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Religious Identity and Its Impact on Environmental Beliefs and Behaviors

Kaylise Algrim

A Thesis Submitted in Partial Fulfillment of the Requirements for the degree of
Master of Science in Experimental Psychology with a Concentration in Behavioral Sciences

In

The Department of Psychology

Seton Hall University

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Seton Hall University
Department of Psychology
Report of M.S. Thesis Defense

To be completed by the *Student and Principal Advisor* and filed with the Director of the Graduate Studies within 72 hours of the completion of the Thesis defense meeting.

We have examined Kaylise Algrim, **Student ID** 11556193

Thesis Title Religious Identity and Its Impact on Environmental Beliefs and Behaviors

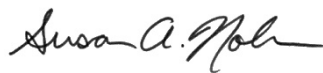
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Approval Signatures:

Principal Advisor



Reader



Reader



Dissenting Signatures:

Comments

Abstract

For many years, research into religion and environmentalism focused on affiliation with a religious institution as it correlated with environmental attitudes (Boyd, 1999; Hand & Van Liere, 1984). This perspective did not account for differences in religious attitudes among members of the same religion and also missed the ways religious identity can shape other views. Newer research into religious identity as a factor in environmentalism has highlighted religion as a personal and social construct which can positively influence environmental beliefs (Hedlund de-Witt et al., 2013; Garfield et al., 2014). This study used a psychosocial approach and surveyed 286 undergraduate university students on the influence of two measures of psychosocial religious identity, religious orientation and religious identity maturity, on stated environmental beliefs and behaviors. Other values, ecocentrism and anthropocentrism, were also analyzed. The results indicate religious identity can play a positive role in pro-environmental behavior and showed a significant positive relationship between religious orientation and environmental behaviors. Additionally, ecocentric and anthropocentric views independently influenced environmental beliefs and behaviors. Further, ecocentrism and religious orientation were both significant in a model predicting pro-environmental behaviors. Future research into how religious self-identity influences environment actions should consider the positive effects that religion can have on environmental behaviors. Further, future research should explore other ways a psychosocial approach to religion could illuminate environmental attitudes and actions.

Keywords: religious psychology, environmental psychology, psychosocial identity

Religious Identity and Its Impact on Environmental Beliefs and Behaviors

Environmental psychology is a quickly evolving field, one which is adapting to new problems and visualizing new solutions in response to pressing environmental concerns. New questions and new angles can illuminate how we approach these issues. One question within the field is how religion affects environmental attitudes. For many years, psychological research into religion's effects on environmentalism focused largely on affiliation and group identity. The majority of studies examining the relationship between religion and environmentalism have used only the most basic definitions of religion, such as claimed affiliation or attendance estimates. Further, religion has been treated as a uniform concept, affecting all those who claim it uniformly. This study took a broader view on religion and explored how religion as a personal and social entity could impact environmental beliefs and behaviors in heretofore unexplored ways.

Conservative Christians in the United States statistically show greater skepticism about climate change and have more negative views on conservation (Boyd, 1999). To explore reasons for this negative relationship, several studies have looked at environmental values among religious communities with different political cultures. One study looked at active churchgoers in the predominately white and Christian area of Wheaton, Illinois and found that belief in biblical literalism negatively related to positive responses to pro-environmental policy (Guth, 1995). Other studies have countered this narrative of religious affiliation as a negative predictor of environmental concern and looked at the intersection of religious and environmental groups. One study looked at Christian ecological groups and found a connection between religious belief and positive assessments of environmental policy (Shaiko, 1987). Although these studies give insight into religious and environmental attitudes in particular cultural groups, they are difficult to

generalize and hard to reconcile with other possible confounding cultural variables, especially political orientation.

In recent years, studies have focused more directly on subjective religious belief and worldview's impact on environmental attitudes. One study found that religious belief could positively relate with environmental behavior when looking at certain religious values alongside strength of belief. In the analysis of a 1992 national survey, religious salience did not independently influence environmental behaviors. However, when the model added dominion views as a predictor, religious salience positively influenced environmental behaviors. This means with the same level of dominion beliefs, individuals for whom religion was more salient showed stronger pro-environmental behaviors (Wolkomir, 1997). Newer research also supports a positive relationship between mature, intrinsically motivated religious beliefs and pro-environmental belief (Garfield et al., 2014, Hedlund de-Witt et al., 2013). The present study continued in this new vein of research, exploring individual religion as a psychosocial approach rather than religious affiliation in relation to pro-environmental belief and behaviors. It was hypothesized that individuals with more mature religious identities and stronger motivations toward religiosity would show a greater tendency to hold pro-environmental belief and report more environmental behaviors.

Review of Literature

Historical Roots of Religion – Environmental Study

Lynn White published the historical essay “On the Roots of Our Ecologic Crisis” in 1967. The piece focused on a reading of Genesis 1:26: “Then God said, ‘Let us make man in our image, after our likeness. And let them have dominion over the fish of the sea and over the birds of the heavens and over the livestock and over all the earth and over every creeping thing that

creeps on the earth.’” White argued that the belief that nature existed for humans’ use deeply affected the Western psyche. He argued that the solidification of Western European Christianity coincided with the scientific revolution, and the growth of human scientific capacity was bolstered by Judeo-Christian dominion values. White claimed that Judeo-Christian ethics instilled in humans “mastery over nature” views, which provided a psychological mandate for unchecked industrial growth with dire environmental consequences.

The concepts White presented pitted religion against environmentalism, and the ideas faced significant criticism. Theologians believed the interpretation of the biblical text was overly narrow, and Christian environmentalists argued faith could have the exact opposite effect on environmental concern. Despite these rebuttals, the academic inquiry into environmentalism and religion was shaped by the essay and created two lines of thought that would dominate the literature. On one side, those who agreed with the essay’s underlying ideas argued that Christian belief created entitlement, or belief that human beings have “dominion” over nature. On the other, researchers that disagreed with the essay’s perspective argued that “stewardship” values, belief in human beings as caretakers of nature, encouraged pro-environmental attitudes.

In the first study to empirically examine the relationship between religion and environmental attitudes, researchers reached out to Washington state residents by mail survey ($n = 806$) and asked about religious affiliation, dominion values, and environmental beliefs (Hand & Van Liere, 1984). In the study, individuals who responded to the survey stated their religious affiliation, as well as the frequency with which they attended a religious service. The primary dependent variable was environmental concern, measured through a number of Likert-type scales on subjects including “Resource Conservation,” “Population Control,” and “Environmental Spending.” The results did not show significant relationships between religious attendance and

environmental concern overall; however, there was a negative correlation between both Catholic and Mormon identification with concern for overpopulation. The results also showed that Judeo-Christians held more mastery-over-nature views, on average, than non-Judeo-Christians. Of the respondents, 101 were non-Judeo Christians and they showed the highest percentage of individuals who disagreed with mastery-over-nature views. The authors point out that environmental belief could be affected by interaction with more conservative sects, as Baptists and Mormons were more likely to emphasize mastery over nature. Conversely, Episcopalians and Methodists showed fewer mastery-over-nature views.

