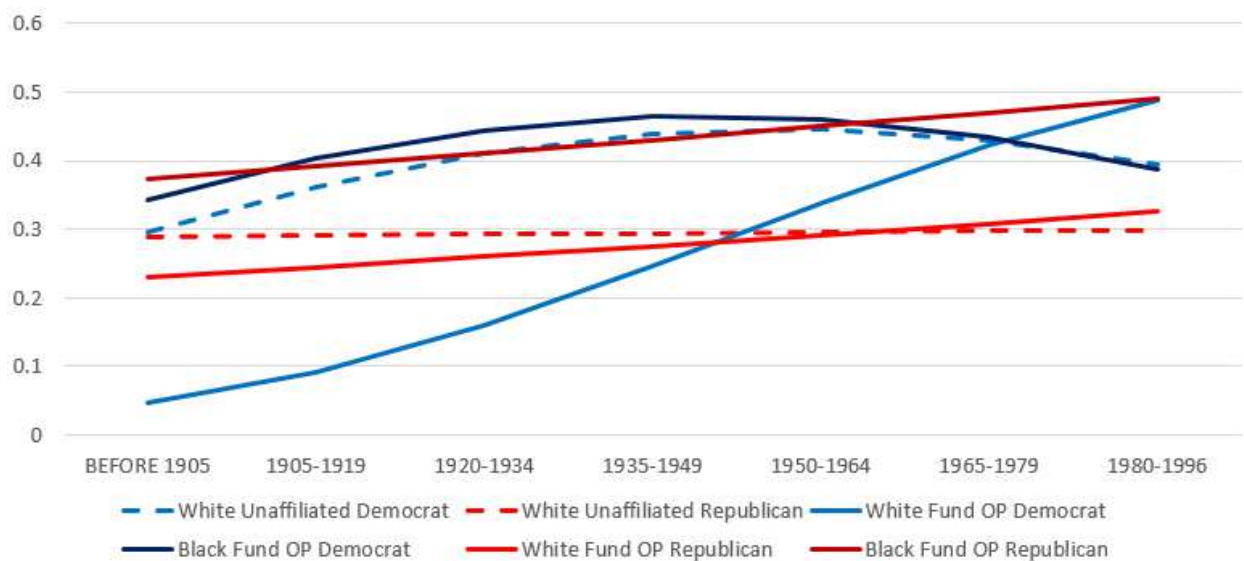


Figure 53: Conservation by Party and Race, Fundamentalist Other Protestant

The white Protestant divides

In addition to the racial and partisan divides noted above, three religious groups stand out: Presbyterians, Lutherans, and Catholics. It is not race but political party that underscores

divides in these groups, but some of the divides are rather surprising. Turning to Figure 54, Presbyterian Democrats closely match unaffiliated Democrats, but Presbyterian Republicans indicate a notable downward trend across cohorts. The oldest Presbyterian cohorts held significantly higher levels of conservation, whereas younger counterparts hold some of the lowest levels of conservation. These trends partially explicable historically—Stoll (2015) noted at length that Presbyterians were instrumental in the conservation efforts in the Progressive movement of the early twentieth century. Presbyterians were among the first religious groups in the U.S. to actively cultivate environmental concern as part of doctrine, but over time, conservation has become a casualty of political polarization among Presbyterians. It may be, given the findings in Chapter 4, that some of the decline in conservation among Presbyterian Republicans is linked to the rate at which younger Presbyterians have disaffiliated—a trend also noted by Stoll (2015).

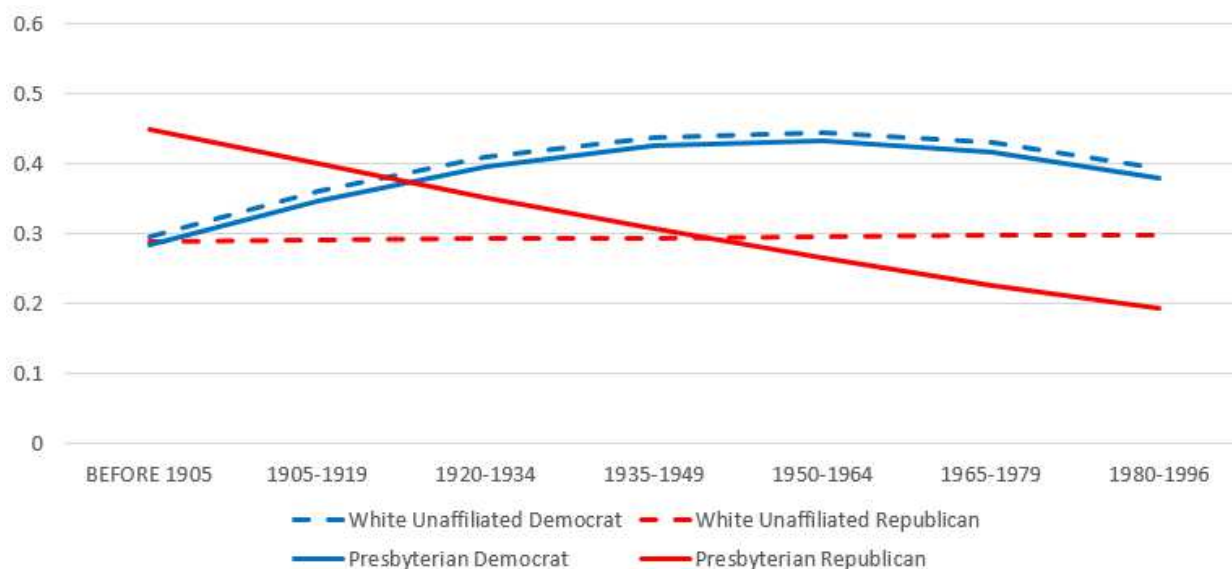


Figure 54: Conservation by Party, Presbyterian

Lutherans are notable in that they challenge the direction of partisan polarization on conservation. Namely, Lutheran Republicans have become *more* conservation-oriented relative

to Democrats, who have become less conservation-oriented in more recent cohorts. Lutheran Republicans hold notably higher levels of conservation relative to even the unaffiliated Democrats. The reasons for this trend are not readily evident. Younger Catholic Republicans, similarly, have surpassed their Democrat counterparts in levels of conservation. Among younger Catholics and Lutherans, the explanation may lie in a small but increasingly noteworthy group of “crunchy cons” who are in many ways morally conservative as well as “green” in their overall outlook (see Dreher 2006). However, if this is the case, this explanation does not match what was found regarding stewardship, above. Again, conservation and stewardship ethics may be in tension with one another in various ways given their differing emphases.

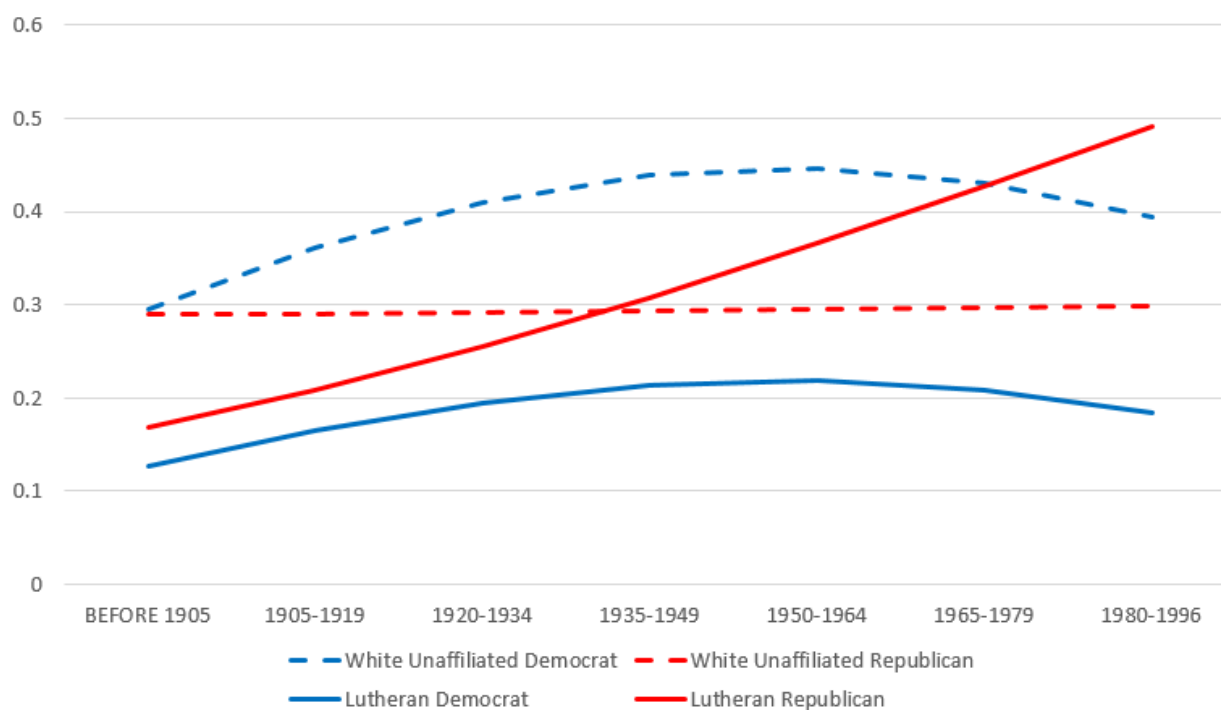


Figure 55: Conservation by Party, Lutheran

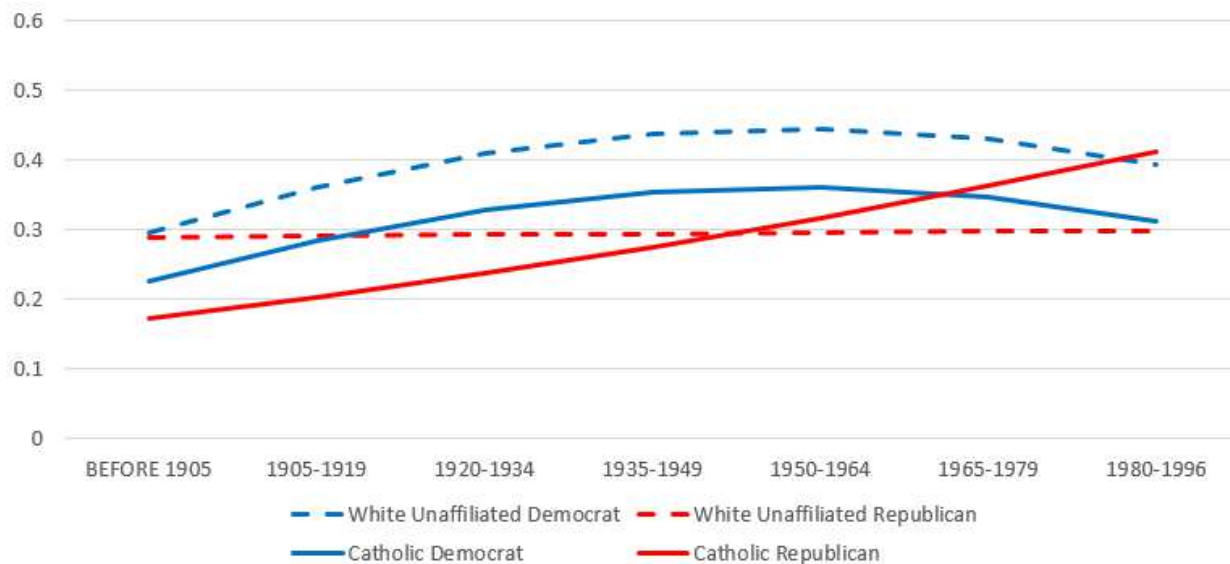


Figure 56: Conservation by Party, Catholic

Among blacks, often race is a more salient predictor of conservation than political party affiliation (with the notable exception of the Non-denominational), but the effects of religious group identity appear to be uneven. Among Black Baptists, Republicans in the youngest generation also hold higher levels of conservation than black Baptist Democrats. The same holds true for Methodists and fundamentalist other Protestants. Regarding conservation, it is not clear whether theological considerations per se are responsible for these trends, but they do seem to cut counter to theses that point toward political and cultural polarization. Note, of course, that only a small proportion of blacks identify as Republican; this may suggest, in turn, that blacks as a group hold a higher conservation ethic that may not be driven by either religion or political party.

Summing Up

I addressed two hypotheses in this section. Regarding H_9 , that Religious group identity is more salient among blacks than among whites in explaining environmental concern, evidence was mixed. Regarding stewardship, the racial divide took different forms across differing

religious group identities, suggesting that religion has differing salience across racial groups. It may be that theological differences drive these differing patterns, but more research is needed to clarify this relationship. Future research may disentangle the role of race and religious identity, with better measures of race, for example. Regarding conservation, I cannot say with certainty, but it appears that identifying as black has a positive effect on levels of conservation. Stoll (2015) has suggested that this relationship might derive from religious traditions of the black church. He explained,

Virtually the only black institution to survive slavery intact...Religion affected the view of the land. In the absence of a natural theology [which drove many white conservation efforts], to believers nature was less the place where one found God than where he acted and spoke through natural events, as he did in the Bible...[conservation] lacked connotations that it developed among many whites as a place to escape overcivilized society and return to pure freedom and primal goodness. Polls have repeatedly shown that African Americans prefer developed parks with clear human presence to unpeopled landscapes (236-37).

Regarding the alternative hypothesis (H_A), I tentatively reject the idea that the religion-environment connection is spurious, and explicable in terms of politics. While the models showed that being a Republican often played a role that was more salient than religious group identity, it became clear over the course of the analysis that the unprecedented divide along party lines on environmental issues is likely more conditional than it appears. First, it is likely younger cohorts across many religious group identities and on both sides of the party line have come to cultivate higher levels of stewardship, and some have cultivated higher levels of conservation. Whether or not these cohorts “age out” of these environmental attitudes and/or pass them on to future generations of course is still an open question. Second, the role of religious group identity seems to play a complex role. Party divides have manifested themselves most clearly on stewardship and between white Protestants, which conditionally supports Hunter’s (1991)

“culture wars” thesis. However, among the unaffiliated, Catholics, and blacks, the story is quite different. Among each of these groups, the evidence points toward a *convergence* in levels of both stewardship and conservation. Political party lines may have become sharper and more pronounced in recent years, but there is evidence that birth cohort, religious group identity, and race cut across these divides in ways that may foster increased cooperation at various levels on environmental issues in the future.

