

# THE SANCTIFICATION OF NATURE AND THEOLOGICAL CONSERVATISM: A STUDY OF OPPOSING RELIGIOUS CORRELATES OF ENVIRONMENTALISM\*

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REVIEW OF RELIGIOUS RESEARCH, 2001, VOLUME 42:4, PAGES 387 - 404

*We examined the association of two distinct religious forces, sanctification of nature and theological conservatism, with environmental beliefs (humans take precedence over the environment and human actions hurt nature), willingness to sacrifice personal funds for the environment, and behaviors (participation in green activities) among three samples - members, elders, and clergy affiliated with the Presbyterian Church, U.S.A. Across all three samples, greater theologically conservative views were associated with lower care for the environment; conversely, a stronger belief in the sanctification of nature was associated with greater pro-environmental beliefs and willingness to invest personal funds in the environment. Sanctification of nature was also predictive of greater environmentally supportive behaviors among elders and clergy. After controlling for demographic variables and theological conservatism, sanctification of nature accounted for unique, though modest, amounts of variance in environmental variables. Moderated regression analyses revealed only a few significant group differences. Specifically, greater belief in sanctification was associated with more pro-environment behavior among clergy than members. Also, theological conservatism had a greater negative effect on pro-environment behaviors of clergy than elders. These findings suggest that religious institutions have the potential to support or discourage care for the environment.*

Several studies indicate that religious organizations have played a pivotal role in mobilizing society's response to controversial social and political issues, such as abortion, homosexuality, school prayer, and the study of biological evolution as part of school curricula. The link between environmental attitudes and religion is another issue that has social and political implications across the globe. In 1967, White proposed that the Biblical injunction in the Old Testament to "...have dominion over....every living thing" (Gen. 1:28) predisposes Christians to exploit the earth's resources without regard for consequences (i.e. the "dominion doctrine"). Although members of Judeo-Christian religions endorse stronger attitudes of dominance over nature (Eckberg and Blocker 1989; Kanagy and Willits 1993) than non-members, it appears that the strength of this relationship varies across denominations, and is stronger for more theologically conservative groups (Eckberg and Blocker 1996; Guth et al. 1995; Guth et al. 1993; Hand and Van

Liere 1984). Furthermore, when the dependent variable is environmental behaviors rather than attitudes, the results are inconsistent. Some studies indicate no relationship between religious affiliation and pro-environmental behavior (Kanagy and Willits 1993), while others report a positive relationship between religious participation and environmental behaviors (Eckberg and Blocker 1996; Kanagy and Willits 1993; Wolkomir et al. 1997).

The "dominion" doctrine, initially proposed by White (1967), and emphasized by conservative Christians, is only one possible religious belief that shapes an individual's attitudes toward the environment. An alternative set of theological teachings that nature itself is a transcendent and holy object, since it is a creation of God and hence, deserves reverence and care, could serve as another religious belief yielding opposite effects from those of the dominion doctrine. A recent theoretical model developed by Mahoney and Pargament (2000) on sanctification is consistent with this theological orientation. This model proposes that when people perceive specific objects, such as the environment, as having spiritual character and significance, they will invest more resources to preserve and protect these aspects of life. Recent empirical efforts have supported this model in relation to marriage (Mahoney et al. 1999), parenting (Swank, Mahoney, and Pargament 1999), and general life goals (Mahoney and Pargament 2000). Thus, the present study examines the association between two potentially opposing religious beliefs, namely theological conservatism and sanctification of nature, and care for the environment as manifested by pro-environmental beliefs, willingness to sacrifice personal funds for the environment, and behaviors. The participants in the study are members, elders, and clergy from the Presbyterian Church, U.S.A.

## RELIGIOUS DOCTRINES ABOUT THE ENVIRONMENT

### *Dominion hypothesis and theological conservatism*

In his essay, "The historical roots of our ecologic crisis," White (1967) proposed that western civilization has exploited nature to the point of jeopardizing its own survival because of the Judeo-Christian religion's assumptions about humanity's right to dominate the earth. In support of this idea, White referred to the first few pages of the Old Testament in which God commands people to "be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth." (Gen. 1:28) White also asserted that, in its rigid monotheism, Christianity rejected the animism of pre-Christian cultures whose reverential attitudes toward nature grew out of the belief that every part of the environment, living and non-living, has a consciousness or spirit.

Fowler (1995) suggests White's thesis is especially applicable to more conservative religious groups. He has identified two factors that are thought to contribute to indifference or hostility towards the environmental movement among religious conservatives. First, conservative religious circles place a great deal of emphasis on the "end times" and eternal life in heaven (i.e., millennialist and dispensationalist beliefs). Presumably, such attitudes direct attention away from immediate, "earthly" concerns, such as environmentalism. Secondly, religious conservatives typically view environmentalism suspiciously as a culturally liberal, modernistic, and secular movement that is opposed to the values of fundamentalism (e.g., Hunter 1991; Page and Clelland 1978; cited in Eckberg and Blocker 1996).