This research was followed by a study from Eckberg and Blocker (1989) that analyzed whether personal importance of religion negatively related to concern for the environment, as well as specific beliefs like “biblical literalism.” Data were gathered by telephone surveys to residents of Tulsa, Oklahoma, ($n = 300$) and showed a negative relationship between belief in biblical literalism and concern for the environment. The dependent variables measured environmental concern using negative measures focusing on whether it is allowable to harm the environment for the sake of the economy and positive measures on protecting the environment at the expense of the economy. They also included measures particular to environmental concerns in the Tulsa area. Overall, the study showed support for White’s hypothesis that religious belief negatively correlates with environmental concern. Personal importance of religion positively correlated with willingness to use the environment to better the economy, and negatively related to belief in protecting the environment at the expense of the economy. Although the study supported White’s thesis, it is important to note that the sample was relatively small, specific to the area around Tulsa, Oklahoma.

The other side of the White thesis debate supported an alternative view of religion's impact on environmental belief. A study from Woodrum and Hoburn sampled adults from across North Carolina by phone interview ($n = 332$) to test the impact of religiousness, including religious salience and biblical literalism, on environmental beliefs (Woodrum & Hoburn, 1994). The dependent variables included concern about a controversial environmental issue and general support for environmental programs. The study used a number of measures on religion as independent variables, including whether individuals subscribed to the biblical interpretation of Genesis and whether they had dominion values. Interestingly, the variables were not significantly correlated, and the authors suggest individuals may hold contradictory views, particularly related to religious doctrine. The study did not find any significant results showing religious belief predicted mastery-over-nature attitudes, contrasting with previous results from Hand and Van Liere which found a positive relationship between biblical literalism and dominion views (1984).

The paper from Wolkomir and colleagues published in 1997 made the strongest case denying White's thesis and also refuted previous research, stating that religion positively affects environmental concern, and mastery-over-nature values do not negatively relate to environmental concern. The researchers analyzed data from a 1992 national survey of 1,228 participants. The researchers particularly looked at the predictive power of salience, or personal significance of religion, alongside biblical literalism to critically assess previous research. The dependent variables included reactions to the following statements: "Modifying the environment for human use seldom causes serious problems," "The environmental crisis has been greatly exaggerated," and "Economic growth is more important than environmental protection." An additional measure tested environmental behavior. The analysis found that neither biblical literalism nor religious salience had independent effects on environmental concern. The study

refuted previous claims that dominion values negatively impacted environmental belief and stated that earlier results should be discounted if they cannot account for how personally significant the tested beliefs were to the individual. The study found that both mastery-over-nature and stewardship views, the belief that man is meant to protect and serve nature, positively correlated with environmental attitudes when questions included content about personal significance of faith (Wolkomir et al., 1997).

Although there have been changes in overall thought, most empirical research supports a positive relationship between stewardship values and environmentalism, and a negative relationship between mastery-over-nature values and environmentalism; however, many studies used moderately sized samples with strong cultural influences that may have influenced their results. A study from sociologists Sherkat and Ellison (2007) attempted to reconcile the diverse results from previous empirical studies. They argued that the diversity in results could be accommodated by putting them in clear cultural context. They also emphasized that other lines of inquiry may be more fruitful to understanding attitudes about the environment. Sherkat and Ellison referenced a previous analysis of the 1993 General Social Survey, a long-term data collection project analyzing social and cultural trends in the U.S., which showed weak predictive power for all religious variables on environmental attitudes and stronger results from variables such as race, gender, and political orientation (Boyd, 1999). Sherkat and Ellison argued that future studies should focus on specific cultures and concrete beliefs, including fiscal policy beliefs and political affiliation, without making larger claims for how these variables might operate in different cultural environments.

There is good evidence that culture has a large effect on environmental belief. Additionally, research has shown a relationship between religious belief and environmentalism,

even across cultural contexts. A study from Schultz and Zelezny (2000) examined Christianity multi-nationally in English- and Spanish-speaking countries and found biblical literalism negatively related to environmental attitudes and religious importance positively related to environmental attitudes (Schultz & Zelezny, 2000). Another study replicated previous American work with a Spanish sample and found a negative relationship between literal belief in biblical text and environmental concern (Muñoz-García, 2013). These results suggest there may be a unifying factor that crosses cultural boundaries.

Schultz and Zelezny also noted that few studies exploring religion and environmental attitudes use the New Environmental Paradigm (NEP) (Schultz & Zelezny (2000). The New Environmental Paradigm was developed by Dunlap and Van Liere in 1978 and is one of the most widely used scales measuring pro-environmental concern (Dunlap et al., 2000; Dunlap & Van Liere, 1978). By using a widely accepted measure like the NEP, previous results may have been more consistent. Additionally, recent empirical studies on the relationship between religious belief and the environment have used motivational aspects to define religious variables (Gifford & Nilsson, 2014; Hedlund de-Witt et al., 2013) and found positive relationships between intrinsic religious orientations and environmental concern. These studies remove religion from sociological and affiliation-specific religious contexts by assessing religion as a psychosocial phenomenon that has unifying qualities across human experience.

Psychosocial Perspective: Religious Identity and Orientation

The psychosocial identity model was first introduced by Erik Erikson in 1950 in his book, *Childhood and Society*. The book described a model for identity development as a series of normative crises, whose successful resolution developed ego strength. In the model, ego strength is necessary for healthy adaptation to life and includes the development of a cohesive identity, a

sense of self that is understood internally and reflected back in interactions with others. The psychosocial model developed by Erik Erikson considers religion an important source of meaning-making, and Erikson's work created a theoretical perspective for an identity-based psychology of religion. In the late 1960's, James Marcia used this model to describe identity statuses which could be tested empirically (Marcia, 1966).

Marcia defined four identity statuses: identity diffusion (low exploration, low commitment), identity foreclosure (low exploration, high commitment), identity moratorium (high exploration, low commitment), and identity achievement (high exploration, high commitment). A successful resolution of a crisis entails exploration and commitment, resulting in identity achievement, the goal for identity development described by Erik Erikson. Identity achievement results from exploration, or a personal investigation of what is meaningful to the individual, and achievement, a conclusion of this investigation with a clear understanding of one's views that is internally and externally consistent. The opposite pole of identity achievement is identity diffusion, in which the individual has not successfully explored or committed to an identity or resolved a given crisis. Insufficient exploration or commitment result in immature identity statuses. These immature statuses are identity moratorium or foreclosure, in which either commitment or exploration has been left unresolved. These identity statuses allow researchers to look at identity maturity as a testable entity and can also be used to explore identity status in relation to particular facets of identity, like religion, using a scale called the Objective Measure of Ego Identity Status (Bennion & Adams, 1986). A recent work from Jia and colleagues (in press) showed that religious identity maturity is an important predictor in religious commitment. The study assessed religious identity maturity as a mediating variable between religious fundamentalism and later religious commitment. The result showed religious identity

maturity mediated the relationship between early religious fundamentalism and later religious commitment. This study appears to be the first to measure religious identity maturity and environmentalism.