Chapter 9. Conclusion

For you, the glory of an unseen divinity; for me, the glory of the universe revealed at last. For you, the belief in God made flesh to save mankind; for me, the belief in Promethean fire seized to set men free. You have found your final truth; I am still searching. I may be wrong, you may be wrong. We may both be partly right. Does this difference in worldview separate us in all things? It does not. You and I and every other human being strive for the same imperatives of security, freedom of choice, personal dignity, and a cause to believe in that is larger than ourselves. Let us see, then, if we can, and if you are willing, to meet on the near side of metaphysics in order to deal with the real world we share. I put it this way because you have the power to help solve a great problem about which I care deeply. I hope you have the same concern. I suggest we set aside our differences in order to save the Creation. The defense of living Nature is a universal value. It doesn't rise from, nor does it promote, any religious or ideological dogma. Rather, it serves without discrimination the interests of all humanity... You may well ask this point, Why me? Because religion and science are the two most powerful forces in the world today, including especially the United States. If religion and science could be united on the common ground of biological conservation, the problem would soon be solved. If there is any moral precept shared by people of all beliefs, it is that we owe ourselves and future generations a beautiful, rich, and healthful environment (Wilson 2006:4-5).

Put simply, whether one is a secular humanist like Wilson, or a deeply religious, Bible-believing Christian pastor such as the one to whom Wilson addresses his letter, constructive engagement with questions of environmental concern matters. In this final chapter, I address some broader considerations. First, I briefly summarize my overall findings regarding my hypotheses presented in Chapter 1. Then, I explain at some length the limitations of the research undertaken here, especially as they arise from the measures used. Finally, I bring together the findings presented here with related work in history, social theory, and philosophy to consider how the religion-environment connection might be more fruitfully envisioned.

Summary of Findings and Hypotheses

The simplest means by which to summarize my findings is to revisit my hypotheses, systematically, considering the evidence. Examining the entirety of this project, I reject the null hypothesis—*No significant differences in environmental concern exist between religious groups*. Differences in religious group identity clearly contribute to predicting levels of environmental concern as measured here. However, it is worth noting that these differences in religious identity

do not account for a great deal of variance in environmental concern, meaning their effect, though statistically significant, is relatively modest. Additionally, not all groups significantly differed from the unaffiliated across all measures undertaken. The reason for this, as will be explored in detail below by drawing upon historical research, may indeed be that religious groups are effective at communicating a message of creation care. It is also possible that the reason certain religious groups hold higher, or lower, levels of environmental concern is related to some latent ideological, cultural, geographic, or socioeconomic trait that was not accounted for in this analysis. Other effects, such as political ideology, region, race, and gender played significant roles in predicting both stewardship and conservation. Moreover, religious service attendance and confidence in organized religion were both generally negatively associated with environmental concern, raising new questions as to whether, and to what extent, religiosity itself accounts for variation in environmental concern.

However, I reject the rival hypothesis tested (H_A)—that *the connection between religious group affiliation and environmental concern is spurious, explicable in terms of differences in political party affiliation*. Though it appears that although being Republican was consistently negatively associated with environmental concern relative to other political party affiliates, the differences between Democrats and other party affiliates were less consistent. However, as also tested in the previous chapter, it appears that religion plays only a modest role among Republicans. Additionally, race, region, and other variables were as strong and consistent, and in some cases, stronger, predictors of environmental concern as measured here. The findings of this study support the conclusion that religion plays a significant role in environmental concern, which is not accounted for by political party identity alone. Yet it may be the case that the measures of political party affiliation did not capture the full range of ideological factors, which

may ultimately affect environmental concern as well as religiosity. Other unexamined dimensions of what might broadly be called *ideologies* or *value-stances* could and likely do play a role in predicting environmental concern that has not been captured here.

A difficulty related to measuring political party affiliation as it relates to environmental concern has to do with the fact that what it means to be a Republican or a Democrat has shifted over the historical period covered in this study. As it pertains to environmental concern, Mooney (2005) noted this shift indicating that at late as the 1970s, there were numerous Republicans in office who championed environmental regulation. Similar to Gauchat's (2012) work on political polarization around trust in science, Republicans lost trust in science over time relative to Democrats and Independents, particularly in the 1980s. Recent research (Pew Research Center 2014) has found that Republicans and Democrats have also grown apart ideologically to an unprecedented extent over the last two decades, with Republicans becoming increasingly homogeneously conservative on economic and social issues, and Democrats becoming increasingly and consistently more liberal on both.

Figure 57 indicates that this study's data mirrors, to some degree, this divide, using the pooled GSS data employed throughout this study. A seven-point scale of conservatism was deployed, where zero=very liberal and six=very conservative. Both the mean (the solid line) and variance (the square of the standard deviation, captured by the dotted lines on either side) indicate that both parties have become more polarized. This suggests further that what it means, specifically, to identify as Republican or Democrat in the U.S. has changed over the course of this study. In particular, note the dotted lines for each party, which represent one standard deviation from the mean level of conservatism for that party. Assuming an approximately normal distribution of outcomes on the conservatism scale, by 2004, the average Democrat has become

more liberal than over 80% of Republicans, while conversely, the average Republican has become more conservative than more than 80% of Democrats. Additionally, about one in six Democrats scored around one or lower on political conservatism beginning around 2008 (meaning they identify as liberal or extremely liberal) while about the same proportion of Republicans scored more than five (meaning they identified as conservative to extremely conservative) beginning in the mid-1990s. Democrats have become more liberal overall since approximately 1989, while Republicans have become more conservative in roughly the same period. These findings corroborate existing research on political polarization in the U.S. (Pew Research Center 2014) and provide some external validity to the salience of political party identity in the present context.

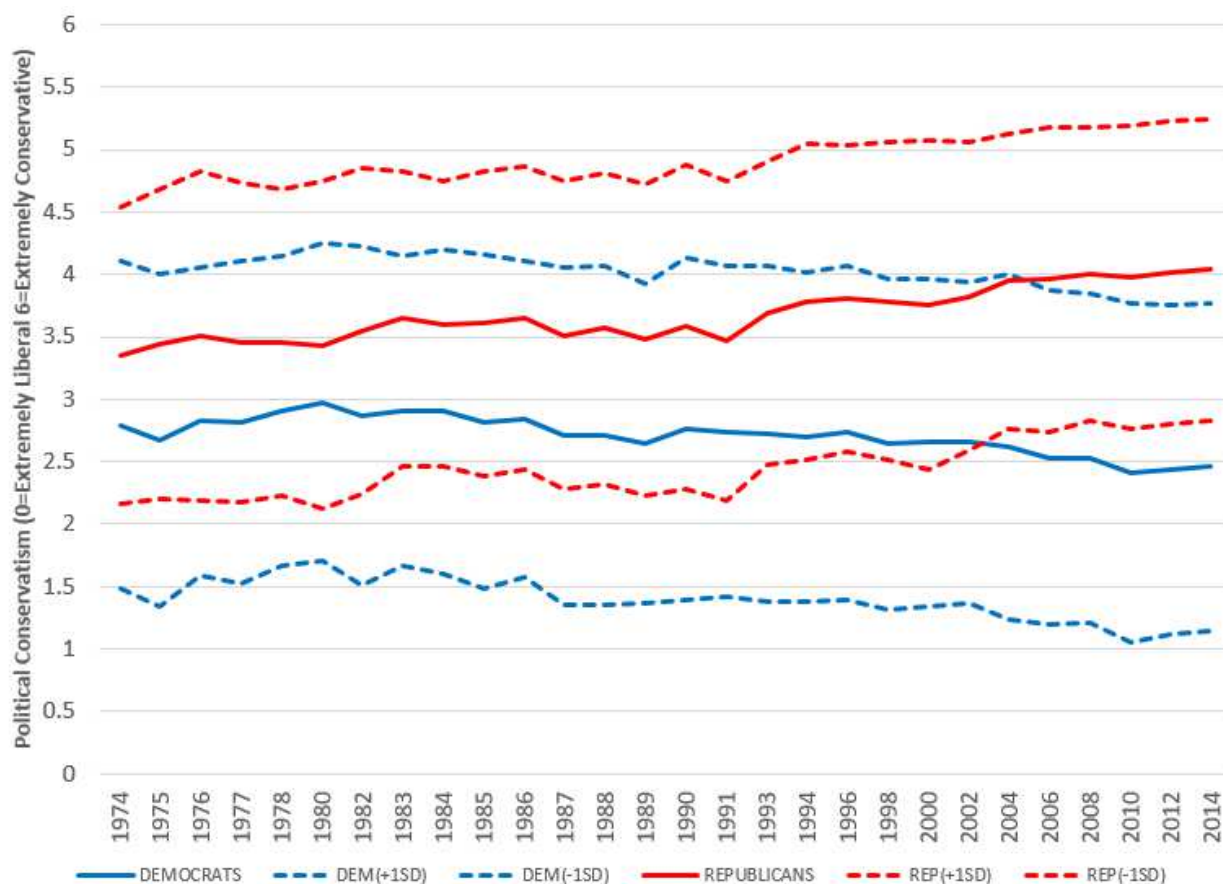


Figure 57: Political Polarization by Party, 1974-2014

Religious group identity, then, appears to play a statistically significant, nonspurious role in predicting levels of stewardship and conservation. The hypothesis that has been revisited many times which arises out of the Lynn White thesis— H_1 , that *Christian affiliation is negatively associated with environmental concern*—found only conditional support. Where and when religious groups significantly differed from the unaffiliated on both measures, Christians expressed lower levels of environmental concern, at least in the simpler models. However, after controlling for the effects of upbringing, disaffiliation, attitudinal and demographic factors, as well as the conditional effects of birth cohort, this relationship did not hold. Environmental concern has increased over time in general, but has increased more quickly among several religious groups, suggesting that while it may have been the case in the past that Christians were less environmentally concerned in general, many groups do not differ from the unaffiliated among the younger birth cohorts. Additionally, religious upbringing across several traditions may have a positive impact on environmental concern, and in a few rather exceptional cases, environmental concern among those in some religious groups was significantly *higher* than among the unaffiliated. Overall, the evidence analyzed in this dissertation suggests that, consistent with existing literature, there does seem to be a negative effect of sectarianism on environmental concern, particularly among the more fundamentalist branches of Christianity. However, American Christians in general are not less environmentally concerned than other religious groups or the unaffiliated.

Assessing H_2 —*Groups with pro-environmental stances will see increasingly positive levels of environmental concern when compared to those that do not*, and H_3 —*Being raised in a religious tradition with a historically “green” stance is associated with higher levels of adult environmental concern*—requires visiting existing historical literature. An initial goal of this

research was to determine whether, and to what extent, religious groups' pronouncements on environmental issues affected believers' levels of environmental concern. Statistical analysis is an effective means of modeling *how* levels of environmental concern vary across religious groups, and over time, but qualitative approaches are called for to explore possible reasons *why* environmental concern might vary across these groups. Fortunately, a good deal of thorough qualitative research on environmental concern as a function of official doctrine has been conducted previously, such that I can offer some possible explanations *why*, without having to extensively visit historical ground that has already been well-covered by other scholars.

Data on Catholic social teaching and environmental concern is readily available on-line. I present a document analysis of the "greening" of Catholic doctrine in the appendix (currently under review for publication). While Catholic identity clearly plays a role in predicting levels of environmental concern, the levels of both stewardship and conservation among Catholics do not match the significance with which the Catholic Church has approached environmental problems in recent decades (Guhin 2006). Yapple (1982) found that although the religious leaders and groups were interested in, and attempted to engage with, environmental issues, "it is not a priority item" (1982:228). Only the United Methodist Church was strongly engaged in actively assigning significant personnel and resources to environmental questions, which is interesting given the rather ubiquitous presence of Methodists in higher levels of both stewardship and conservation throughout this project. Perhaps the most compelling indirect qualitative support for the statistical patterns and relationships in this dissertation comes from Yapple's (1982:69-73) efforts to conduct the study on the religion-environment connection. Of the churches to which he reached out, the American Lutheran Church, the Episcopal Church, the Roman Catholic Church,

the Southern Baptist Convention, the United Methodist Church, and the United Presbyterian Church chose to participate in the study.

The data he received, as noted above, indicated strong interest in environmental issues among religious leaders (despite not being a high-priority item). Given that these churches appeared repeatedly across this study, these hypotheses receive support. If religious leaders reach out on environmental issues, it appears that parishioners may be listening. It also appears that churches, despite some declines in membership among younger cohorts, still have the power to affect ethical change in American society. If church leaders make strides in more “green” directions, environmental concern could be catalyzed in novel patterns, and that may even be able to break through some of the political gridlock on such issues as it stands in the U.S. at present. I am not overly optimistic, but there appears to be cause for hope on this front. Future research should perhaps engage at the level of congregations rather than broad religious group identities—such research may provide more conclusive evidence that religion continues to drive changes in environmental concern in the U.S.

Regarding H_4 , that *Disaffiliation in adulthood is associated with higher levels of environmental concern than remaining religiously affiliated*, there is some qualified support. In Chapter 4 I found that disaffiliation after age 16 was consistently positively associated with both stewardship and conservation. Indirectly, support for this hypothesis should be qualified, however. It is noteworthy that over 60% of those who claimed to be religiously unaffiliated were raised religious; this alone may shed new light on the religion-environment connection given that some previous studies have found negative associations between religiosity and environmental concern. I have not successfully parsed out the effect of being raised religious versus the effect of disaffiliating *over time* as a function of stewardship and conservation—such an effort would

further support, challenge, or contradict H₄, and should be undertaken in the future. Additionally, given that many religious groups hold comparable levels of environmental concern among younger adherents relative to older adherents, it is difficult to state with any certainty exactly *why* disaffiliation would be associated with higher levels of environmental concern. Furthermore, the unaffiliated have increased as a share of the U.S. population over time; this may suggest that what it means to be “unaffiliated” may have changed as well over this period, which may have additional effects on the religion-environment connection, including but not limited to the function of religious upbringing and disaffiliation over time. In short, this hypothesis is supported by the data analyzed here, but further research is needed.