Researchers have evaluated the extent to which Christian beliefs about human dominion over nature are prevalent, and their associations with concern for the environment. They have found considerable diversity across various denominations with respect to environmental doctrine (Hadden 1969; Rokeach 1969). Eckberg and Blocker (1989) reported that, among adult residents ( $N=300$ ) in Tulsa, Oklahoma, a 'belief in the bible' was a strong predictor of negative attitudes towards 'local' and 'general' environmental issues, after controlling for background variables and other religious measures (e.g., self-rated religiosity and religious affiliation). In a North Carolina sample ( $N=332$ ), Woodrum and Hoban (1994) found that individuals who hold dominion beliefs (master over nature orientation) were less likely to support environmental programs. In their analyses of a 1992 ( $N=1228$ ) national survey, Wolkomir et al. (1997) found that biblical literalism was associated with lower environmental concern because of its correlation with dominion belief.

### ***Sanctification of the environment***

It is important to recognize that there are other interpretations of the Bible than those endorsed by the dominion view or by conservatives. Nature can also be sanctified (i.e., consider nature to possess sacred qualities and/or experience nature as a manifestation of God), and hence, treated with more reverence and respect. In his classic theological essay, Eliade (1961) posited that perceiving spaces (such as the environment) as sanctified provides people a nodal access to what is perceived as the ultimate, transcendent reality. Further, these sanctified spaces serve a communal purpose by helping people connect with each other, and also provide the spaces with a unique identity. Bartkowski and Swearingen (1997) interviewed forty-five individuals who were local environmental activists in Austin, Texas to explore whether they viewed nature as having an implicitly religious character as suggested by Eliade (1961). The results indicated that the local land was a religious symbol to these activists and that it served the three purposes highlighted by Eliade (1961). Thus, sanctifying nature could lead to greater care and investment in its protection. Recent research on religion and marriage (Mahoney et al. 1999) and religion and parenting (Swank et al. 1999), also suggests that sanctifying an object (i.e., viewing it as sacred) is associated with increased investment in the object and attempts to care for that object.

The notion of sanctification of nature is consistent with the reinterpretation of biblical themes that highlights the notion of 'stewardship' of the environment (Baer 1970; Nash 1989; Sittler 1954). According to this belief, humans are assigned the responsibility of overseeing the welfare of all God's other creations, including nature. For biblical support, the proponents of this belief cite Genesis 2:15, in which God placed the first man in the Garden of Eden "to till it and keep it." Accordingly, the underlying message is that the world belongs to God and, thus, is holy. Hence, it is right to respect the environment, and even sacrilegious not to do so.

In summary, there may be two distinct religious themes that could serve as religious resources that have opposing but unique effects on care for the environment - (1) the theologically conservative view and presumably associated with the "dominion" view first highlighted by White (1967) and (2) our proposed model about the sanctification of nature. More specifically, conservative theological beliefs (which presumably reflect a stronger belief in humanity's dominance over the environment) are likely to be related to lower

environmental concern. On the other hand, the belief that nature is sacred and is a creation of God may encourage people to assume a caring and reverential role regarding their environment. As yet, no study has examined both these distinct religious themes together.

Some researchers have examined links between religiosity (e.g., religious affiliation, church attendance) and care for the environment, with mixed results. For example, Kanagy and Willits (1993) found that greater frequency of church attendance was inversely related to pro-environmental attitudes ( $r = -.18$ ). However, religiosity was not related to environmental behavior. In fact, when environmental attitudes were controlled, greater frequency of church attendance was positively related to environmentally protective behaviors. Similarly, Eckberg and Blocker (1996) reported that greater religious participation was positively associated with higher levels of personal environmental action (acts such as recycling and signing a petition about an environmental issue) and cultural greenness (measured through items such as, "do you eat organic fruits and vegetables?"). However, they also found that more orthodox Christians were less likely to participate in personal and organized environmental actions. To help account for these mixed findings, Wolkomir et al. (1997) recommended examining specific substantive beliefs (e.g., regarding nature as sacred) that are associated with concern for the environment. Hence, we assert that examining specific beliefs such as sanctification of the environment and theological conservatism might help clarify these mixed findings.