Although religious identity maturity is one framework for psychosocial religious study, several other structures use Eriksonian principles to study religion. Gordon Allport used many of Erikson's ideas to construct a theory of religion as a function of personal identity by defining orientations that motivate individuals to religious engagement. Allport defined two overarching religious orientations, intrinsic and extrinsic in the book, *The Individual and His Religion* (1950). "Intrinsic" orientation was defined as religion as its own end, meaning a religious individual chooses to practice religion because they believe it is the right thing to do. "Extrinsic" religion is religion as a means to something else. For example, extrinsic religion may be a drive toward religion for the social benefit of a religious community, or the drive toward religion for the emotional comfort and support religion provides. (Allport & Ross, 1967).

In 1982, Batson and Ventis released a book which revisited the scale. The book used the original framework of intrinsic-extrinsic religion but reformulated a number of questions and added a third category they saw as lacking, quest. The quest orientation is based on complexity, doubt and speculation around important existential questions. All three categories measure motivation related to religious belief and practice, and someone who is strongly motivated to participate in their religion would score highly on all three metrics, as evidenced in a study comparing Princeton seminary students with the general student body (Batson & Ventis, 1982). In 1991, Batson and Schoenrade published a revised version of the scale which used the same three categories and addressed some validity questions.

A recent study examined religious beliefs in connection with environmental belief among American undergraduates ($n = 1,311$) (Garfield et al., 2014). The study used the Religious Maturity Scale (Dudley and Cruise, 1990), based on research from Allport (1967) and Batson and Ventis (1982). Environmental belief was measured using the NEP scale, which included a question created for the study on whether the Earth should be protected for future generations, and a question on whether governmental funds should be spent on environmental protections as environmental variables. The study found a positive relationship between religious maturity and rating on the NEP scale, and a positive relationship between religious maturity and belief in protecting the earth for future generations. Another study in the same series examined oneness beliefs, a series of beliefs rooted in Buddhist teachings which emphasize spiritual oneness among all living things. The study used 15 oneness belief measures exploring spiritual meaning and based on the work of a Buddhist philosopher, Daisaku Ikeda (Garfield et al., 2014). The study found spiritual oneness had positive correlations with pro-environmental attitudes and negatively correlated with dominion beliefs (Garfield et al., 2014). This study is part of a larger trend toward a psychosocial perspective on religion and its relation to environmental beliefs and behaviors.

A recent study conducted in the Netherlands examined contemporary spirituality, belief in a monotheistic god, and inner growth, a measure assessing interior life and belief in life as a process of growth. Unlike previous studies that emphasized group identification or religious attendance to assess environmental attitudes, the study looked at different types of personal beliefs to assess whether philosophical attitudes, including religious beliefs, predicted environmental beliefs and sustainable behaviors. The researchers polled a representative sample of the Dutch population ($n = 952$) through online survey and found inner growth, contemporary

spirituality, and belief in a monotheistic god all correlated positively with connectedness with nature and willingness to change behavior for the good of the environment, with belief in a monotheistic god correlating less strongly (Hedlund de-Witt et al., 2014). By focusing on meaningful frameworks to the individual, it is possible to see differences in religious attitudes and explore impacts on environmental belief that may have been overlooked. Although education, social group, and cultural upbringing play important roles in environmental belief, identity-based study has meaningful insight to offer on environmental belief, as evidenced by previous studies using dimensional religious scales to explore other beliefs and behaviors.

The majority of research done on the topic of religion and environmentalism focused on a sociological view of religion and explored how religious participation, affiliation, and fundamental belief impacted environmental attitudes. Many of these studies took a narrow view of religion, particularly focusing on Judeo-Christian religions in the United States, and used wide-ranging measures to test for environmental belief. One such study from 1993 examined religion and attitudes toward the environment using only belief in the inerrancy of the bible as the independent measure and only willingness to spend money on the environment as the dependent measure (Greeley, 1993). This study and many others used variables that were often confounded by cultural factors and difficult to generalize from their specific contexts. Many studies also failed to account for the personal significance of religion in individuals' lives, or the wide range of ways to be religious among people within the same sect. This narrowness in the research created a narrative that could either be affirmed or refuted but drew attention away from other meaningful avenues of inquiry.

Beliefs and Behaviors

The Theory of Planned Behavior states that actions are outputs of behavioral, normative and control beliefs (Ajzen & Madden, 1986). The model has been used effectively in a number of disciplines, but it has particularly offered insight about environmental psychology. A study from Mancha and Yoder (2015) validated an environmental theory of planned behavior, which showed a series of beliefs that led to green behaviors, including green subjective norms. These norms are based in the belief that other people will approve of green behaviors, and they significantly predicted green behavioral intentions. In relation to environmental actions, this framework provides a structure for how beliefs form behaviors, as well as the ways those beliefs may interact.

The Present Study

There is a reasonably large body of research around religion and the environment. Much of this research focused on affiliation and attendance, ignoring the psychosocial aspects of religion (e.g., personal importance of religious belief) and its related impact on environmental attitudes and behaviors. This study focused on whether religious identity maturity and strength of religious motivation related positively to pro-environmental beliefs and behaviors. Recognizing the limitations of previous studies, this study focused on religious identity, rather than religious affiliation, as a predictor. Participants responded to questionnaires based on established measures of religious identity and orientation, as well as scales relating to environmental belief and behavior. As stewardship and dominion values have been noted as strongly related to people's environmental views, the study tested the comparable values of ecocentric and anthropocentric views as predictors for environmental belief and behavior and possible interactions with religious variables.

The study explored religious identity and the personal significance of religion without setting expectations about religious affiliation and fundamental religious belief. Several studies in the 1980's and 1990's sampled Conservative Christians in the United States to assess their concern for the environment. Political life in the United States was becoming increasingly factional and research done at the time focused on the possibility that Conservative Christianity was antithetical to environmentalism. This research downplayed the nuance and specificity of religion. This study explored religion as a fact of many people's lives and worldviews, recognizing people of different faiths may approach religion with similar attitudes, and individuals from the same sects may vary in motivation and intensity of feeling.

The study also investigated values in relation to religion and environmentalism. Several previously mentioned studies investigated the connection between religion and environmentalism and found positive relationships between stewardship values and pro-environmental attitudes. Relatedly, researchers found evidence for a negative relationship between dominion views and concern for the environment. These studies indicated that values about human beings' relationship with the environment can affect environmental beliefs and behaviors. Anthropocentric and ecocentric values assess belief about human beings' place in the natural world. Namely, anthropocentric views place humans as the central agents of life on earth, Although ecocentric views emphasize humans' interconnectedness with other life on Earth. These values map very closely on the religious values of dominion and stewardship, respectively. They have been used in environmental psychology studies on relationships between humans and nature (Kortenkampf & Moore, 2001; Hermann & Menzel, 2013), which show positive significant associations between ecocentrism and pro-environmental attitudes, and significant negative associations between anthropocentrism and pro-environmental attitudes.

With or without religious context, these values offer information about worldview's effect on environmental attitudes. In the context of religion, they show a potential influence on and possible mechanism of religious beliefs' impact on environmental beliefs and behaviors.