Regarding H₅, that *members of religiously fundamentalist groups hold lower levels of environmental concern*, the evidence does not point particularly clearly in this direction. Analyses reported in Chapter 5 found that liberals held higher levels of stewardship and conservation overall, but that the theological divide is not as strong as the age gap, and that both gaps have closed since approximately 1993. Additionally, moderates held lower levels of conservation than fundamentalists, further challenging this contention. Broadly, findings challenge the contention that environmental concern cannot be neatly mapped onto a liberal-moderate-fundamentalist theological divide. Whereas liberal Episcopalians lead in environmental concern across multiple measures, the mostly liberal Methodists fall below the largely fundamentalist Baptists, and theologically moderate Catholics and largely liberal Presbyterians cultivate middling levels of environmental concern. In some cases, the theologically moderate other Protestants were outperformed by the theologically fundamentalist other Protestants in terms of environmental concern. There are also distinctive racial divides on

these matters, where blacks in general hold higher levels of environmental concern than whites, perhaps especially among the more ostensibly fundamentalist religious groups.

The findings of this study suggest that some dimensions of religious environmental concern are specific to religious traditions that have taken official stances on environmental issues (see Francis 2015; John Paul II 1979, 1990; Land and Moore 1992; Stoll 2015; Yaple 1982), and are not reducible to other, broader cultural or ideological struggles. This may be heartening to those who seek new ways to engage with environmental issues in American civil society. It follows that disentangling the religion-environmental concern connection requires more detailed religion classification schemes than those that have been popularly used in the scientific study of religion in previous decades, and that further study might indicate ways to engage with environmental issues that are more amenable to those on both sides of the political aisle in the U.S.

This assessment of H₅ is also supported indirectly by the relationships between Bible belief and conservation. Biblical literalists did not differ from those who considered the Bible a book of fables in their levels of conservation, but those who considered the Bible the inspired word of God held modestly lower levels of conservation ethic overall. Given that other research has suggested a stronger, negative relationship between Bible belief and environmental concern (Schwadel and Johnson 2017; Szrot 2019), I interpret this to mean that differences in environmental concern may be better accounted for by specific religious group differences rather than broad divisions among theological orientations. This may be due to the belief structure of congregations themselves as reflected in its social structure. Current research suggests that Biblical literalism decreases in congregations with higher levels of education (Stroope 2011) perhaps due to social networks which reinforce more, or less, homogeneous ideological views

(Szrot and Collins 2019). Based on both prior research and the analyses conducted here, environmental concern in religious groups may be more likely on balance to take root among more middle-class, highly educated, congregations less sectarian in their views *vis a vis* the broader culture.

H₆, that *Younger members of the same religious group hold higher levels of environmental concern than older members*, enjoys some of the most consistent support. It is difficult to extricate birth cohort effects from age effects from year (or period effects), but data in this dissertation consistently indicates that younger members of the same religious group hold higher levels of environmental concern than older members, even after controlling for period effects in Chapter 5. Age was a strong predictor of levels of both stewardship and conservation in Chapter 5, though as previously noted, this may be due to birth cohort or life course differences. Furthermore, age declined in significance after 1993 in stewardship, per the multilevel model. I have speculated that this is reflected in the relative “leveling off” in increases in environmental concern in more recent cohorts. This also suggests the possibility that religious groups’ statements on environmental concern, which emerged in the 1970s, may have been a reaction to broader cultural shifts rather than their catalyst. Carlisle and Clark (2018) argue that age effects are most prominent, and that cohort-level shifts reflect more comprehensive changes in environmental concern across all groups rather than specific changes within religious groups. I suspect this is due at least in part to their use of RELTRAD (Steensland et al. 2000), a more parsimonious coding scheme of religious groups which cannot account for religious-group-level changes in stewardship or conservation as a function of environmental doctrine. I have shown in this research that, whatever other benefits inhere in the use of this or the FUND (Smith 1990) coding scheme (which was used in Chapter 5), there are distinct advantages to using a less

broadly-drawn operationalization of religious identity in assessing the religion-environment connection.

Regarding H_7 , that *Women will be more likely than men to express environmental concern, and religious affiliation will be more salient among women than among men in explaining environmental concern*, support was mixed. Women in general expressed slightly higher levels of stewardship, but men expressed slightly higher levels of conservation. In Chapter 6, when examining men and women separately, religion among women was negatively associated with environmental concern to a greater extent than among men. The addition of the cohort interaction effects only improved model fit for men on both measures, suggesting that the negative associations among women regarding religious group identity could be assumed to change in parallel across birth cohorts. In other words, religion may play a stronger positive role among men than among women regarding environmental concern. In general, model-predicted gender differences in environmental concern by religion and birth cohort tended to *converge* over time, which I would speculate indicates that another factor or effect, such as the overall increase in both education and political enfranchisement among women over the birth cohorts covered, in part explains different rates of change in environmental concern by gender.

Regarding H_8 —*Religious group affiliation is more salient among those of lower incomes in explaining environmental concern*—data do not support this contention. Instead, stewardship most clearly takes root among the middle classes, and conservation is more likely to be found among upper classes. Religion actually plays *less* of a role among those of below average income, and though conservation is inversely associated with perceived income (such that it is highest among those of below average income and lowest among those of above average income) there is no such pattern regarding stewardship. It may be that environmental concern is

“not a priority” among religious persons of below average incomes in most cases because other concerns loom larger. It may also be that below average income religious persons conceive of environmental issues in ways that are not tapped by measures of federal-level spending.

However, if income explains the religion-environment connection, then it is not clear why there are differences between the middle classes and upper classes. Stewardship was more dynamic among the middle classes, whereas conservation was higher among the upper classes. These could reflect differing cultural and political priorities, but it may be summarized here that faith-based environmental concern on the measures tested here may be more the purview of relatively more affluent Americans. More research which focuses on lower levels of analysis such as communities and congregations rather than national-level data and concerns may better clarify the connection between income specifically—and social stratification, more broadly—and environmental concern. There are fruitful avenues of research here regarding the cross-cutting effects of income and religious group identity (or perhaps culture more broadly) regarding environmental concern, which I plan to examine further in the future.

Finally, H_9 , that *Religious group identity is more salient among blacks than among whites in explaining environmental concern*, received mixed support. It does seem to be the case that blacks hold higher levels of environmental concern than whites, most notably regarding conservation. The possible reasons why that is, as related to religious group identity, were explored in Chapter 8. Blacks still held higher levels of conservation after parsing out the sample by political ideology, so political identity was not the only reason they hold higher levels of environmental concern. Additionally, the interacting roles of race, religion, and birth cohort were notable among Democrats. As noted in Chapter 8, there be something unique to black theological, congregational, or community organizations that leads to higher levels of

environmental concern, particularly among the more fundamentalist groups. The opposite impact could be seen among whites, with lower levels of environmental concern among more theologically fundamentalist whites after controlling for the conditional effects of political affiliation, race, and birth cohort. Additionally, a good deal of polarization around environmental issues appears to be driven by divergences among white Protestant religious groups along political party lines. Further analysis of the distinctiveness of black culture, religious faith, politics, and environmental concern should be undertaken in future research, particularly as related to the conservation ethic.

The Limits of Environmental Concern

Many studies of environmental concern have increasingly used multiple variables which can be indexed or subjected to factor analysis to extract common dimensions of environmental concern across numerous variables simultaneously (see, for example, Clements, Xiao, and McCright 2014; Sherkat and Ellison 2007; Truelove and Joireman 2009). By comparison, this study included only two dichotomous measures of environmental concern—*stewardship* and *conservation*—which were selected both due to their availability across multiple waves of data, as well as because existing literature has established that both dimensions of environmental concern have historical precedents in religious environmental engagement. Future research may require merging separate data files to create a measure of environmental concern with more dimensions or attempting to collect new data that more thoroughly dimensionalize environmental concern along lines that are significant in the context of religion.

This limitation linked to a limitation in the survey instrument question, which placed this variable among a battery of *spending variables*. To reiterate, the exact prompt reads, “We are faced with many problems in this country, none of which can be solved easily or inexpensively.

I'm going to name some of these problems, and for each one I'd like you to tell me whether you think we're spending too much money on it, too little money, or about the right amount. First (READ ITEM A)...are we spending too much, too little, or about the right amount on (ITEM)?"

The stewardship variable was operationalized using *improving and protecting the environment*, and the conservation variable, *parks and recreation*. The view that we are spending too little money on improving and protecting the environment and parks and recreation is freighted with several assumptions may limit the validity of these measures. Though I do not believe these assumptions severely undermine the study's validity, their limitations, as well as the limitations of environmental concern in general, are well worth discussing.

Firstly, the "we" who are doing the spending, presumably, are government agencies, particularly the federal government. This may be interpreted as a willingness to pay higher taxes for environmental programs and conservation efforts, buy more expensive consumer products due to environmental regulation, and/or one or more of numerous other possibilities (such as levying carbon or energy taxes to internalize their ecological and public health costs). The "we" may even imply someone other than the person answering the question: "we" could even imply that others within one's society are not spending their fair share on stewardship and conservation, or that wealthier Americans, corporations or other, "less green" consumers should pay more to improve and protect the environment. Clarifying differing levels of support or opposition to various environmental policy proposals, as well as both government-based and market-oriented pro-environmental reforms, should be addressed in greater detail as related to the religion-environment connection.

However, what if religious environmental concern is catalyzed among those who do not see a more ecologically just and sustainable future as a function of spending, regulatory regimes,

market forces, or technological development? Stock (2008) notes one of many possible limitations in the prelude to his work on the Catholic Worker movement: “First, ‘environmental concern’ is too abstract for people to act upon. Second, by measuring one’s willingness to act positively toward the environment solely on a willingness to pay for abstract programs suffers from...technological utopianism” (24). The first objection is a long-standing problem within values research more broadly. In one of the earliest systematic efforts to think through the religion-environment connection, Yapple (1982) noted three distinctive branches of values theory as related to *education*—*values clarification*, *value analysis*, and *moral reasoning* (56). His research found that the first was particularly popular in environmental education when he was writing.

To express environmental concern, as measured here, is to be willing, in principle, to commit more resources to improving and protecting the environment, and to parks and recreation. Unfortunately, this does not necessarily translate into any action occurring on the part of individuals, communities, or religious groups. There is, in short, always the possibility of disconnects between what people say and what people do, regardless of how vaguely or clearly specified the goals. However, those who express concern for the environment are probably more likely to act on behalf of the environment than those who do not. Environmental concern, then, is a *necessary* but not a *sufficient* condition for creating a greener, healthier, and more sustainable future. Further research must better account for not only environmental *concern* or environmental *behavior* but also the explicit emergence of an environmental *ethic*, particularly as related to the religion-environment connection. Measuring ethical intuitions and ethical change in ways that dig deeper than psychological values research is difficult but could be accomplished

by revisiting moral intuitions in something akin to *experimental philosophy* (Knobe and Nichols 2008).

The Limits of Technological Society

The first and second objections overlap, but the second half of the objection to conceptualizing *environmental concern* requires a good deal more explanation. Religious environmental movements tend to seek ethical transformation, rather than single-issue policy reform (Smith and Pulver 2009). Accordingly, they may choose options that are not ultimately predicated on what Stivers (2008: 2) called *technological society*: “behind global capitalism and the political state is the technological system...In all its manifestations, technology is driven by the will to power.” One possible response to a critical view of the link between technology and power is that some may tend to mistrust bringing large-scale social structures and institutions to bear upon environmental problems. Thus, some may advocate devolving focus to localities, communities, and even individual consumer restraint rather than state power and technical apparatus in ways that are not consistent with current political and economic categories (e.g., Dreher 2005; McFague 2013; Scheid 2015). Insofar as this is the case, the measures used here may not readily capture these aspects of, and approaches to, environmental concern. Studying these practices and approaches as they relate to religion and values would perhaps call for qualitative field research rather than large-scale data analysis.

The degree to which to maintain or shun faith in technological society (and its varied elements, including bureaucracy, growth-based market economy, etc.) is an issue with which environmental movements consistently must grapple. As noted succinctly by Fukuyama (1992:83), “[T]he most coherent and articulate source of opposition to technological civilization comes from the environmental movement... the most radical among them have attacked the

entire modern project of mastering nature through science and have suggested that man might be happier if nature were not manipulated but returned to something more closely approximating its original, pre-industrial state”. A thorough examination of the contradictory relationship between environmentalism and technological society is beyond the scope of this project but is worth visiting given its importance regarding both environmental concern and morality as they relate to the religion-environment connection.

Given what has been repeatedly stressed about religious environmental efforts, that the goal is more often linked to lasting ethical change rather than near-term policy fixes, there is a limit to which one can accurately ascribe measures of religious environmental concern to variables that account for spending. Broadly speaking, *spending* can be defined as a technical means to achieve policy reform. This follows logically from two premises. First, regarding the nature of economics via Purdy (2015), “once presented as a gift of providence or an outgrowth of human nature, economic life, like politics, turned out to be a deliberate and artificial achievement, vulnerable to its own kinds of crises” (3). Second, the way in which issues such as “the environment” are redefined as “social problems,” via Stivers (1999): “the dominant metaphor of evil becomes ‘social problem.’ To use *problem* as a metaphor is to invoke mathematics and engineering. A problem is an obstacle, something to be solved or overcome. Social problems are not moral problems, but technical problems” (27). Surely environmental problems, broadly construed, require both scientific expertise and cultivation of moral imperatives—they are at once both *moral* and *technical* problems. But the way in which environmental concern is addressed in the preceding analyses might be read to subsume problems that are both moral and technical to their technical dimension.