Furthermore, the impact of sanctification of the environment and theological conservatism on environmental beliefs/behaviors could conceivably vary among individuals, depending on their roles. It is possible that those who are more involved with religion and occupy a prominent position in their organization, such as the clergy, will be more likely to use their religious beliefs as a resource, when compared to members. This is similar to the notion of schemas (e.g., assumptions, informal understanding, conventions, habits, preferences) and resources (e.g., organizational memberships, norms that are actualized into doctrines and laws) proposed by Sherkat and Ellison (1997). According to these researchers, strong commitment to a specific schematic understanding can help transform informal interpretations into cognitive resources. In the case of the environment, individuals committed to the biblical interpretation that human beings have dominion over nature may draw on this belief as a resource which informs other beliefs - such as beliefs about importance of the environment, about need for pollution control, and so on. These beliefs could, in turn, influence care for the environment.

In this study, we examined the relationship between sanctification and beliefs about the environment (i.e., humans take precedence over the environment and human actions hurt nature), willingness to invest personal funds in protecting the environment, and environmentally protective behaviors (measured through participation in green activities) among three samples - members, elders, and clergy affiliated with the Presbyterian Church, U.S.A. We also studied the association between theological conservatism and pro-environmental beliefs, willingness to invest personal funds in the environment, and behaviors. In addition, we investigated whether sanctification of the environment accounted for unique variance in environmentally supportive beliefs and behaviors, after controlling for background variables and theological conservatism. On the basis of previous research, we hypothesized that sanctifying nature would be related to pro-environmental beliefs, attitude, and behaviors while the reverse would be true for those who endorsed more conser-

vative beliefs. Finally, we examined whether the relationship between sanctification and pro-environmental outcomes differed across roles within the Presbyterian Church (i.e., members, elders, and clergy).

## DATA

### *Participants*

The participants in the study were three nationally representative samples of groups affiliated with the Presbyterian Church, U.S.A.: (1) N=610 rank-and-file members, (2) N=573 lay leaders of the congregation also known as 'elders', and (3) N=1,128 clergy, who are ordained ministers of Word and Sacrament. Table 1 shows that the respondents were largely male among clergy (79.3%); there were more female participants among members (63.2%) and elders (49%). The mean age (in years) of members, elders, and clergy was 55.7, 56.6, and 50, respectively. Majority of the members, elders, and clergy were married (77.7% for members and about 87% for elders and clergy). Mean income range was between \$40,000 - \$49,999 for members, \$40,000 - \$59,999 for elders, and \$60,000 - \$69,999 for clergy. On an average, members and elders noted attending Sunday church between 1-3 times per week and once every week, respectively. In addition, 46% of members and 47% of elders reported having a conversion experience. (Refer to Table 1 for additional demographic information)

The procedure for selecting members and elders was different from that used to select the clergy sample. The samples of members and elders were drawn in a two-stage process in 1996. Four hundred twenty-five congregations were selected from the population of 11,361 congregations through a procedure known as proportional sampling based on size of congregation. First, the individual congregations were asked to compile a numbered alphabetical list of names of members. Then seven random numbers for each congregation were generated and the names of members that corresponded with these random numbers were identified. The congregations were then asked to send the names and addresses of those identified members. Seventy-three percent of the congregations sent in names, yielding a total of 2,163 names. Sixty-three percent of the selected participants (members and elders) returned the first survey that contained their background information and were chosen as potential participants for this study.

The sample of elders was drawn from the list that was constructed for each of the sampled churches. These lists were obtained from the national offices. Using an algorithm, four or five elders were drawn from each congregation. This resulted in a list of 1,759 elders, of which 75% returned the first survey and became potential participants.

Two thousand five hundred thirty clergy were randomly selected from the list of active clergy kept by the national office. Of these, 74% returned the first survey and became potential participants. All the potential participants from the three samples were sent a second survey on 'Nature and the Environment.' Of these individuals, 71% of the 1360 members, 57% of the 1314 elders, and 75% of the 1870 ministers returned the second questionnaire, which yielded data for the study.

After using listwise deletion of missing values to deal with the problem of item non-response, the sample size in this study for the descriptive analyses ranged from 797 to 879 cases for members, 687 to 746 cases for elders, and 1141 to 1200 cases for clergy.

However, it should be noted that for the hierarchical regression analyses, the sample sizes were fairly stable (N varied from 601 to 631 for members; N varied from 560 to 586 for elders; and N varied from 1141 to 1200 for clergy).

## MEASURES<sup>1</sup>

### ***Sanctification of environment.***

Two items in the survey were used to operationalize participants' views about nature as a sanctified object. For the first item, participants were asked to endorse only one of the following three statements: a) "Nature is sacred because it was created by God;" b) "Nature is spiritual or sacred in itself;" or c) "Nature is important but not spiritual or sacred." This item was dummy coded for the analyses such that subjects who selected 'a' were classified as 'sanctifying' the environment while those who selected 'b' or 'c' were classified as subjects who did not sanctify the environment. Subjects also responded to a second item "Human beings should respect nature because it was created by God" on a 5-point scale with 1 being 'strongly disagree' and 5 being 'strongly agree.' The two items were positively correlated with each other across the three groups:  $r = .24$ ,  $p < .01$  for members,  $r = .29$ ,  $p < .01$  for elders,  $r = .22$ ,  $p < .01$  for clergy.