The study hypothesized that greater religious identity maturity and higher religious orientation score would individually predict pro-environmental beliefs and pro-environmental behaviors. It also hypothesized that ecocentric values would positively predict environmental beliefs and behaviors, and anthropocentric values would negatively predict environmental beliefs and behaviors. The study further predicted that ecocentric and anthropocentric values would have unique contributions to the relationships between religious and environmental variables.

Methods

Participants

In total, 286 participants were recruited from the participant pool in the Seton Hall University psychology department and completed the questionnaire. Undergraduate students who were over the age of 18 and fluent in English were included and received one course credit for participation. Participants who self-identified as "Atheist" or as having "No religion" were excluded from analysis but able to participate in order to earn course credit. The final sample consisted of 229 participants, as 57 participants were excluded for self-identifying as non-religious. The final sample was 75.5% female and 24.5% male, and the mean age was 20.2 years. Of the participants who identified as religious, 146 identified as Catholic, 13 identified as Protestant, 15 identified as Muslim, 19 identified as Non-Denominational Christian, 17 identified as Hindu, 2 identified as Jewish, 2 identified as Buddhist, and 15 identified as Other, a category which included Baptist, Presbyterian, Messianic Jewish, Coptic Orthodox, and Episcopalian. The majority of participants were white (46.7%), followed by Asian (21.8%), Hispanic/Latino

(17.5%), African American (7.45%), and Multiracial (4.4%). Five participants did not list their race/ethnicity.

Design

The study had a correlational design with a single participant group. There were four independent variables and two dependent variables, as well as two control variables. The four independent variables were religious identity maturity, religious orientation, ecocentrism and anthropocentrism, and the two dependent variables were environmental belief and declared pro-environmental behavior. Political orientation and gender were control variables.

Procedure and Measures

Participants were asked to report to classrooms in large groups and then online, following a change in procedure relating to the COVID-19 pandemic. All participants were given informed consent in accordance with Institutional Review Board approval for the study. The participants were evaluated by questionnaire, which they received through an email link. Participants received the same survey over Qualtrics in-person and online, and the change from in-person to online received IRB approval. Participants were also given a demographic questionnaire asking their age, gender, race/ethnicity, major, and political orientation. Political orientation was measured using a single question rating from 1 (Very conservative) to 7 (Very liberal). The next set of questions measured religious orientation, religious identity maturity, environmental belief, stated pro-environmental behaviors, and a measure on ecocentric and anthropocentric values. A power analysis was conducted using G power that determined .80 power and .05 effect size could be reached with 244 participants (total six tested predictors in a linear multiple regression).

Religious identity maturity was measured using the religious section of the Objective Measure of Ego Identity Status (Bennion, & Adams, 1986). The religion subscale has eight items

assessing identity status on the domains of religion. This scale ranges from 1 (Not true of me at all) to 7 (Completely true of me). “I’m not sure what religion means to me. I’d like to make up my mind, but I’m not done looking yet.” is an example of an item. A composite score was created as an index of religious identity maturity by subtracting identity diffusion, moratorium, and foreclosure from identity achievement (McLean & Pratt 2006). The previously reported reliability scores (Cronbach’s alphas) for the scales were relatively low, ranging from .51 to .70 (Alisat & Pratt, 2012).

Religious orientation was measured using the religious orientation scale from Batson and Schoenrade (1991), updated from Batson and Ventis’ original text (1982). The scale included 30 items measuring extrinsic, intrinsic, and quest orientations, which all assess motivation toward religiosity. There were nine questions relating to intrinsic religion, eleven questions relating to extrinsic religion, and ten questions relating to quest orientation. An example of an intrinsic item is, “It is important for me to spend periods of time in private religious thought and meditation.” An example of an extrinsic question is, “The purpose of prayer is to secure a happy and peaceful life.” Finally, an example of a quest item is, “For me, doubting is an important part of what it means to be religious.” The original quest subscale included 12 items, but I removed two questions based on factor analysis that noted poor measurement qualities for two questions (Leak, 2011). Participants were asked to rate their agreement with the items on the scale from 1 (Strongly agree) to 7 (Strongly disagree). In a previous study, the intrinsic scale had a reliability coefficient of .83, the extrinsic scale a reliability coefficient of .70, and the revised quest scale a reliability coefficient of .81 (Batson & Schoenrade, 1991).

Environmental beliefs were measured using The New Ecological Paradigm Scale (Dunlap et al., 2000), a 15-item measure using a 7-point Likert-type scale ranging from 1

(Strongly agree) to 5 (Strongly disagree). Participants rated items such as “The earth is like a spaceship with very limited room and resources” and “The balance of nature is very delicate and easily upset.” The previously reported reliability coefficient for the New Ecological Paradigm Scale was .83 (Dunlap et al., 2000)

Pro-environmental behaviors were measured using the Environmental Action Scale (Alisat & Riemer, 2015). The scale includes 18 items on a 5-point scale from 0 (Never) through 2 (Sometimes) to 4 (Frequently). The scale assessed both private and public environmental actions: “Personally wrote to or called a politician/government official about an environmental issue” and “Participated in nature conservation efforts (e.g., planting trees, restoration of waterways)” are examples of private and public actions, respectively. The previously reported reliability coefficient for the EAS was .92 (Alisat & Riemer, 2015).

Ecocentric and Anthropocentric values were measured using an adapted version of the Ecocentric and Anthropocentric Attitudes Toward the Environment Scale (Thompson & Barton, 1994). The scale includes Likert-type responses from 1 (Strongly agree) to 7 (Strongly disagree) in response to statements on beliefs about human beings’ place in relation to the natural world. Statements based on anthropocentric views included, “The worst thing about the loss of the rain forest is that it will restrict the development of new medicines.” A statement rating ecocentric views was, “Sometimes it makes me sad to see forests cleared for agriculture.” The original scale included statements assessing environmental apathy, which I did not include in this study. Ecocentric and anthropocentric values relate closely to stewardship and dominion values. As these concepts were more relevant for religious research and apathy was not, I decided to exclude apathy, and the final scale included 24 items. The previously reported reliability

coefficient for ecocentrism was 0.63 and for anthropocentrism was 0.58 (Thompson & Barton, 1994).

Results

The goal of the study was to look at the relationships among psychosocial religious identity and orientation, anthropocentric and ecocentric values, and environmental beliefs and behaviors. Means and standard deviations of the key variables are in Table 1. There was a positive correlation between religious orientation and environmental behaviors ($r = .175, p < .01$). There were also positive correlations between ecocentric values and pro-environmental behaviors ($r = .22, p < .01$), and between ecocentric values and pro-environmental beliefs (NEP) ($r = .44, p < .01$). Anthropocentric values were negatively correlated with NEP ($r = -.29, p < .01$), but not with pro-environmental behaviors ($r = .024, p = .720$).