Critics of the solubility of environmental matters via technical means abound. Oreskes and Conway (2010) drew upon the concept of *technofideism* in their critique of contrarian scientists sowing doubt on environmental issues: “a blind faith in technology that isn’t borne out by the historical evidence” (261). The scale and scope of environmental issues may pose problems without historical precedent that may not be reliably amenable to technical solutions. Thus, it may be more important at present than ever to incorporate values, culture, and *religion* into existing earth systems research (Gerten, Schönfeld, and Schauburger 2018). Ethicist Clive Hamilton (2013) discusses one possible technical solution—*geoengineering*—at length: “Many find repellent the idea embodied in some geoengineering schemes, of attempting to take control of the Earth’s climate. It is, surely, the ultimate expression of humankind’s technological arrogance. Yet if the alternative is to stand back and watch humanity plunge the Earth into an era of irreversible and hostile climate change, what is one to do?” (18) Grappling with perspectives and human implications surrounding geoengineering lie at the frontiers of philosophy, theology, and the social sciences—there is much more to be done regarding understanding not only the technology and its implications but also the underlying beliefs and values underlying decisions to deploy (or not) such technologies in the future (Clingerman and O’Brien 2016).

Others have offered argument and evidence that a growth-based economy (Antonio 2009; Daly 1996, 2001, 2005), capitalism, broadly construed (Buttel 2004; Curran 2017; Foster 1999; Habermas 1975:41-2; Klein, 2014; Spargaaren and Mol 1992:10; Stoner 2013; York and Rosa 2003), and even technological society itself (Kingsnorth 2013) is fundamentally incompatible with coping with contemporary environmental problems. This may be especially so in the cases of those problems that are global in scale such as climate change and mass extinction of species. From these perspectives, society must be reorganized in its constituent economic, political, and

sociocultural elements. It follows from such views that solutions predicated on markets or technologies or issue-based policy reform are unlikely to be enough in the short-term and the long-term, and belief in their feasibility may compound existing problems. Whether or not this is the case, the relationship between these various perspectives as they relate to the research conducted here is not clear. That is, how might those who anchor environmental problems in broad contradictions of modern society answer environmental concern survey questions predicated on *spending*, or, for that matter, on some other currently existing set of environmental concerns, behaviors, or policies?

Additionally, religious groups may be more, or less, amenable to certain definitions of the problems, as well as certain solutions, which is discussed at some length below. There are numerous ways to avoid this trap, one of which involves covering historical and theoretical dimensions of the problem as well as conducting statistical analysis. Another would involve more field research or qualitative analysis of the religion-environment connection as spelled out by religious environmental movements (REMOs), church leaders, and/or congregants, of which several examples exist (Baugh 2017; Ellingson 2016; Nita 2016; Stock 2008).

In transitioning to a discussion of the limitations and promise of “bringing religion in” regarding environmental considerations, I return to the work of Lynn White, Jr. (1967) who is often cited as placing the blame for the current environmental problems that face the planet’s seven and half billion inhabitants at the door of medieval western Christianity. However, this common view of White virtually ignores the details of his argument, which takes shape around an effort to *catalyze* religious environmentalism through measured and constructive critique. He had personal doubts about the ability of science and technology to fix the burgeoning

environmental crisis, and rather than offering a repudiation of Christianity, found an avatar for a greener Christianity in the life and work of Saint Francis of Assisi.

Thus, White offered a challenge, finding both a problem and a solution in the Christian religious tradition. The evidence presented in this analysis suggests that some Christians in the U.S. have accepted White's challenge. As noted above, historical evidence indicates that several Christian denominations have weighed in on environmental issues, and statistical analyses have shown that this has had an impact, albeit a conditional and uneven one, on levels of environmental concern as measured by *stewardship* and *conservation*. Having noted some of the limits of environmental concern, in data, measures, conceptualization, and theory, I turn now to some of the challenges of religion as related to the religion-environment connection.

The Limits of Creation Care

Many of the most prominent limitations of bringing religion into environmental issues has to do with what exactly is meant by *religion*, which in turn affects how religion is measured. As noted in Chapter 2, there are existing schema to capture the contours of American religion, such as the FUND scheme (Smith 1990), and the RELTRAD scheme (Steenland et al. 2000). This work represents a departure from these approaches, and the embrace of a more detailed, less parsimonious set of measures of religious group identity, which has yielded new results regarding historical engagement among religious denominations with environmental issues. Because the questions surrounding the development of creation care involve engagement with specific faith traditions, these more detailed categories are, in many ways, still simply not detailed enough. That is, there are likely to be differences *within* the religious groups—Baptists, Methodists, Lutherans, Presbyterians, etc.—that have not been accounted for in this analysis. This raises conceptual problems if the research pursued here is to cross the boundaries of the

United States and examine global religious trends (which would seem a next logical step in sorting out the religion-environment connection).

The splintering of Christianity, an indirect consequence of the development of the printing press (see Szrot 2015:93), began with Martin Luther in 1520 and spurred religious tensions throughout Europe, some of the bloodiest of which took place in France (White 2012:198-205). By 1800, some 500 Christian denominations existed, and as of mid-2014, there were a staggering 45,000 Christian denominations (International Bulletin of Missionary Research 2014)! One of the limitations of this study, then, is related to the fact that broad categories such as *Baptist* conceal numerous denominations that may differ from one another in their engagement (or lack thereof) with creation care. While some of these differences are captured in GSS data, the resulting religious groups and identities are too small, particularly spread out between 1973 and 2014 in the pooled data, to make statistically feasible claims based on samples that in many cases are in the single digits, or even zero, in many years. Research into specific religious groups and denominations may require a data set that oversamples these groups and/or field research, both of which may be more suited to someone with “insider” status relative to these more specific religious denominations.

Additionally, and particularly with Baptists given their racial heterogeneity in the U.S., racial divides in theological teaching require closer examination in this regard. Future research should attempt a more detailed account of differences *within* black churches in the U.S. Cutting-edge research has offered a means by which to categorize, and specifically assess, the role of denomination *within* black churches (Shelton and Cobb 2017). Given the findings in Chapter 8, better understanding the relationship between race, religion, stewardship, and conservation would supplement the analyses conducted here.

I have divided Protestants into several recognizable additional groups, as well as created categories for *other Protestants* based on the FUND scheme (see Smith 1990). I have also created a “catch-all” category for *other religion*. As noted at the end of Chapter 3, the broad category *other religion* obscures some highly important differences among religious groups. Future studies which focus specifically on Muslims, Buddhists, Hindus, and other broad world religions, as well as First Peoples’ spiritualities and/or New Age and neo-Pagan groups would better contribute to comparing the role of Christianity and American culture in fostering and/or stymieing the development of environmental concern.

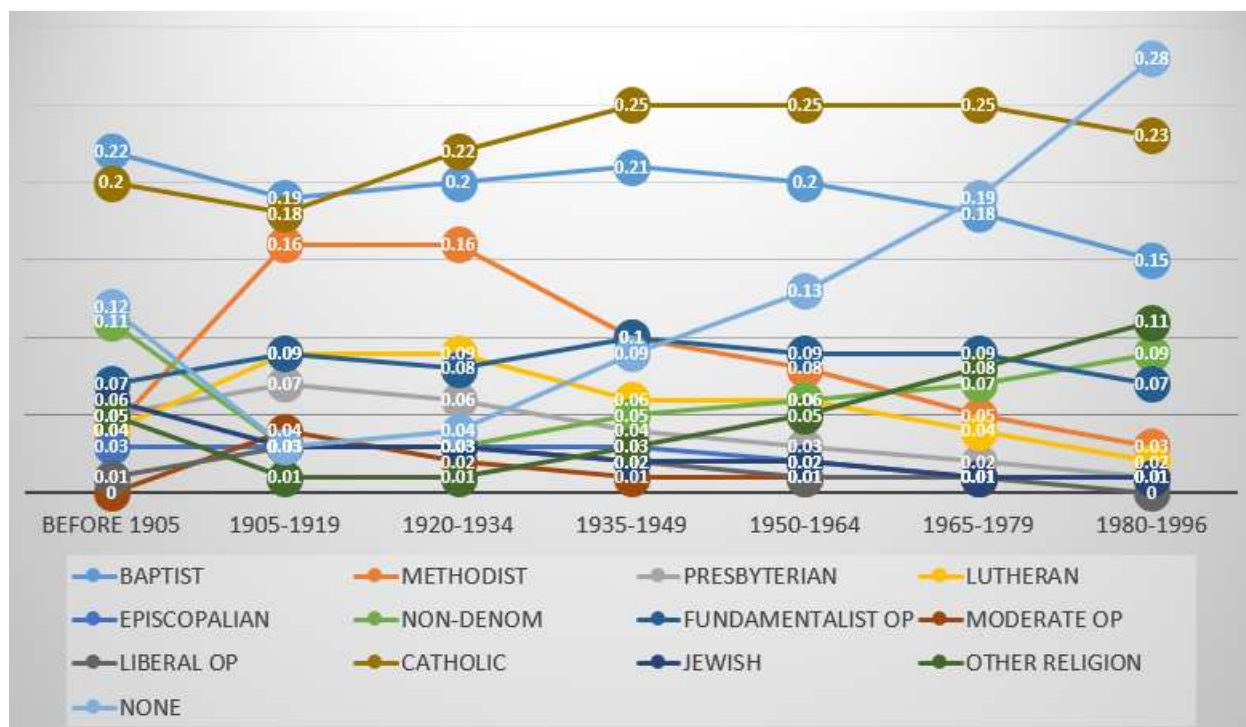


Figure 58: Religious Change by Birth Cohort, U.S., 1883-2014

Potential Impacts of Religious Change

Another limitation of the cultivation of environmental concern among religious groups is related to the fact the demography of religious groups themselves over the time that the data for this study was collected, as well as the projected impacts of religious change in the future. Since

this study employed birth cohorts through much of the analysis, Figure 58 examines how the religious groups studied here have changed over the course of these birth cohorts. The implications of these changes have been discussed, and are being debated by religion scholars at present, which I will discuss at greater length below. More directly, however, several trends are evident in Figure 58 that are largely corroborated by evidence analyzed by other scholars in the field (Chaves 2011; Jones 2016; Roof and McKinney 1992).

A single broad trend is evident: Christianity is in decline in the U.S. overall (with the notable exception of the non-denominational), while the proportion of Americans that identify as unaffiliated or a non-Judeo-Christian religion has increased, most dramatically across the younger cohorts. This complicates the analyses in previous chapters given that some Christian religious groups have shown signs of increased environmental concern relative to the unaffiliated. Even if Christian groups develop greater levels of environmental concern in the future relative to the unaffiliated, it is possible (though by no means certain) that their ability to affect changes in a democratic society will be, to some degree, increasingly limited.

However, this conclusion involves several assumptions regarding religious demography and the impact of belief. First, there is the problem of separating birth year from age from calendar year, which is of course a problem that bedevils cohort analyses, and which is addressed most comprehensively in the models in Chapter 5. Higher probabilities of being religiously affiliated may have more to do with the age at which respondents were polled rather than the birth cohort to which they belong. In this sense, it is possible that many of those who identified as unaffiliated *because* they were still relatively young may return to the religion of their upbringing, or even convert to a different religion, later in life. As noted previously, extricating effects of age from effects of year from effects of birth cohort is not easy in the best of

circumstances, and is often further complicated by data limitations. Truly longitudinal research, which can follow a relatively large group of Americans across a broad span of their lifetimes, would be ideal for correcting some of the potential limitations here, and more fully extricating these various effects from one another. Such research is extremely expensive, time-consuming, and difficult.

Another related assumption lies in the impact of religious *upbringing* as examined in Chapter 4. As it turns out, being raised in some faiths has a different impact than remaining in said faiths as an adult, and disaffiliation has a unique, positive impact on levels of environmental concern overall. Even though, for example, Episcopalians and Liberal Other Protestants (two groups that held strong levels of environmental concern relative to upbringing) have declining membership, at least some of that decline is among those who left the faith in adulthood. These groups engender higher levels of environmental concern as a function of upbringing, and even higher levels of environmental concern are expected among those who disaffiliated. As noted in Chapter 4, more detailed measures of upbringing, disaffiliation, and conversion may disentangle these relationships.

It is also noteworthy that the impact of a religious group on national environmental initiatives is not necessarily smoothly reducible to the proportion of Americans that identify as such. Presbyterians, for example, never constituted more than seven percent of the American population in any cohort, yet according to Stoll's research (2015), they were instrumental in Progressive Era environmental reforms (137-70). Furthermore, even though Episcopalians have never made up more than three percent of any cohort in this study, there have been more U.S. Presidents who identified as Episcopalian than any other faith (Lipka 2018). Cultivating religious environmental concern (or any other type of concern) in a representative democracy and

translating that into meaningful reform is at least as much a function of the influence and political will of persons as a function of a majority seeking meaningful action. Religious groups can influence Americans in the direction of (or for that matter, away from) greater environmental concern is possible even if a relatively small proportion of persons limited to a few religious groups have organized around such issues. It is also possible that a charismatic figure, per Weber (1946), could emerge and lead one or more religious groups in radically different directions, particularly given the relative magnitude of some environmental threats. There is, to be sure, an opportunity for bringing in social movements theories as well as political sociology and the sociology of organizations to grapple with the questions that arise here.

Toward a Social Theory of Humanity, Nature, and the Sacred

Finally, there are several related theoretical issues need further attention. First, I revisit the possibility addressed in the introduction: that *culturally orthodox* American Christians may decry environmental concern as “the bailiwick of liberal pagan activists,” a distraction from the primary Christian missive of individual salvation if not a threat to the moral fabric of American society (Ellingson 2016:55). Research has also suggested that End Times Theology and Biblical Literalism are negatively associated with levels of environmental concern (Eckberg and Blocker 1989; Guth et al. 1995; Hand and Van Liere 1984; Szrot 2019). This study did not directly control for End Times Theology and did not find evidence to support the contention regarding Biblical Literalism. Additionally, recent research suggests that some religious environmental efforts have been stalled by politics—specifically, the shifts away from environmental concern in the American Republican Party (Pogue 2016). However, certain questions are raised regarding the apparent *authenticity* of making a religion-environment connection as it relates to actual

Scripture. I am not a theologian, but I can address possible issues that may complicate the statistical relationships religion and environmental concern in this dissertation.