The bivariate correlations (Table 2) indicate that there was not a significant correlation between religious identity maturity and pro-environmental belief ($r = -.022, p = .743$) and, likewise, the correlation between religious identity maturity and environmental behavior was not significant ($r = -.016, p = .805$). Religious orientation also did not significantly correlate with pro-environmental beliefs ($r = .007, p = .915$). Political orientation positively correlated significantly with pro-environmental belief ($r = .202, p = .002$) and pro-environmental behavior ($r = .265, p < .001$). Because participants who were liberal scored higher on pro-environmental beliefs and pro-environmental behaviors, political orientation was controlled in future analyses. When gender was added as a variable, being female positively related to pro-environmental belief ($r = .162, p = .014$), but not with pro-environmental behaviors ($r = .089, p = .182$). Gender was controlled in the analyses involving NEP.

Main Analyses

Hypothesis 1a and 1b

Hypothesis 1 stated that religious orientation and religious identity maturity would explain variance in the outcome variables of pro-environmental belief and pro-environmental behavior. Two hierarchical regression analyses (see Tables 4 and 5) were conducted to explore the influence of religious identity maturity and religious orientation on environmental belief (NEP) and pro-environmental behavior (PEB), after controlling for political orientation. I expected that the overall model fit (R^2), as well as the unique contribution of religious identity maturity and religious orientation to the total variance explained would be significantly different from zero. The first hierarchical regression analysis explored religious identity maturity and orientation as predictors for environmental belief (NEP) (Table 4). Political orientation and gender accounted for 5.4% of the variance ($R^2 = .054$, $F(2, 225) = 6.378$, $p = .002$). When religious identity maturity and orientation were added in the second step, the change in R^2 was .000 and was not statistically significant ($p = .987$). Neither religious identity maturity nor orientation significantly predicted NEP. Political orientation remained as a significant predictor ($b = .179$, $p = .009$). Thus, Hypothesis 1a was not supported.

In the regression exploring religious identity maturity and orientation as predictors for pro-environmental behavior (PEB), political orientation accounted for 7.0% of the variance ($R^2 = .07$, $F(1, 224) = 16.89$, $p < .01$). After controlling for political orientation, religious identity maturity and orientation added a unique contribution ($\Delta R^2 = .037$, $p = .01$) in predicting PEB. Religious orientation ($b = .20$, $p = .003$) uniquely predicted PEB, though the effect was relatively small. Political orientation remained a significant predictor for PEB ($b = .28$, $p < .01$); however, religious identity maturity was not a significant predictor ($b = .28$, $p < .01$). Thus, Hypothesis 1b was partially supported.

Hypothesis 2a and 2b

In the second set of hypotheses, it was expected that ecocentric/anthropocentric values would also predict NEP and PEB. Two similar hierarchical regression analyses (see Tables 6 and 7) were conducted. In the regression analysis (Table 6), political orientation and gender were entered in the first step, and religious orientation and identity were entered in the second step. Ecocentric and anthropocentric values were entered in the third step (Table 6). Anthropocentric and ecocentric values had independent influences on the variance for NEP ($\Delta R^2 = .29$, $F(2, 220) = 48.41$, $p < .01$) in addition to political orientation and religious variables. After adding ecocentric and anthropocentric variables, gender became non-significant. Both ecocentric values ($b = .46$, $p < .01$) and anthropocentric values ($b = -.35$, $p < .01$) predicted NEP uniquely. Political orientation ($b = .14$, $p < .01$), but not religious variables remained statistically significant in the final model. Thus, Hypothesis 2a was partially supported.

In a similar regression analysis on PEB (Table 7), anthropocentric and ecocentric values had independent influences on the variance for PEB ($\Delta R^2 = .035$, $F(2, 220) = 4.55$, $p = .012$). In addition to political orientation and religious variables, ecocentric values positively predicted PEB uniquely ($b = .191$, $p = .003$). Although political orientation ($b = .27$, $p < .01$) and religious orientation ($b = .17$, $p = .01$) remained statistically significant in the final model; however, anthropocentric values did not significantly predict pro-environmental behaviors. Thus, Hypothesis 2b was partially supported.

Additional Analysis: Participatory and Leadership PEB

The Environmental Action Scale measures the frequency of pro-environmental behaviors and distinguishes between two types of environmental behaviors, participatory and leadership actions (Alisat & Riemer, 2015). The two classifications show how participatory actions, like

educating oneself about environmental issues, may be distinguished from taking leadership actions, like organizing for a political group fighting climate change. The distinction is important, as participatory action requires less effort and personal risk than leadership action.

There was not a significant correlation between religious identity maturity and either leadership action ($r = -.118, p = .076$) or participatory action ($r = .050, p = .455$); however people who were motivated toward religion (measured by religious orientation) were more likely to act pro-environmentally in both participatory ($r = .151, p = .02$) and leadership actions ($r = .163, p = .01$). Moreover, participatory action was positively correlated with ecocentric value ($r = .373, p < .01$), Whereas ecocentric value did not significantly correlate with leadership action. Two hierarchical regression analyses were conducted on participatory and leadership actions after controlling political orientation and found that religious orientation ($b = .131, p = .038$) positively predicted participatory action ($R^2 = .209, p < .01$). Political orientation ($b = .224, p < .01$) and religious orientation ($b = .174, p = .010$) positively predicted leadership action ($R^2 = .096, p = .01$).

Discussion

This study explored religious and environmental beliefs, their intersection, and their corollary behaviors. Much research on this topic has focused on religious affiliation and attendance as negative predictors for environmental attitudes (Greeley, 1993; Guth, 1995). The current study approached religion differently. Instead of assuming religion affects all people uniformly, it looked at religion as a psychosocial construct, meaning a personal and social entity which affects self-understanding and worldview (Erikson, 1993). This perspective is denomination-neutral, meaning individuals from different religions are measured on the same religious identity factors. It also gives greater weight to individual experiences, showing how

different people may experience the same religion differently and how those distinctions can meaningfully affect other views, including environmental views. Within this context, the project explored whether a more nuanced, psychosocial model of religion would show positive relationships with environmental beliefs and behaviors. Additionally, past research has shown values relating to humans' dominance over nature can negatively influence environmental beliefs, and values relating to humans' duty to care for nature can positively influence environmental beliefs (Hand & Van Liere, 1984; Wolkomir et al., 1997). The study found that a psychosocial perspective is a fruitful approach to religious-environmental study, especially when including values and approaching religion in terms of religious motivation and drive.

Hypothesis 1 stated that religious identity maturity, which is the level of development of one's religious views, and religious orientation, which is the motivation toward religiosity, would positively predict both pro-environmental attitudes and behaviors. There was a small but significant positive relationship between religious orientation and pro-environmental behaviors, and religious orientation further predicted environmental behaviors (4% of unique variance) in a regression model after controlling for political orientation. The religious orientation scale measures motivation to religion and addresses three possible attitudes toward religion: intrinsic, extrinsic, and quest. These categories cover different reasons for individual participation in religion, including faith, social connection, and as a search for meaning. The overall score measures drive toward religious participation as a whole. As a psychosocial measure of religion, it gives particular insight into the social aspect of religion, as well as the internal motivations.

Interestingly, although previous research has shown a connection between introspective religious views and pro-environmental beliefs (Garfield et al., 2014; Hedlund de-Witt et al., 2013), neither intrinsic nor quest views showed a significant relationship with PEB. As shown in

Table 3, only extrinsic views showed a positive, significant relationship with pro-environmental behaviors. There are many possible reasons for the connection between religious orientation and pro-environmental behaviors. One possibility is that stated environmental behaviors and religious orientation both address forms of social norms. In this case, the relationship between religious orientation and pro-environmental behaviors is not based on a particular set of religious or environmental beliefs, but on a shared concern with normed behaviors. In addition to these quantitative data, the study also collected narrative samples connecting religious beliefs and environmental behaviors which have not yet been analyzed. These qualitative data could illuminate the mechanisms between types of religious orientation and pro-environmental behavior that are not currently clear.

The Theory of Planned Behavior states that actions are outputs of behavioral, normative and control beliefs (Ajzen & Madden, 1986). By this model, it is likely the pro-environmental behaviors in the current study are partially related to concerns about normatively correct actions. Likewise, religious motivation has a significant social norm component. There is evidence that defying religious social norms, such as stopping attendance, can negatively affect mental health and overall well-being in certain religious cultures. (Mannheimer & Hill, 2015). Both religious orientation and pro-environmental behaviors are rooted partially in social norms. This may have influenced the meaningful positive connection between religious orientation and pro-environmental behaviors in this study. In any case, this study shows a positive relationship between religious orientation and pro-environmental behaviors which has not previously been explored in other research.

The study used two different psychosocial religious measures, religious identity maturity and religious orientation, to examine religious identity in connection with environmental

behaviors. These two measures yielded different results in the context of the study. Unlike religious orientation, religious identity maturity did not correlate with either pro-environmental beliefs or behaviors. Religious identity maturity assesses personal significance and clarity of religious belief, Although religious orientation captures motivation and drive. Religious identity maturity also develops throughout the lifespan (McLean & Pratt, 2006), Whereas religious orientation is a static measure (Batson & Ventis, 1982). One possibility for the lack of statistically significant results was the sample's mean age. The sample consisted of undergraduate students, and all participants were in emerging adulthood. Emerging adulthood is a time of great transition and research has shown that many young people have not developed a mature religious identity by this stage (Algrim & Jia, 2019; Jia et al., in press; McLean & Pratt, 2006). It is possible that religious identity maturity is a more fruitful measure in later adulthood when religious self-identity is better established.

Neither religious orientation nor religious identity maturity positively correlated with pro-environmental beliefs, as measured by the NEP. Religion is an underexplored predictor for environmental beliefs, but other predictors are established influences on environmental beliefs. Political liberalism predicted pro-environmental belief in a regression model. Political conservatism also negatively correlated with religious identity maturity ($r = -.19, p < .01$), meaning less mature religious identities relate to more conservative views. It is possible these social and cultural factors influenced the results. It is also possible that in a more uniform cultural sample, religious beliefs would be easier to isolate as an influence. Psychosocial identity is fertile ground for study, but it is also complex, as all factors are influenced by culture. Although psychosocial religious factors did yield positive results as predicted, cultural factors, including political orientation, also influenced environmental and religious factors in ways that

are not clear. Future studies should address the relations among psychosocial and cultural factors regarding religion and the environment.

Hypothesis 2 stated that anthropocentric and ecocentric views would influence environmental belief and behavior in addition to the religious variables. As predicted, the study found that ecocentric views positively predicted environmental beliefs and anthropocentric views negatively predicted environmental beliefs. Additionally, in the regression model predicting environmental behaviors from religious variables, when values were added, ecocentrism, religious orientation and political orientation remained statistically significant. This study found ecocentric and anthropocentric views influence both pro-environmental beliefs and behaviors. This aligns with research established in the environmental theory of planned behavior which found preservation attitudes predicted green behaviors (Mancha & Yoder, 2015). Preservation attitudes are beliefs that the earth should be protected and closely align with both stewardship values and ecocentric views. This study supports those findings and supports the hypothesis that ecocentric views positively influence environmental beliefs and behaviors. The study also partially supported the hypothesis that anthropocentric views would negatively influence environmental beliefs but not behaviors. It is important to note that there could be a possible interaction between religious orientation and ecocentric value in predicting pro-environmental behavior, as both variables remained significant in the regression model. Future research should investigate this possible interaction.

The Lynn White Thesis states that Christianity instilled a belief in humans' dominion over nature, which resulted in carelessness toward the environment. Although this thesis runs counter to this study's hypothesis that religion can positively affect environmental beliefs and behaviors, it also emphasizes the same structure as the Theory of Planned Behavior which

underlies this project. This study and the Lynn White thesis frame behaviors as direct outputs of beliefs. Interestingly, the current study did not find that anthropocentric views negatively predicted pro-environmental behavior, contrary to its hypothesis and to the Lynn White thesis. Again, this may be from the age of the sample or other influential cultural factors; however, it may also be that ecocentric views or preservation attitudes better predict pro-environmental actions than anthropocentric views or dominion beliefs predict anti-environmental actions or environmental negligence.

There were several limitations in this study. First, the sample consisted of undergraduate university students. One explanation for the lack of statistically significant relationships between environmental variables and religious identity maturity is that the sample was largely in emerging adulthood, a period of extensive development, and participants may not have reached their mature religious identities. Also, this study looked across religions for a universal quality of religious engagement. Although more specific cultural contexts may not give universal insight into religion and the environment, specific religious cultures may have different belief structures related to culture which affect environmental beliefs and behaviors in specific ways. With a more culturally uniform sample or a sample in a later stage of development, it is possible religious values and environmental values would interact in more meaningful ways.

Additionally, the study is correlational in nature. Although religious orientation may influence environmental behaviors, the relationship may be bidirectional; it is possible that environmental behaviors influence religious orientation. The study was also based on self-report questionnaires, meaning the results are only as accurate as the participants have accurately and truthfully self-assessed. Particularly, the Environmental Action Scale depends on self-report measures for pro-environmental behaviors. It is possible that respondents overestimate their

positive behaviors to “fake good,” or to enhance their self-perception (Exner et al., 1963). Future analyses of collected narrative samples could illuminate the mechanism connecting environmental and religious beliefs, both in terms of relationship direction and accuracy of self-assessments. Examining these qualitative interviews could also show themes that are unclear from quantitative, correlational data.

There are also meaningful implications for this study. First, the study found religious orientation was a statistically significant predictor for pro-environmental behaviors. This gives evidence that future research into worldviews and culture that influence environment actions should consider the positive effects that religion can have on environmental behaviors. In particular, the relationship between religious orientation and environmental behaviors showed that the study of religious drive could be particularly useful in future research. Second, there are new potential applications for this research. This study found a connection between religious orientation and pro-environmental behaviors. There are many factors that influence environmental behaviors and religious participation. Particularly, both are strongly influenced by social behaviors. Although, there is evidence that religious communities can be skeptical of global warming and other environmental concerns, religious communities are complex and yield strong social influence. Because of this complexity, the same institutions that drive environmental skepticism may also drive environmental engagement. One possibility is that religious social communities could hold particular influence in setting pro-environmental norms and could be centers for pro-environmental organizing.