If environmentalism more broadly and religious environmentalism (of course) more specifically, can be thought of as *religious*, then they can be construed in a variety of ways that can be, as Grim and Tucker (2015:13-20) put it, both “limiting” and “liberating”; as repositories of culture and tradition, religions may display tendencies to preserve existing orders, or might become new sources of social change. Those who approach religion for its liberating potential may, with critical theorist Max Horkheimer, view religion as, “The not-yet-strangled impulse that insists that reality should be otherwise, that the spell will be broken and turn toward the right direction. Where life points this way in every gesture, there is religion” (quoted in Neiman 2002:306). Religion can also engender reactionary tendencies—it played a central role in the September 11, 2001 World Trade Center attacks, and was seemingly omnipresent in their wake, perhaps most controversially in the claims made by the late televangelist and Southern Baptist pastor Jerry Falwell, that the attacks were God’s retribution against a nation of sinners (Luke 2001:139-40). Religious leaders and religious figures were present on both sides of the antebellum debates over slavery, and in the Civil Rights movements of the mid-twentieth century (Desmond and Moore 2009; Emerson and Smith 2000:21-50). Limiting and liberating, indeed—the ambivalence and complexity of religion is why it is important to understanding environmental issues as well as why it is difficult to systematically measure its impacts. measure its impacts.

How Religious is Environmental Concern?

Having addressed the findings of this project, as well as several sets of limitations, several theoretical questions remain. First, given the complexity of the findings presented in

previous chapters as well as theoretical concerns about the use and misuse of traditions, how authentically “religious” is environmental concern? The answer to this question raises another: if environmental concern has a quasi-religious foundation then what role does it play in the civic life of a society which values separation of church and state? Additionally, tensions arise surrounding the religion-environment connection as it relates to other less human-centered approaches to environmental issues. Does bringing religion into environmental concern potentially strengthen or undermine environmental efforts?

The relationship between human beings and the natural world is central to the religion-environment connection. The religion-environment connection as studied here is predicated on a certain strand of *anthropocentrism*—stewardship and conservation as approaches to environmental concern are both rooted in assumptions about the relationship between human activity and the natural world in which humans act and nature is acted upon. Other, non-Judeo-Christian traditions may ultimately hold quite different views of the relationship between humans and the natural world. A typology may be of assistance here, as deployed by Ellingson (2016). First, in a *Stewardship Ethic*: “In this framework, environmental problems are understood to be rooted in sin or alienation from God... tends to locate environmental problems and their solutions at the individual level and thus does not push religions to consider the systemic or structural causes of environmental degradation...” An *Eco-justice ethic*: “draws on biblical mandates to care for the poor, the weak, the powerless, and the most vulnerable in society and extends it to the environment. Finally, *Creation Spirituality*: “was developed by Catholic thinkers, and it ‘attempts to reorient people to understand the proper place of humanity as part of a panentheistic creation as opposed to seeing humans as separate from creation and God outside

of creation’...rejects religious anthropocentrism and argues that humans and nature are mutual partners in God’s cosmic plan” (10).

There is much more to be done conceptually regarding the human-environment relationship and the assumptions that underpin differing religious and denominational approaches to the matter. However, findings which suggest positive associations between some religious groups and the measures of environmental concern presented here are predicated in part on an anthropocentric *stewardship* ethic. I have not directly tested whether, and to what extent, eco-justice or creation spirituality exist within various religious groups but based on the typology as deployed by Ellingson (2016) and the qualitative research he conducted on religious environmentalism, it is likely that there are limitations regarding the theological orientation of many religious traditions in the U.S. concerning environmental concern. For now, I think this may be one of the strengths of the approach undertaken in this work—both variables, *stewardship* and *conservation*—are operationalized around human activity, presumably for the common benefit, rather than predicated on environmental concern as a function of “benign neglect” of natural vistas considered worth preserving. Though some would likely argue that it does not go far enough, this general approach to environmental issues may be better able to build broader, more ecumenical, bases of support.

Religion and Politics in a Secular Society

The status of religious claims in a secular society is also at issue. Religious and secular individuals *within* societies are likely to have differing conceptions of what role religious language ought to play in the public sphere. In an open society (see Popper 1966), many scholars have argued that individuals who hold conflicting worldviews must reason toward public policy in ontologically and theologically neutral terms, which effectively requires religious persons to

split their identities in public discussion, and which may result in an asymmetrical burden of citizenship (Yates 2007). Habermas (2011) attempts to resolve this tension by drawing a distinction between the secularization of state and the secularization of society, arguing that religious language is appropriate in the public sphere but must be translated before making its way into the state governing apparatus. Taylor (2011) calls for a dramatic reformulation of secularism, noting that religions, far from being inassimilable to democratic norms, evolve over time as living traditions. He also confronts the assumptions behind secular reason: “So religion either comes to the same conclusions as secular reason, but then it is superfluous, or it comes to contrary conclusions, and then it is dangerous and disruptive. This is why it needs to be sidelined” (49).

Further debate centers on the construction of multiculturalism, arguing that a bias inheres in liberalism that elides the complicated relationship between religion and ethnicity (Modood 2013). Multiculturalism, and perhaps some “dramatic” reformulations of secularism, have been critiqued as “anti-Enlightenment.” Specifically, critics argue that tolerance—which calls for constraining a tendency to be shocked at unfamiliar ways of being in the world—is conflated with respect, which calls for yielding to specific cultural demands, including everything from censoring images of Mohammed to teaching creationism in public schools (Stjernfelt 2009). Others argue that there is in fact no substantive reason why religion deserves political toleration, given its “categorical demands on action” and “indifference to evidence,” and that tolerance of religion should rest on the practical, fallibilist foundation that the consequences of state-sponsored *intolerance* of religion are worse than tolerating religion, however problematic its demands on believers (Leiter 2008).

There are merits to each approach, and drawbacks, which could undoubtedly be debated *ad infinitum*. I propose reframing the question. Rather than asking *a priori* what the role of religion in the public sphere *ought to be*, I think it would be more fruitful to ask an empirical question: what role *does* religion *in fact play* in the public sphere? In asking this question instead, informed by existing theory, some have concluded that “[m]any of our dominant stories about religion and public life are myths that bear little relation to either our political life or our everyday experience” (Mendieta and VanAntwerpen 2011:1). Empirical questions arise out of the status and role of religion in the public sphere. Evans (2012) found that though his respondents want a deliberative public sphere in principle, they tended to see public deliberation as separate from politics (*contra* Habermas) and tended to want to exclude career politicians, rather than religious leaders or claimants. Evans also explored the relationship between religion and support for science (2012a), and religion and political decision making (2014), finding little difference between religious and nonreligious persons in their support for science or willingness to defer to legitimate political processes rather than violating them to get their way.

Recent research on politics *within* religious institutions further challenges conceptual work predicated on the assumption that religion is dangerous to democracy. Scheitle and Cornell (2015) found a disconnect between what clergy report they say about contemporary social and political issues and what congregation members hear—congregation members’ personal interest in social issues is a significant predictor of their reporting hearing about these issues. This may have a profound effect on the ability of religious leaders to address issues such as environmental concern, particularly among more culturally orthodox congregations, which may, for ideological or other reasons, be less susceptible to digest such messages. However, within the church, including conservative evangelical Protestant churches, a multi-methods researcher found

evidence that small group settings cultivate democratic discussion and participation, including dissent and questioning (Neilheisel, Djupe, and Sokhey 2009). This may offer the possibility of horizontal communication of environmental issues within church groups. Americans frequently hear about political issues from the pulpit, including hot-button “conservative” issues such as defending religious liberty and speaking out against abortion as well as “liberal” issues such as welcoming and supporting immigrants, protecting the environment, and problematizing economic inequality (Pew Research Center 2016). In short, even if one takes a more secularist position on the role of religion in the public sphere, religion continues to play a significant and potentially democratic role in American civic life.

Postcolonialism to Pragmatism: Toward a More Coherent Approach

Tomlin (2009) raises more questions in the complex and nuanced work *Biodivinity and Biodiversity: The Limits to Religious Environmentalism*. In a case study of India, Tomlin (2009: 177) inquires rhetorically: “Is religious environmentalism a narrowly focused, colonial, postmaterialist and romantic ideology that has limited relevance in a developing context?” This objection could be raised anywhere that religious environmentalism invites systematic scholarly study. In merely inquiring as to the linkages tested in this analysis, have certain white, urban, middle-class, secular, progressive expectations regarding environmental concern been implicitly imposed upon others within American society? Given that these are groups that are in many ways less vulnerable to environmental degradation (see Harlan et al. 2015), is this even the right question to ask?

I will briefly unpack the series of terms in the above quotation. First, the concept of *romantic* ideology is pithily conceptualized by Purdy (2015) that by the 1920s even the U.S. Parks Service was referring to national parks as “shrines to nature and the human spirit it

trained” (24). Romanticism called for a direct, spiritual experience of nature that was not reducible to making productive (that is, profitable) use of natural landscapes and the resources they may contain (Farrell 2015:54-6). Romanticism is potentially at odds with other, more rurally grounded ideas about nature, as a place to be transformed by human labor for human survival and flourishing (White 1996). The idea of setting aside large tracts of the natural world as off-limits for human interference may be read as something of a luxury provided by “full-belly” environmentalism, which elides the necessity of transforming nature for human needs via “empty-belly” environmentalism (see Martinez-Aller and Hershberg 1992).

Postmaterialism is the contention that human beings in many parts of the world, particularly since the mid-twentieth century, have become more affluent on average, freeing some of their inhabitants to pursue more “self-expressive” (rather than “traditional” or “materialist”) values, of which environmental concern is a notable example (Inglehart 1977, 1995; Norris and Inglehart 2011:76; Tomlin 2009:31-3). In practice this view elicits certain beliefs about the role of religion in societies—that is, as societies move toward postmaterialism and self-expressive values, religious belief and practice is expected to decline—this contention has been tested empirically and has received some support (Norris and Inglehart 2011; see also “existential security theory” in Chapter 7). Broadly speaking, then, environmental concern is expected to increase in societies at the same time as religion is expected to decline, suggesting an inverse relationship. That relationship was not specified in this analysis.

However, the dichotomy may ultimately be a false one—the developers of the theory argue that it is probabilistic rather than deterministic. Environmental issues such as climate change are expected to continue to make the production of food via agriculture more difficult, meaning that eventually environmental concern may not have the luxury of waiting until

societies develop sufficiently. The most vulnerable populations are, in a grim irony, those who least contribute to climate change (Harlan et al. 2015), and meeting their immediate needs is expected to become increasingly difficult as global action on climate change loses momentum (Anderson 2015). In this sense, bringing religion in may offer constructive avenues to approach environmental issues from novel perspectives which are *more* rather than *less* likely to include those who are most affected—the global poor, and those who live in subsistence cultures. Additionally, groups that are also more likely to be religious such as political conservatives worldwide (see Norris and Inglehart 2011:196-212) may be catalyzed by religious leaders' engagement with environmental issues and may ultimately have new insights to offer.

Second, the concept *colonial* ties these contentions together. Literary and social critique bundled together under the heading *postmodernism* turned from emphasis on “grand narratives” and “grand theory.” This move introduced suspicion of cultural, epistemic, political, and economic programs as manifestations “Western modernity.” Postcolonial scholarship emerged when migrant intellectuals entered American and Western academia, adding to a body of knowledge critical of capitalism, technological society, and the scientific domination of nature (Ahmad 1992; Nanda 2003). As noted before, at least some strands of environmental concern have offered criticisms of institutions and lifestyles that may be considered “Western” and/or “modern,” or at least have originated as such. The spread of market economies, scientific knowledge, and technological society are assumptions linked to both Romanticism and postmaterialism. They are viewed as negative developments to be resisted (at least in part) by the former, and as positive developments that allow for new ways for human beings to actualize their potential by the latter.

Pulling together these possible objections and directing them toward American civic life, the possibility arises that concerns such as environmental concern may not have been initially part of the religious traditions may be creeping into their fabric via other avenues. Even an implicit belief that religious groups *should* cultivate environmental concern may reflect the selfsame “Western modernity” that is criticized as part, if not the root, of the problem. Religious cultures risk being coopted by secular ideological struggles rather than engaging in sincere efforts toward long-term ethical transformation.

This shading of nuance regarding possible avenues of religious engagement in environmental issues may partly avoid some potential problems, only to bring up new ones. Which ethic is most consistent with the religious traditions found in the U.S? And can such questions be satisfactorily answered using quantitative analysis of survey questions with the aforementioned limitations, coupled with some efforts to link the findings to historical and theoretical contentions? The objections arising out of postmodern thought (and by extension some of its postcolonial off-shoots) extend to interrogating the assumptions behind the possibility of a social science which can deploy sophisticated mathematical modeling to present analyses of human relations that have universal validity. The ubiquity of this approach risks rendering social problems in a manner that is amenable to specialized expertise but nearly incomprehensible to the non-expert, potentially foreclosing on the possibility of social change (see Agger 2000).

These objections are valid, and I have addressed them elsewhere (Szrot 2017, 2019); however, beyond them, the problems that arise here can be addressed more comprehensively by meeting the stronger versions of social constructivism (which underpins many versions of postmodern theory and postcolonial scholarship) on their own ground *vis a vis* environmental

issues. To begin, I turn to the possibility of *strong social constructivism*, which Smith (2010) defines as the belief that:

Reality itself for humans is a human, social construction, constituted by human mental categories, discursive practices, definitions of situations, and symbolic exchanges that are sustained as ‘real through ongoing social interactions that are in turn shaped by particular interest, perspective, and usually, imbalances of power’—our knowledge about reality is therefore entirely culturally relative, since no human has access to reality ‘as it really is’ (if such a thing exists or can be talked about intelligibly) because we can never escape our human epistemological and linguistic limits to verify whether our beliefs about reality correspond with externally objective reality (122).