Religious affiliation and attendance have been measured relative to environmental attitudes, and they have been approached as static qualities that affect all religious people in the same ways. This study gives evidence that a psychosocial religious identity approach offers

nuanced insight into environmental beliefs and behaviors. It also shows how different religious drives, or stronger religious drives, may affect environmental behaviors across religions and illuminate individual differences. Unlike past studies relating to affiliation and attendance, this study found a positive predictive relationship between religious orientation and environmental behaviors. The study also found that ecocentric views and anthropocentric views can influence pro-environmental beliefs in positive and negative directions, respectively. These factors point to identity and worldview as key components to environmental beliefs and behaviors. Psychosocial religious identity is not the sole influence on environmental attitudes and actions; however, religious identity is a major piece of self-identity, and its influences on environmentalism have been understudied. This study points to new directions for future research, as well as new perspectives on how psychosocial approach, particularly religious identity and orientation, can influence environmental attitudes and actions.

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Table 1*Mean and Standard Deviation for Relevant Variables*

Variable	<i>M</i>	<i>SD</i>
Environmental Belief (NEP)	4.89	.70
Environmental Behavior	1.62	.50
Religious Diffusion	2.72	1.52
Religious Foreclosure	4.13	1.62
Religious Moratorium	3.14	1.66
Religious Achievement	5.11	1.06
Religious Identity Maturity	-4.89	3.32
Intrinsic Religion	4.41	1.34
Extrinsic Religion	4.15	.76
Quest	4.16	.97
Religious Orientation	4.24	.62
Anthropocentric Values	4.44	.86
Ecocentric Values	5.74	.75

Table 2*Correlations*

Variables	1	2	3	4	5	6	7
1. Religious Identity Maturity	--						
2. Religious Orientation	.226**	--					
3. Pro-environmental Belief (NEP)	-.022	.007	--				
4. Pro-environmental Behavior	-.016	.175**	.131*	--			
5. Anthropocentrism	-.102	.286**	-.290**	.024	--		
6. Ecocentrism	.084	.150*	.442**	.217**	.092	--	
7. Political Orientation (V. Con. – V. Lib)	-.190**	-.068	.202**	.265**	-.132*	.009	--

* $p < .05$. ** $p < .01$.

Table 3*Correlations for Religious Identity Maturity Statuses and Types of Pro-Environmental Behavior*

	Religious Orientation	Intrinsic Orientation	Extrinsic Orientation	Quest Orientation
Pro- Environmental Behavior	.175**	.061	.175**	.115
Participatory Environmental Behavior	.151*	.043	.147*	.117
Leadership Environmental Behavior	.163*	.073	.170*	.080

* $p < .05$. ** $p < .01$.

Table 4*Religious Variable Regression Models for Pro-Environmental Beliefs*

Variable	Model 1		Model 2	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Political Orientation	.179**	.058	.179**	.059
Gender	.119	.106	.119	.107
Religious Identity Maturity			-.006	.014
Religious Orientation			.010	.075
R^2	.054**		.054*	
ΔR^2	.000			

* $p < .05$. ** $p < .01$.

Table 5*Religious Variable Regression Models for Pro-Environmental Behaviors*

Variable	Model 1		Model 2	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Political Orientation	.265**	.040	.277**	.040
Religious Identity Maturity			-.008	.010
Religious Orientation			.196**	.051
R^2	.070		.108	
ΔR^2	.037**			

* $p < .05$. ** $p < .01$.

Table 6*Regression Models for Pro-Environmental Behavior including Values*

Variable	Model 1		Model 2		Model 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Political Orientation	.265**	.040	.277**	.040	.270**	.040
Religious Identity			-.008	.010	-.274	.010
Religious Maturity			.196**	.051	.171*	.054
Ecocentrism					.191**	.041
Anthropocentrism					-.008	.038
R^2		.070		.108		.143
ΔR^2		.		.037*		.035*

* $p < .05$. ** $p < .01$.

Table 7*Regression Models for Pro-Environmental Beliefs including Values*

Variable	Model 1		Model 2		Model 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Political Orientation	.202**	.058	.203**	.059	.139*	.050
Religious Identity			.000	.014	-.092	.012
Maturity						
Religious Orientation			.018	.075	.065	.067
Ecocentrism					.460**	.052
Anthropocentrism					-.347**	.048
R^2		.041		.041		.334
ΔR^2				.000		.293**

* $p < .05$. ** $p < .01$.

Appendix

Independent Variables

Religious Identity Maturity (Bennion & Huh, 1986)

Question phrasing: “Read each item and indicate to what degree it reflects your own thoughts and feelings. If a statement has more than one part, please indicate your reaction to the statement as a whole. Indicate your answer by rating your agreement on a scale from (1) strongly agree to (6 strongly disagree.”

A composite score will be created as an index of religious identity maturity by subtracting identity diffusion, moratorium, and foreclosure from identity achievement.

1. When it comes to religion, I just haven't found anything that appeals and I don't really feel the need to look. (Religion/Diffusion)
2. I don't give religion much thought, and it doesn't bother me one way or the other. (Religion/Diffusion)
3. A person's faith is unique to each individual. I've considered and reconsidered it myself and know what I can believe. (Religion/Foreclosure)
4. I'm not sure what religion means to me. I'd like to make up my mind, but I'm not done looking yet. (Religion/Moratorium)
5. Religion is confusing to me right now. I keep changing my views on what is right and wrong for me. (Religion/Moratorium)
6. I've gone through a period of serious questions about faith and can now say I understand what I believe in as an individual. (Religion/Achievement)
7. I attend the same church my family has always attended. I've never really questioned why. (Religion/Foreclosure)

8. I've never really questioned my religion. If it's right for my parents, it must be right for me.

(Religion/Foreclosure)

Intrinsic, Extrinsic, and Quest Scales (Batson & Schoenrade, 1991)

Participants will be asked to rate their agreement with the items on the scale from 1 to 9, ranging from (1) Strongly disagree to (9) Strongly agree.

Intrinsic Items

1. It is important for me to spend periods of time in private religious thought and meditation.
2. If not prevented by unavoidable circumstances, I attend church.
3. I try hard to carry my religion over into all my other dealings in life.
4. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services.
5. Quite often I have been keenly aware of the presence of God or the Divine Being.
6. I read literature about my faith (or church).
7. If I were to join a church group I would prefer to join a Bible study group rather than a social fellowship.
8. My religious beliefs are what really lie behind my whole approach to life.
9. Religion is especially important to me because it answers many questions about the meaning of life.

Extrinsic Items

1. Although I believe in my religion, I feel there are many more important things in my life.
2. It doesn't matter so much what I believe so long as I lead a moral life.

3. The primary purpose of prayer is to gain relief and protection.
4. The church is most important as a place to formulate good social relationships.
5. What religion offers me most is comfort when sorrows and misfortune strike.
6. I pray chiefly because I have been taught to pray.
7. Although I am a religious person I refuse to let religious considerations influence my everyday affairs.
8. A primary reason for my interest in religion is that my church is a congenial social activity.
9. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.
10. One reason for my being a church member is that such membership helps to establish a person in the community.
11. The purpose of prayer is to secure a happy and peaceful life.