Nanda (2003) notes a problem that logically follows: “While all statements of facts about nature are seen as value-laden, social and cultural values themselves are conceptualized as cultural givens, and beyond the pale of rational criticism and reasoned exchange” (146). To make a strong constructivist argument requires three assumptions: that a bright line can be drawn between what Giddens (2000) calls “invented” and “authentic” traditions (55, 58-9), that tradition somehow belonged to the “pre-modern” past (56-60, 62), and that tradition is being systematically eroded by the advancement of modernity. Giddens is skeptical of all three of these claims, as am I. A founding assumption of many nineteenth-century thinkers, including some of the founders of sociology, was that religion was doomed to succumb to the advancement of technological society, capitalism, and the advancement of scientific knowledge (Lenzer 1998; Lough 2006; Nietzsche 1990; Norris and Inglehart 2011; Palmeri 2016; Weber 2011). Is religious engagement with environmental concern yet another accommodation on the path toward a more secular and “de-traditionalized” society, potentially undermining religious tradition as a whole rather than existing as an authentic part of it?

I answer this question in the negative, for two reasons: first, it is not possible to unproblematically separate “invented” from “authentic” traditions. Traditions are socially constructed if anything is—they arise, and are followed, modified, or discarded with the collective behaviors and interactions of human beings over time. All traditions may be thought of as “invented” even if no one alive now knows who “invented” them, or even how or why they originally arose. All traditions are also “authentic” insofar as people follow them, take them seriously, and draw meaning from them. A tradition that people stop following or forget is neither “authentic” nor “invented”; it simply ceases to exist, regardless of the meanings behind its original intent. Ironically, then, the idea that there is a sort of culturally particular given-ness that inheres in social and cultural values is a reification of a belief, perpetuated in part by the Enlightenment, that traditions are closed, inward-looking, and ossified rather than living, dynamic, and ever-evolving. What is perhaps the most problematic aspect of the Enlightenment is therefore the ground on which strong constructivism implicitly makes its stand.

Second, the religion-environment connection is a link between something that is best understood (at least scientifically and philosophically) as socially constructed—religion—and something that is best understood (at least scientifically and philosophically) as *real*—environmental problems. Social theorists have drawn considerable attention to the realist-constructivist divide in how environmental issues such as climate change are conceptualized (Antonio and Clark 2015). Building in part upon their work, which ultimately incorporates important dimensions of realist and constructivist visions, several distinctions must be made regarding the current study, which may have repercussions for the theory and practice of the sociology more broadly. It follows from the stronger version of social constructivism as delineated above that if it is part of someone’s culture to reject the science on climate change,

then the validity of that belief is as valid as the belief that anthropogenic climate change is occurring and poses a danger. The same could be said for any concept, idea, or truth claim. Human rights, freedom of speech, democratic governance, the germ theory of disease, and the belief that the earth is round could all be rendered merely culturally-specific preferences if not Western imperialist dogma. Indeed, this is one of the central insights of Nanda's (2003) research into the implications of postmodern critiques of science—the attempts to expose power structures that lie behind all forms of culture, including the pursuit of scientific knowledge—can, and do, empower reactionary political movements which draw strength from flouting the pursuit of truth.

Critical distinctions can be drawn which can aid in avoiding these pitfalls. The first is to acknowledge the limitations of social constructivism. Contrary to the popular slogan, everything is *just not* socially constructed, at least not to the same extent. This does not mean that social constructivism is irrelevant. It does, however, imply embracing something more like *weak* social constructivism. Smith (2010:122), once more: “All human knowledge is conceptually mediated and can be and usually is influenced by particular and contingent sociocultural factors such as material interests, group structures, linguistic categories, technological development, and the like—such that *what people believe to be real is significantly shaped not only by objective reality but also by their sociocultural contexts*” (emphasis mine). Smith explains that he thinks this is what social scientists and their fellow travelers really mean when they talk about *social constructivism* (123-34), but that this gets lost in translation, perhaps due to writing styles which “...allow writers to pitch various edgy social, epistemological, and ontological claims while leaving open an escape door of plausible deniability...” (126).

Clearing up this conceptual confusion allows one to talk about how, for example, *concerns about environmental problems that have been revealed by decades of research in the natural sciences may impact, or fail to impact, various religious groups*. In this way, I can take a stance on the reality of environmental problems without necessarily having to judge the objective reality of religious claims, one way or the other. Bringing in the “cookie cutter” pragmatist realism of Hilary Putnam (1987) may be the most effective way to frame this and future efforts to conceptualize the religion-environment connection. To wit: “There are ‘external facts’, and we can *say what they are*. What we *cannot* say—because it makes no sense—is what the facts are *independent of all conceptual choices*. A metaphor which is often employed to express this is the metaphor of the ‘cookie cutter’. The things independent of all conceptual choices are the dough; our conceptual contribution is the shape of the cookie cutter” (Putnam 1987:33, emphasis in original).

This ontological realism, married to a conceptual subjectivism, creates a space whereby differing traditions, religious groups, and cultures may communicate productively regarding differing conceptions of “the environment” without demanding a sacrifice of reason or a wholesale cultural capitulation. Environmental problems such as climate change and the mass extinction of species are brought into stark relief by the methods of the natural sciences (IPCC 2014). Environmentalism in the U.S. can be spoken of historically as possessing religious roots without assuming that environmentalism *must therefore* be defined specifically in religious terms. Whether or not human beings are changing the biosphere at an unprecedented rate is not predicated on a leap of faith, a living tradition, or a specific understanding of the cosmos but on rigorous research indicating how the world really is. Similarly, religious groups can engage (or not) with environmental issues as related to specific cosmological understandings without

necessarily imposing components of a secular worldview from outside. In this manner, it seems possible to engage constructively along the lines described by Wilson (2006) in the introduction to this chapter, toward a dialogue regarding present and future environmental concerns which is informed by diverse understandings of the environment, and how humans as well as the divine ultimately relate to it. A plurality of understandings regarding the environment, both secular and religious, expressed in a shared normative language, may contribute robustly toward efforts to care for creation.

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Appendix A: From Stewardship to Creation Spirituality:

The Evolving Ecological Ethos of Catholic Doctrine

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Abstract

The relationship between the Catholic Church and the world's poor is complicated by the link to between concern for the earth and concern for the poor. To historically situate this relationship, 28 papal Encyclical letters issued by six Popes were examined, spanning a period between publication of Rachel Carson's 1962 *Silent Spring* and Pope Francis' *Laudato si'* "climate change Encyclical." Using a typology developed by Stephen Ellingson, Encyclicals were coded for changes in Catholic doctrine from a "Stewardship Ethic" rooted in individual sin to an "Eco-Justice" ethic which bridges concern for the environment with concern for the poor, and finally, to an ethic of "Creation Spirituality" which views humans and nature as inseparable. This analysis offered evidence of profound doctrinal shifts at the crossroads of ecology and poverty, illuminating ongoing dialogues at the boundaries of religion and science by highlighting points of departure between Catholic and secular ecological ethics.

From Stewardship to Creation Spirituality:
The Evolving Ecological Ethos of Catholic Doctrine

“I urgently appeal, then, for a new dialogue about how we are shaping the future of our planet. We need a conversation which includes everyone, since the environmental challenge we are undergoing, and its human roots, concern and affect us all. The worldwide ecological movement has already made considerable progress and led to the establishment of numerous organizations committed to raising awareness of these challenges. Regrettably, many efforts to seek concrete solutions to the environmental crisis have proved ineffective, not only because of powerful opposition but also because of a more general lack of interest. Obstructionist attitudes, even on the part of believers, can range from denial of the problem to indifference, nonchalant resignation or blind confidence in technical solutions.” - Pope Francis, *Laudato si'* (14)

In the early years of “environmentalism,” medievalist Lynn White (1967; 1974) fired a shot across the bow of human conceit with the widely-cited *The Historical Roots of Our Ecological Crisis*, in which he laid blame for environmental degradation at the feet of Western Christianity. Notably, White called for a “green reform” of Christianity, drawing the possibility of a new Christian environmental ethic from the life and work of Saint Francis of Assisi (Whitney 2005). Nearly half a century later, Pope Francis issued the Encyclical *Laudato si'*, igniting widespread dialogue at the intersections of Catholicism and the environment, ecology and the poverty, science and religion, fact and value, and perhaps most significantly, between human beings and the cosmos. The historical period beginning with the 1960s and continuing through *Laudato si'* is marked by a notable shift in Catholic doctrine on these issues. Using document analysis, this paper explores the Papal precedents for this shift in doctrine, particularly

as it relates to the development of environmental sociology, a field emerging out of efforts to re-conceptualize the link between nature and society.

A Cosmic Dialogue

In the decades that followed White's work, Christians responded. In *The Dream of the Earth*, well-known eco-theologian Fr. Thomas Berry (1988) addressed the problem, opening his work by finding inspiration in diverse sources, including the Sioux worship of the "Great Spirit" (8), the Omaha tradition of announcing the birth of a new-born child to the world (13), the Iroquois thanksgiving ritual (14), a ninth-century Chinese clerk named Chang Tsai, who proclaimed "Heaven is my father and Earth is my mother" (15), and the *Ramayana* and *Hitopadesa* of India (17), concluding that "Personal designation of the earth as Gaia is no longer unacceptable in serious discussion" (18). In 1992, Berry stated provocatively that, "We should put the Bible away for twenty years while we radically rethink our religious ideas" (Allen 2009:306).

Religious traditions, as Grim and Tucker (2014) noted, can be "limiting and liberating" (13-5), and efforts such as Berry's were often met with resistance. Allen (2009) noted the Interfaith Council for Environmental Stewardship's 1999 "Cornwall Declaration" which, "Though affirming the legitimacy of environmental awareness, the statement referred to global warming, overpopulation, and rampant species loss as 'unfounded or undue concerns.' More broadly, it warned of setting economic development in opposition to good stewardship, describing that as a false dichotomy that would, in their view, keep the poor in misery" (308). Catholic thinkers and writers seeking a "greening" of the Church drew censure from Church authorities, such as the Jesuit paleontologist Teilhard de Chardin, accused of "flirting with pantheism" (306; a belief that God and nature are one), Matthew Fox, who was dismissed from

the Dominican order in 1992 (307), or Fr. Diarmuid O’Murchu whose *Quantum Theology* “speaks much of God and constantly talks of human liminal values in a ‘planetary’ or ‘cosmic’ context, but says almost nothing about Jesus Christ” (306-7).

Survey evidence has provided some conditional support for Lynn White’s thesis, at least among American Christians (Ellingson 2016:4-5; see also Clements, Xiao, and McCright 2014), and early statistical research on ecology and religion suggested “no compelling evidence to suggest that any particular tradition or denomination within American Christianity is becoming ‘green’” (Ellingson 2016:5; see also Eckberg and Blocker 1996; Eckberg and Blocker 1989; Kanagy and Nelson 1995; Guth et. al. 1995; Wolkomir et. al. 1997). However, a document analysis from 1984 to 2010 found evidence of increased environmental concern among Evangelical Protestants (Danielsen 2013), and evidence of “scientific constructs” can be found in both Papal and Episcopal documents (Downs and Weigert 1999). “Divergent conclusions” regarding the Christianity-environment connection have also been cited (Djupe and Hunt 2009; Sherkat and Ellison 2007). Whether Catholics, nationally or globally, were becoming more ecologically conscious prior to Pope Francis’ declaration is an open question, but research after the Encyclical’s release suggested that the majority of American Catholics departed from Church teaching on multiple issues, and that less than a third considered working to address climate change an essential aspect of being Catholic (Lipka 2015).

Part of the tension between environmental concern and Christianity can be explained in terms of the cultural and political heritage of the United States. Religiosity has long been associated with conservatism (Chaves 2011; Jones 2016; Roof and McKinney 1992), and environmentalism has long been championed—and condemned—as a keystone liberal political cause (Ellingson 2016; Mooney 2005: 78-168; Oreskes and Conway 2010), stymieing fruitful

interaction between religious communities and existing secular environmentalist groups. Yet opportunity inheres in this tension, as well. One avenue of re-engagement emerges in the genesis of a Christian environmental stewardship that eschews the politically-freighted term “environmentalist” in favor of “creation care” (Van Dyke et. al. 1996). This re-framing effort, coupled with a pragmatic, community-based “people, not polar bears” (Baugh 2017: 29-45) approach, has the potential to appeal to Evangelical Christians and traditionalist Catholics as well as mainline and liberal Protestants across race, class, and partisan lines by drawing upon a Biblical mandate for environmental concern (Baugh 2017; Dreher 2006:151-218; Van Dyke et. al. 1996). However, perhaps it is the intimate link between concern for the environment, and concern for the poor and vulnerable, that stands out most prominently in the context of the evolution of Catholic doctrine.

Catholicism, Ecology, and Poverty

On November 29, 1979, Pope John Paul II (1979) issued a papal bull declaring Saint Francis of Assisi the patron saint of ecology. More than three decades after the Papal Bull, on March 13, 2013, former Argentinian-born Jesuit leader and archbishop of Buenos Aires Jorge Mario Bergoglio became the 266th Bishop of Rome (Cheney 2016; Vallely 2015). Recounting his choice of name, Pope Francis recalled his friend Cardinal Hummes, who, when Bergoglio earned the votes to become Pope, “hugged me, kissed me, and said, ‘Don’t forget the poor’” (quoted in Wooden 2013). The linkage between Catholicism, ecology, and the poor has substantial historical precedent, and is further catalyzed by the increasing clarity and severity with which these concerns can be linked to the ecological problems facing the planet at present. The relationship between poverty and vulnerability to the consequences of environmental despoliation has also become increasingly clear in the environmental sociology literature—in

particular, “the *impacts* of climate change are unequally felt by the rich and poor...*policies* designed to manage climate change have starkly unequal consequences, and the processes by which emissions reductions are decided tend to exclude the poor and the powerless” (Harlan et. al 2015:127, emphasis in original).

Contra the aforementioned Cornwall Declaration, the Catholic Church has framed creation care as an issue linked inextricably to the welfare of the world’s poor and vulnerable populations. Social movement theorists might see in this connection an example of “frame-bridging” (see Snow et. al. 1986), an effort to connect emerging environmental concerns to existent Catholic social teachings regarding poverty. Additionally, environmental problems challenge social scientists to think of collective action and social movements in terms that are not smoothly reducible to “material and economic competition [or] resource mobilization and political opportunities” (Farrell 2015: 258). Climate change, and its relationship to enduring social problems of care and justice for the impoverished, raises new intersections and invites the discussion of how morality and “the sacred” figure into environmental dialogues. Indeed, Farrell (2015) noted how environmental problems invited a re-engagement with a “science of morality,” in which “the moral and spiritual dimensions of conflict become entwined with—influencing and being influenced by—changes in the structure of economic, political, and status-based exchange markets” (18).

To understand the relationship between Catholicism, ecology, and poverty, then, is to interrogate the moral, and ultimately theological, bases upon which this relationship is built. To bring ethical, and ultimately theological, dimensions into the conversation is warranted, in that, like Farrell’s findings in Yellowstone, “disagreement [about what to do about environmental issues] emerges from differences in worldviews and perspectives on such things as science,

spirituality, economics, and politics” (Clingerman and O’Brien 2016: x). Environmental science can indeed tell us that the Earth’s average annual temperature is increasing, is already affecting lives, and could have catastrophic results decades or centuries from now (Stocker and Qin 2013); extinction rates due to human activity have come to rival the effects of the comet impact sixty-five million years ago which wiped out the dinosaurs (Wilson 2016:6-9). What then should be done? Catholic doctrine can offer a new framework through which to engage both ecological issues as well as matters of science and faith by articulating an *anthropocosmic* rather than *anthropocentric* worldview, locating humanity *within*, rather than somehow *apart from*, the biotic, and ultimately cosmic, community (Baugh 2017; Grim and Tucker 2014; Scheid 2016). Early stirrings of this anthropocosmic worldview can be traced through the Encyclical letters of the past half-century, and mark a profound shift in understanding the relationship between God, humanity, and nature.

Analytic Strategy

The purpose of this work is to examine the doctrinal link between concern for the environment, science, technology, and the plight of the world’s poor in the historical context of the modern environmentalist movement. In order to do this, I examined pontifical pronouncements, primarily in the form of Encyclical letters, across two historical periods. The first period began with a commonly-conceded watershed moment for present-day environmental activism, the publication of Rachel Carson’s inspired 1962 work *Silent Spring* (Carson 2002; Hamilton 2013: 5) and terminates with the beginning of the reign of John Paul II. The second period focused on the thirty-six years that followed Pope John II’s aforementioned 1979 papal bull, characterized by a shift toward increasing concern with environmental issues in the Catholic Church at the pontifical level. A 1990 World Day of Peace Address, issued by John Paul II, was

also included. Although not an Encyclical letter proper, this address sheds light on a changing environmental ethic within the Church. The analysis draws upon a tripartite distinction of “ethics” made by Ellingson (2016) in his study of REMOs (Religious Environmental Movement Organizations).

Table 31: Encyclical Letters, by Pontiff, Title, Year Issued, 1959 To Present

<u>John XXIII</u> <u>(1959-1963)</u>	<u>Paul VI (1963-1978)</u>	<u>John Paul I</u> <u>(1978)</u>	<u>John Paul II</u> <u>(1978-2005)</u>	<u>Benedict XVI</u> <u>(2005-2013)</u>	<u>Francis (2013-)</u>
<i>Ad Petri Cathedram</i> (1959)*	<i>Ecclesiam Suam</i> (1964)	[No Encyclicals Issued During Reign]	<i>Redemptor Hominis</i> (1979)	<i>Deus Caritas Est</i> (2005)	<i>Lumens Fidei</i> (2013)
<i>Sacerdotii Nostris Primordia</i> (1959)*	<i>Mense Maio</i> (1965)		<i>Dives in Misericordia</i> (1980)	<i>Spe Salvi</i> (2007)	<i>Laudato si'</i> (2015)
<i>Princeps Pastorum</i> (1959)*	<i>Mysterium Fidei</i> (1965)		<i>Laborem Exercens</i> (1981)	<i>Caritas in Veritate</i> (2009)	
<i>Mater et Magistra</i> (1961)	<i>Christi Matri</i> (1966)		<i>Slavorum Apostoli</i> (1985)		
<i>Aeterna Dei Sapientia</i> (1961)	<i>Populorum Progressio</i> (1967)		<i>Dominum et Vivificantem</i> (1986)		
<i>Paenitentiam Agere</i> (1962)	<i>Sacerdotalis Caelibatus</i> (1967)		<i>Redemptoris Mater</i> (1987)		
<i>Pacem in Terris</i> (1963)	<i>Humanae Vitae</i> (1968)		<i>Sollicitudo rei Socialis</i> (1987)		
			<i>Redemptoris Missio</i> (1990)		
			<i>Centesimus Annus</i> (1991)		
			<i>Veritatis Splendor</i> (1993)		
			<i>Evangelium Vitae</i> (1995)		
			<i>Ut unum Sint</i> (1995)		
			<i>Fides et Ratio</i> (1998)		
			<i>Ecclesia de Eucharista</i> (2003)		

*Note: Encyclical letters marked with an asterisk have been excluded from the analysis.

1. *Stewardship Ethic*: “In this framework, environmental problems are understood to be rooted in sin or alienation from God...tends to locate environmental problems and their

solutions at the individual level and thus does not push religions to consider the systemic or structural causes of environmental degradation...” (10)

2. *Eco-justice ethic*: “draws on biblical mandates to care for the poor, the weak, the powerless, and the most vulnerable in society and extends it to the environment” (ibid.).
3. *Creation Spirituality*: “was developed by Catholic thinkers, and it ‘attempts to reorient people to understand the proper place of humanity as part of a panentheistic creation as opposed to seeing humans as separate from creation and God outside of creation’...rejects religious anthropocentrism and argues that humans and nature are mutual partners in God’s cosmic plan” (ibid.). Creation spirituality bears many of the hallmarks of the anthropocosmic theological perspective, or the “cosmic common good” articulated by Scheid (2016).

As noted in Table 1, the documents examined spanned the reign of six Popes, comprising a total of 33 Encyclical letters. Beginning with the hypothesis that a marked doctrinal shift has taken place throughout the course of the last half-century, hypothesis-oriented motif coding techniques were applied to the Encyclical letters (Saldaña 2009), meaning (1) a systematic search was undertaken for the appearance of “man,” “human,” or “the poor” alongside “nature,” “the environment,” or “ecology” in these documents and (2) the context in which these key words and phrases appeared was then further analyzed. Coding was conducted manually by the author over a period beginning in February and ending in December of 2016. The 1961 document *Mater et Magistra* was the first document near the proposed historical time period which contained substantial and explicit evidence of a theological and ethical stance on the relationship between human beings and nature, which served as a baseline for the analysis. The documents historically prior to this work have been excluded from the analysis (see asterisk at the foot of Table 1).

Evidence of a transition from an explicitly anthropocentric ethic, to stewardship, eco-justice, and later, creation spirituality is evident over the period of time examined below.

John XXIII and Paul VI: From “Mother and Teacher” to “Peace on Earth”

1960 was a big year for Catholics in the United States, bearing witness to the election of the first Catholic U.S. president, John F. Kennedy. Yet in the 1961 Encyclical *Mater et Magistra*, Pope John XXIII (1961) expressed little that might indicate the current direction of the Church regarding creation care. The *Mater et Magistra* (“Mother and Teacher”) Encyclical is concerned primarily with establishing ethical and political standards upon which to base a just economic policy. In particular, “Genesis relates how God gave two commandments to our first parents: to transmit human life—‘Increase and multiply’—and to bring nature into their service—‘Fill the earth, and subdue it.’ These two commandments are complementary. Nothing is said in the second of these commandments about destroying nature. On the contrary, it must be brought into the service of human life” (196-7). Yet John XXIII (1961) admonishes: “According to sufficiently reliable statistics the next few decades will see a very great increase in human population, whereas economic development will proceed at a slower rate. Hence, we are told, if nothing is done to check this rise in population, the world will be faced in the not too distant future with an increasing shortage in the necessities of life” (186).

The Pope subsequently challenges this data, stating: “we do not seem to be faced with any immediate or imminent world problem arising from the disproportion between the increase of population and the supply of food” (188) and that “Besides, the resources which God in His goodness and wisdom has implanted in Nature are well-nigh inexhaustible, and He has at the same time given man the intelligence to discover ways and means of exploiting these resources for his own advantage and his own livelihood” (189). The solution is made explicit:

The real solution of the problem is not to be found in expedients which offend against the divinely established moral order and which attack human life at its very source, but in a renewed scientific and technical effort on man's part to deepen and extend his dominion over Nature (189).

The tension between currents in secular environmentalism and the Church's teachings regarding reproduction is evident here, and will be revisited later. Yet this interpretation of Scripture Lynn White (1967) would likely recognize: the natural world exists for the benefit of human beings, its resources are abundant, and that it is the duty of human beings to conquer nature using science and technology.

Just two years later, a tension with the aforementioned faith in science and technology manifests itself with a call in *Pacem in Terris* (1963), as John XXIII calls for "Integral education" in a world in which "the amount of energy devoted to the study of secular subjects is all too often out of proportion to that devoted to the study of religion" (153). At the same time, this Encyclical addresses another potent moral conundrum that had arisen out of scientific and technical efforts—the ongoing Cold-War-fueled arms race (109-13). In the same 1963 Encyclical John XXIII (1963) declared,

That a marvelous order predominates in the world of living beings and in the force of nature, is the plain lesson which the progress of modern research and the discoveries of technology teach us. And it is part of the greatness of man that he can appreciate that order, and devise the means for harnessing those forces for his own benefit. But what emerges first and foremost from the progress of scientific knowledge and the inventions of technology is the infinite greatness of God Himself, who created both man and the universe (2-3).

John XXIII is somewhat more circumspect in his examination of the role of science and technology, hinting at the tension between education in technical matters and the exclusion of religious training in modernity. The destructive power of the proliferation of nuclear weaponry turns the tide away from an unalloyed faith in technology toward a more *theocentric* understanding, which arguably anticipates later Papal critiques of technical domination and its relevance to an evolving human-environment relationship.

In his first Encyclical letter, *Ecclesiam Suam* (1964), Paul VI calls for a deep re-examination of the Church and its relationship with the external world. *Ecclesiam Suam* (“Paths of the Church”) also draws further attention to technical developments—and problems—that inhere in modernity and indicates a turn toward economic concern via a critical examination of the relationship between the “developed” and the “developing” world. While this Encyclical notes the place of “The spirit of poverty,” it also states explicitly that “This passing reference to its necessity and excellence does not, however, relieve Us of Our obligation of pointing out that zeal for poverty is no obstacle to the proper understanding and rightful application of the important laws of economics” (55). This is followed by the declaration that, “We can pass, where necessary, a calm and often severe judgment on wealth and the luxuries of life” (55). Further, this section, entitled *No Conflict with Economic Realities*, is followed by a section entitled *Supreme Position of Charity*, in which “Charity is the key to everything. It sets all to rights. There is nothing charity cannot achieve and renew” (56). Additionally, Paul VI makes note of global development, and how the development of modern economic laws “has been responsible for the progress of civilization, especially in its human aspects” (55).

Three years later, Paul VI (1967) issued *Populorum Progressio* (“The Development of Peoples”), critiquing “unbridled liberalism” and suggesting that,

These concepts present profit as the chief spur to economic progress, free competition as the guiding norm of economics, and private ownership of the means of production as an absolute right, having neither limits nor concomitant social obligations. This unbridled liberalism paves the way for a particular type of tyranny...*improper manipulations of economic forces can never be condemned enough*; let it be said once again that economics is supposed to be in the service of man (25-6, emphasis mine).

Paul VI critiques what some scholars might refer to as “market fundamentalism” (Kozul-Wright and Rayment 2007). Both this and John XXIII’s admonishment about prioritizing science and technology over religion are themes that appeared repeatedly in subsequent Encyclical letters. These themes are also familiar to social theorists with a focus on technological development, particularly the propensity to reduce moral problems to matters of technical know-how (See, for example, Stivers 1999).

While there is little in these works that deals explicitly with the environment (beyond the apparent anthropocentric “dominionism” of the 1961 Encyclical), the re-examination of science, technology, and economic forces offered by John XXIII and Paul VI paves the way for an ethic of creation care that would be recognizable to later generations. And indeed, as noted by member of the Pontifical Academy of Sciences Peter H. Raven (2016), “Pope Paul VI may be legitimately regarded as the first pope who fully comprehended the relationship between human progress, justice, and the environment” (253). As evident in these Encyclicals, by the time John Paul II became Pope in 1978, the Catholic Church’s official teachings had become more nuanced regarding the role of science and technology, free-market economic machinations, and the conquest of nature in relation to a broader project of increasing human humility, prosperity, and well-being.

John Paul II to Francis: A “Green Turn”?

In 1978, John Paul II became Pope, serving until 2005 and issuing fourteen Encyclicals. *Redemptor Hominis* and *Dives in Misericordia*, as well as *Laborem Exercens*, prove particularly illuminating. In 1979, John Paul II released his first Encyclical letter, *Redemptor Hominis*. Here, Pope John Paul II (1979), seemingly anticipating recent developments, offers explicit evidence of an ecological turn in mainstream Catholicism:

We seem to be increasingly aware of the fact that the exploitation of the earth, the planet on which we are living, demands rational and honest planning. At the same time, exploitation of the earth not only for industrial but also for military purposes and the uncontrolled development of technology outside the framework of a long-term authentically humanistic plan often bring with them a threat to man’s natural environment, alienate him in his relations with nature and remove him from nature. Man often seems to see no other meaning in his natural environment than what serves for immediate use and consumption. Yet it was the Creator’s will that man should communicate with nature as an intelligent and noble ‘master’ and ‘guardian,’ and not as a heedless ‘exploiter’ and ‘destroyer’ (15).