Quest Items

1. I was not very interested in religion until I began to ask questions about the meaning and purpose of my life.
2. I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to my world.
3. My life experiences have led me to rethink my religious convictions.
4. God wasn't very important for me until I began to ask questions about the meaning of my own life.
5. It might be said that I value my religious doubts and uncertainties.
6. For me, doubting is an important part of what it means to be religious.

7. Questions are far more central to my religious experience than are answers.
8. As I grow and change, I expect my religion also to grow and change.
9. I am constantly questioning my religious beliefs.
10. There are many religious issues on which my views are changing.

Ecocentric and Anthropocentric Attitudes Toward the Environment Scale (Thompson & Barton, 1994)

Participants will rate level of agreement with each statement below from (1) Strongly disagree to (5) Strongly agree:

1. One of the worst things about overpopulation is that many natural areas are getting destroyed for development – Ecocentrism
2. I can enjoy spending time in natural settings just for the sake of being out in nature – Ecocentrism
3. The worst thing about the loss of the rain forest is that it will restrict the development of new medicines – Anthropocentrism
4. Sometimes it makes me sad to see forests cleared for agriculture – Ecocentrism
5. I prefer wildlife reserves to zoos – Ecocentrism
6. The best thing about camping is that it is a cheap vacation* - Anthropocentrism
7. It bothers me that humans are running out of their supply of oil – Anthropocentrism
8. I need time in nature to be happy – Ecocentrism
9. Science and technology will eventually solve our problems with pollution, overpopulation, and diminishing resources* - Anthropocentrism

10. The thing that concerns me most about deforestation is that there will not be enough lumber for future generations – Anthropocentrism
11. Sometimes when I am unhappy I find comfort in nature – Ecocentrism
12. One of the most important reasons to keep lakes and rivers clean is so that people have a place to enjoy water sports* - Anthropocentrism
13. It makes me sad to see natural environments destroyed - Ecocentrism
14. The most important reason for conservation is human survival – Anthropocentrism
15. One of the best things about recycling is that it saves money – Anthropocentrism
16. Nature is important because of what it can contribute to the pleasure and welfare of humans – Anthropocentrism
17. Nature is valuable for its own sake- - Ecocentrism
18. We need to preserve resources to maintain a high quality of life – Anthropocentrism
19. Being out in nature is a great stress reducer for me - - Ecocentrism
20. One of the most important reasons to conserve is to ensure a continued high standard of living – Anthropocentrism
21. One of the most important reasons to conserve is to preserve wild areas – Ecocentrism
22. Continued land development is a good idea as long as a high quality of life can be preserved – Anthropocentrism
23. Sometimes animals seem almost human to me – Ecocentrism
24. Human are as much a part of the ecosystem as other animals - Ecocentrism

Dependent Variables

New Environmental Paradigm (Dunlap et al., 2000)

Question wording: “Listed below are statements about the relationship between humans and the environment.

For each one, please indicate whether you Strongly Agree, Mildly Agree, are Unsure, Mildly Disagree, or Strongly Disagree with it.” Agreement with the eight odd-numbered items and disagreement with the seven even-numbered items indicate pro-NEP responses.

1 = Strongly Agree

2= Mildly Agree

3 = Unsure

4 = Mildly Disagree

5 = Strongly Disagree

Do you agree or disagree that:

1. We are approaching the limit of the number of people the earth can support.
2. Humans have the right to modify the natural environment to suit their needs
3. When humans interfere with nature it often produces disastrous consequences
4. Human ingenuity will insure that we do NOT make the earth unlivable
5. Humans are severely abusing the environment
6. The earth has plenty of natural resources if we just learn how to develop them
7. Plants and animals have as much right as humans to exist
8. The balance of nature is strong enough to cope with the impacts of modern industrial nations
9. Despite our special abilities humans are still subject to the laws of nature
10. The so-called “ecological crisis” facing humankind has been greatly exaggerated
11. The earth is like a spaceship with very limited room and resources

12. Humans were meant to rule over the rest of nature
13. The balance of nature is very delicate and easily upset
14. Humans will eventually learn enough about how nature works to be able to control it
15. If things continue on their present course, we will soon experience a major ecological catastrophe

Environmental Action Scale (Alisat & Riemer, 2015)

“In the last six months, how often, if at all, have you engaged in the following environmental activities and actions?”

0 (never) through 2 (sometimes) to 4 (frequently)

1. Educated myself about environmental issues (e.g., through media, television, internet, blogs, etc.)
2. Participated in an educational event (e.g., workshop) related to the environment.
3. Organized an educational event (e.g., workshop) related to environmental issues.
4. Talked with others about environmental issues (e.g., spouse, partner, parent(s), children, or friends).
5. Used online tools (e.g., YouTube, Facebook, Wikipedia, MySpace Blogs) to raise awareness about environmental issues.
6. Used traditional methods (e.g., letters to the editor, articles) to raise awareness about environmental issues.
7. Personally wrote to or called a politician/government official about an environmental issue.

8. Became involved with an environmental group or political party (e.g., volunteer, summer job, etc.).
9. Financially supported an environmental cause.
10. Took part in a protest/rally about an environmental issue.
11. Organized an environmental protest/rally.
12. Organized a boycott against a company engaging in environmentally harmful practices.
13. Organized a petition (including online petitions) for an environmental cause.
14. Consciously made time to be able to work on environmental issues (e.g., working part time to allow time for environmental pursuits, working in an environmental job, or choosing environmental activities over other leisure activities).
15. Participated in a community event which focused on environmental awareness.
16. Organized a community event which focused on environmental awareness.
17. Participated in nature conservation efforts (e.g., planting trees, restoration of waterways).
18. Spent time working with a group/organization that deals with the connection of the environment to other societal issues such as justice or poverty.



December 5, 2019

Kaylise Algrim



Re: Study ID# 2020-026

Dear Ms. Algrim,

At its December 4, 2019 meeting, the Research Ethics Committee of the Seton Hall University Institutional Review Board reviewed and approved your research proposal entitled “Religious Belief and Environmental Action” as submitted. This memo serves as official notice of the aforementioned study’s approval as exempt. Enclosed for your records are the stamped original Consent Form and recruitment flyer. You can make copies of these forms for your use.

The Institutional Review Board approval of your research is valid for a one-year period from the date of this letter. During this time, any changes to the research protocol, informed consent form or study team must be reviewed and approved by the IRB prior to their implementation.

You will receive a communication from the Institutional Review Board at least 1 month prior to your expiration date requesting that you submit an Annual Progress Report to keep the study active, or a Final Review of Human Subjects Research form to close the study. In all future correspondence with the Institutional Review Board, please reference the ID# listed above.

Thank you for your cooperation.

Sincerely,

Mara C. Podvey, PhD, OTR
Associate Professor
Co-Chair, Institutional Review Board

Office of the Institutional Review Board

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