While it could be argued that the relationship between human beings and the natural world here remains somewhat instrumental, this passage indicated an increased awareness of the consequences of human behavior toward the earth. Elsewhere, the document reinforced the Church’s standing human-centered perspective: “The Church cannot abandon man... We are speaking precisely of each man on this planet, this earth that the Creator gave to the first man, saying to the man and the woman: ‘subdue it and have dominion’” (John Paul II 1979:14). In other words, John Paul II’s declaration represents clear evidence of an emphasis on *stewardship*, a human-centered religious environmental ethic rooted in sin and alienation from God, and the

nascent stirrings of a “green turn,” emerging from the highest office of the Church. One year later, John Paul II (1980) issued in *Dives in Misericordia* (“Rich in Mercy”), declaring that:

The state of inequality between individuals and between nations not only still exists; it is increasing. It still happens that side by side with those who are wealthy and living in plenty there exist those that are living in want, suffering misery and often actually dying of hunger...a defective machinery is at the root of contemporary economics and materialistic civilization, which does not allow the human family to break free from such radically unjust situations (11).

In his first two years as Pope, John Paul II addressed both the unreflective despoliation of the earth by human activities and offered strong words on the extent of global inequality and its relationship to the “defective machinery” of modern economic thought. Such language would be recognizable in the context of environmental sociology: much ink has been spilled in environmental sociology and related fields, citing an emphasis on material gain as the primary cause not only of poverty and rampant inequality, but also climate change, extinction of species, and an earth system generally over-taxed and “used unsustainably” by human beings (Buttel 2004; Daly 1996; Foster 1999; Klein 2014; York and Rosa 2003). The connection is still implicit, however, in 1980, and waited another decade to come to fuller fruition. An examination of the 1981 Encyclical letter *Laborem Exercens*, which deals specifically with the ethics of human work, proves illuminating. While Pope John Paul II (1981) speaks of “worker solidarity” in the context of “proletarianization” and “social justice,” implicitly critiquing specific dimensions of economic theory (8), he also argues:

Man is made to be in the visible universe an image and likeness of God himself, and he is placed in it in order to *subdue the earth*. From the beginning therefore he is called to work. Work is one of the characteristics that distinguish man from the rest of creatures,

whose activity for sustaining their lives cannot be called work. Only man is capable of work, and only man works, at the same time by work occupying his existence on earth. Thus work bears a particular mark of man and of humanity, the mark of a person operating within a community of persons. And this mark decides its interior characteristics; in a sense it constitutes his very nature (Blessing, emphasis mine).

Several times, the terms “dominion” and “subdue the earth” appear throughout this Encyclical letter, written two years after the bull which established Francis as patron saint of ecologists. However, in addition to devoting most of the Encyclical to addressing the problems of “labor and capital” as well as employment benefits and unionization (11-20), part of what John Paul II seems to have in mind is a restoration of the dignity of agricultural work, “in which man so eloquently ‘subdues’ the earth he has received as a gift from God and affirms his ‘dominion’ in the visible world” (21), concluding that “the expectation of a new earth must not weaken but rather stimulate our concern for cultivating this one” (27). This vision is compatible with a stewardship ethic, and the linkage between this doctrinal shift and present-day creation care movements’ emphasis on community efforts such as urban gardening as part of a more eco-centric and sustainable lifestyle (Baugh 2017) is evident. A form of pragmatism emerges from this Encyclical as well that can be applied to creation care, a responsible and transformative (but still human-centered) relationship between human and non-human that values work and eschews the familiar condemnation of “environmentalism” as an effort to reify the separation of humans and nature espoused in the widespread slogan, “Are you an environmentalist, or do you work for a living” (White 1996)? The value and dignity of agricultural work has precedents in movements that departed from mainstream Catholicism, such as the Catholic Worker Movement and its emphasis on farming and non-violence (Stock 2009; 2015). Yet it was not until New Year’s Day, 1990 that John Paul II (1990) explicitly acknowledged the danger of climate change in his World

Day of Peace address, delineating the interconnectedness of the ecological, technological, and economic domains and underscoring the moral duty to act:

In our day, there is a growing awareness that world peace is threatened not only by the arms race, regional conflicts and continued injustices among people and nations, but also by a lack of *due respect for nature*, by the plundering of natural resources and by a progressive decline in the quality of life. The sense of precariousness and insecurity that such a situation engenders is a seedbed for collective selfishness, disregard for others and dishonesty. Faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past. The public in general as well as political leaders are concerned about this problem, and experts from a wide range of disciplines are studying its causes. Moreover, a new *ecological awareness* is beginning to emerge which, rather than being downplayed, ought to be encouraged to develop into concrete programmes and initiatives. Many ethical values, fundamental to the development of a *peaceful society*, are particularly relevant to the ecological question. The fact that many challenges facing the world today are interdependent confirms the need for carefully coordinated solutions based on a morally coherent world view (1-2, emphasis in original).

This work is the first explicit indicator of a new direction for the Church, more clearly anticipating the *Laudato si* Encyclical. In other words, by 1990, many of the precedents upon which Francis would draw a quarter of a century later were already in place, and some of them had roots in the Encyclicals of John XXIII and Paul VI. The stewardship ethic gave way to eco-justice in the highest office of the Catholic Church a decade before the turn of the century.

The developments that culminate in *Laudato si* were evident in much of Benedict XVI's contributions to doctrine. The connection between Benedict and Francis, particularly on environmental issues, is difficult to ignore. Here, it was more instructive to begin reporting the

results of the analysis with the work of Francis and work backward through Benedict XVI's Encyclical letters toward John Paul II. A more explicitly ecological ethic begins to take shape, but that shape is much clearer when examined from 2015 than from the late 1990s, and contains the fruits of some of the earlier seeds planted by Paul VI and John XXIII.

Francis (2015) shows his concern for the poor throughout *Laudato si*, underscoring, in particular, the interconnectedness between its numerous themes:

I will point to the intimate relationship between the poor and the fragility of the planet, the conviction that everything in the world is connected, the critique of new paradigms and forms of power derived from technology, the call to seek other ways of understanding the economy and progress, the value proper to each creature, the human meaning of ecology, the need for forthright and honest debate, the serious responsibility of international and local policy, the throwaway culture and the proposal of a new lifestyle (16).

Such a statement might seem more at home in a book of social theory than a papal Encyclical letter, yet such a statement is not without rather extensive pontifical precedent. Francis notes that, in the 2009 Encyclical *Caritas in Veritate* (Charity in Truth), his predecessor Benedict XVI

likewise proposed “eliminating the structural causes of the dysfunctions of the world economy and correcting models of growth which have proved incapable of ensuring respect for the environment.” He observed that the world cannot be analyzed by isolating only one of its aspects, since “the book of nature is one and indivisible,” and includes the environment, life, sexuality, the family, social relations, and so forth. It follows that “the deterioration of nature is closely connected to the culture which shapes human coexistence” (6).

The Catholic moral framework is intended to be all-encompassing, ecological—what Peter Berger (1967) called a “re-naturalization of ethics” (122), suggesting that Catholicism’s future possibilities regarding catalyzing ethical change may be linked to its ability to establish a coherent moral and ontological cosmos, connecting the human to the divine, and revealed religion to the cosmos as understood by scientific endeavor (121-22). Some of the content of this position is echoed among secular environmentalists, as well. Earth Policy Institute President Lester R. Brown’s argument that “the environment was not part of the economy, as many corporate planners and economists believe, but instead that the economy was part of the environment” (xv). Yet, as will be investigated further below, there are also serious points of contention between Catholic doctrine and secular environmentalism.

Here, an additional “turn” toward *creation spirituality*, or an *anthropocosmic* perspective, seems to be taking place, a sizable departure in a relatively short period of time (given the enduring legacy of the Church) from an ethic predicated on the domination of nature to one which increasingly views human beings not merely as stewards of creation but connected to both nature and to God, and imbued with a moral duty to protect creation. One can find the first sign of this transition being made explicit nearly two decades before *Laudato si* in the Encyclical letter *Fides et Ratio* (1998) by John Paul II, in which he asserts that “There is thus no reason for competition of any kind between reason and faith: each contains the other, and each has its own scope for action” (17). By *Laudato si*, the critique of technological modes of understanding is expressed through far different language. “This sister [Mother Earth] now cries out to us because of the harm we have inflicted on her by our irresponsible use and abuse of the goods with which God has endowed her” (Francis 2015:2). Gone is the insistence upon technology as the saving grace in the face of human activity potentially overtaxing the Earth. This is *creation spirituality*

in full form, a new cosmic perspective grounded in a God at once transcendent and immanent (Scheid 2016:15-44).

Tensions and Limitations

In 1968, near the height of widespread social upheavals related to racial, sexual, economic, and environmental issues, Pope Paul VI issued the controversial Encyclical letter *Humanae Vitae*, which reaffirmed the Catholic Church's position on sex and reproduction, stating that,

We are obliged once more to declare that the direct interruption of the generative process already begun, and, above all, all direct abortion, even for therapeutic reasons, are to be absolutely excluded as lawful means of regulating the number of children. Equally to be condemned, as the magisterium of the Church has affirmed on many occasions, is direct sterilization, whether of the man or of the woman, whether permanent or temporary.

Similarly excluded is any action which either before, at the moment of, or after sexual intercourse, is specifically intended to prevent procreation—whether as an end or as a means (Paul VI 1968: 13-15).

What is more than implied here stands as a direct challenge to one line of thinking regarding secular environmentalism: the problem of overpopulation. More recently, in *Laudato si'*, Pope Francis (2015) offers his own argument against the *population question*:

Instead of resolving the problems of the poor and thinking of how the world can be different, some can only propose a reduction in the birth rate. At times, developing countries face forms of international pressure which make economic assistance contingent on certain policies of 'reproductive health'... To blame population growth instead of extreme and selective consumerism on the part of some, is one way of refusing to face the issues. It is an attempt to legitimize the present model of distribution, where a minority believes that it has the right to consume in a way which can never be

universalized, since the planet could not even contain the waste products of such consumption (50).

Paul Ehrlich and John Harte (2016) offer a response to this position, as reiterated in the most recent Catholic document: “The Pope’s recent Encyclical on climate change...overlooks a crucial incompatibility at the heart of the climate change problem: marrying shared and sustainable development with demographic growth” (904). Additionally, Ehrlich and Harte argue that,

Attempts to frame the issue as solvable by either more equitable distribution or by restricting the number of people miss two essential factors that link these differing viewpoints. One is the ever-dwindling pool of resources and ecosystem services as a result of the demands of a growing population on the environment. The second is the increasing difficulty of achieving the forms of governance needed to more equitably distribute resources on an ever more crowded planet (904).

Though it would seem *apropos* to draw attention to this tension, this is a broader and deeper debate than can be tackled in the context of this work. Future research is needed in this area, in regard to Catholicism, and in a broader sense—the question of population growth and its relation to environmental and social justice issues more broadly is quite contentious, and requires further, and more nuanced, consideration.

Additionally, a tension at the intersection of religion and science is made manifest in the increasing challenges to reliance on technological transformations. The pontifical language echoed a contention, seemingly more broadly shared at present, that the Enlightenment reliance on science, technology, and human reason has limitations. Nietzsche seemed to understand this, as did Weber, who wrote that “after Nietzsche one could no longer look to science to free us from political decisions or give meaning to life” (Antonio 2015). In the Encyclical letter *Lumen Fidei* (“The Light of Faith”) Francis (2013) expands upon this idea, arguing that it is faith that

has been cast aside in post-Enlightenment hubris. It is perhaps for this reason that this synthesis is warranted, as the means of connecting the standing tensions, and insights, between science, technology, and religion to the ecological and economic dimensions of modernity. There are those in secular environmentalist arenas who have delved into many of the problems that are addressed in the past half century of papal Encyclicals, including ecological degradation and widespread poverty, and increasingly environmental issues may mark a place where religious and secular scholars may examine these relationships, and their broader implications. As Mary Evelyn Tucker and John Grim of the Forum on Religion and Ecology note, “With 1.2 billion Catholics on the planet, the potential for attention to the environment and climate change is unprecedented” (Tucker and Grim 2016: 216).

This brings things full-circle, back to the question of fact and value, raised anew in the context of environmental problems and global inequality. Earlier I noted the difficulty of maintaining a separation between pursuing what is known and proclaiming what should be done, ultimately because environmental problems are *moral* problems and not a purely empirical ones. Of course this is not to say that such judgments cannot, or should not, be based “on the results of the best scientific research today” (Francis 2015: 14), as Pope Francis insisted in *Laudato si*. In this context, it becomes necessary to engage on a level of analysis more typically populated by social theorists, theologians, and philosophers, where discussions of worldviews and moral frameworks re-enter the fray.

By implication, however one ultimately views the moral framework proposed by the Catholic Church over the past half a century, it is a moral framework which deserves attention, discussion, engagement—while religion *qua* religion demands obedience to principles (which are neither as static nor as unquestioningly adopted as critics of religion seem inclined to

suggest), ethics and politics demand a rather different art. In ethics, the impetus is toward establishing *standards*, levels below which human dignity and “the good” cannot materialize (see Smith 2010). Secular thinkers are often reminded that it is from religious worldviews that most individuals draw these standards; religious thinkers may be reminded by secular thinkers in turn that such standards may not be limited to specific religious worldviews. We must thus become familiar with the moral frameworks—moral *orders*, as Farrell (2015) refers to them—through which new dialogue and mobilization may occur. Any global effort to combat environmental threats, present and future, is likely to require an unprecedented degree of cooperation between peoples from different cultures, religions, political ideologies, social strata, and ethnic groups—precisely the boundaries across which human beings so often divide.

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