### ***Theological conservatism.***

Three different aspects of conservatism were assessed: orthodox religious beliefs, view of the bible, and self-rated conservatism. The 'orthodox religious belief scale' included thirteen items and was scored on a 5-point scale with '1' as strongly agree and 5 as 'strongly disagree' (e.g., an individual should arrive at his/her own religious beliefs independent of any church, the only absolute truth for humankind is in Jesus Christ, only followers of Jesus Christ can be saved). The items on the scale were summed and coded such that a high score reflected higher levels of conservatism. The internal consistency of the orthodoxy scale was high across all three groups ( $\alpha = .88$  for members and clergy and  $\alpha = .87$  for elders). The survey also included one item on 'view of the bible.' The subject was asked to select one of five statements that reflected a range of views about the bible, from liberal (e.g., "It is an important piece of literature, but is largely irrelevant to our lives today") to conservative ("It is the inspired Word of God, without error not only in matters of faith, but also in historical, scientific, geographic and other secular matters"). The responses were scored such that a high score corresponded with a stronger belief in the bible. Finally, 'self-rated conservatism' was assessed on a one-item 5-point scale that ranged from 'very conservative' to 'very liberal.' Again, the response was scored such that a high score reflected a conservative stand on theological matters.

### ***Environmental beliefs.***

This construct was reflected through participants' responses to two scales: (a) 3 items reflecting 'belief that all human actions hurt nature' (e.g., economic growth always harms the environment) and (b) 4 items on 'belief that humans take precedence over the environment' (e.g., people worry too much about human progress harming the environment). The scales consisted of Likert ratings from 'strongly agree' to 'strongly disagree' and were scored such that higher scores represented greater endorsement of the belief. The internal

consistency of the scales was acceptable for all three groups ( $\alpha = .70$  for all three groups for belief that 'humans take precedence over nature' and  $\alpha$  ranged from .68 to .72 for belief that 'human actions hurt nature').

### ***Willingness to sacrifice for the environment.***

The participant's willingness to sacrifice personal funds to protect the environment was assessed with three items (e.g., would you be willing to pay much higher prices to protect the environment). These were scored on a 5-point scale from 5 = 'very willing' to 1 = 'not at all willing.' A high score on this measure represented a greater willingness to invest. Internal consistency was moderately high for this scale ( $\alpha = .82$  for members and elders and  $\alpha = .81$  for clergy).

### ***Environmental protective behaviors.***

A participant's behavior towards the environment was assessed through his/her involvement in 'green activities.' This measure included four items that asked about the respondent's participation in personal activities (how often do you recycle, how often do you volunteer time to a program, how often do you cut down use of automobiles by car-pooling, and how often do you write letters to politicians on environmental issues) and one item on the individual's involvement in organized green activities ('yes' or 'no' response to whether s/he is a member of any group whose aim is to protect the environment?). The four 'personal' items were scored on a 4-point scale from 'regular basis' to 'not an available option'. The items were summed and coded such that a high score was representative of greater involvement in environmentally protective behaviors.

### ***Socio-demographic variables.***

Participants provided information regarding the following background measures: *education* (coded into 8 ordinal categories, with a minimum of 'less than 8 years of formal education' and a maximum of 'a graduate degree'); *income* (coded into 14 ordinal categories, with a minimum category of 'less than \$10,000' and a maximum category of '\$150,000 or more'); *marital status* (1 = 'married' and 2 = 'not married'); *gender* (1 = 'female' and 2 = 'male'); *age* (scored continuously on years); *race* (1 = 'white' and 2 = 'otherwise').

## **RESULTS**

### ***Preliminary analyses***

Table 1 indicates that clergy endorsed sanctifying nature more than members and elders. Interestingly, comparisons for theological conservatism were somewhat mixed. On some variables of conservatism (conservative religious beliefs and view of bible), elders and clergy scored higher than members while members and elders endorsed a more conservative stand on theological issues, compared to clergy. Furthermore, clergy were more engaged in pro-environmental behaviors, compared to elders and members, and endorsed greater number of environmentally supportive beliefs and willingness to invest in protecting the environment.

**TABLE 1**  
**Descriptive Statistics**

Variable	Members (a)		Elders (b)		Clergy (c)		Statistical Comparison
	M	SD	M	SD	M	SD	
<b>Demographic</b>							
Age	55.7	17.8	56.6	12.7	50.1	10.1	
Sex (Males)	36.8%		51.0%		79.3%		
Marital Status(Married)	77.7%		87.0%		87.4%		
Education	6.0	1.5	6.4	1.4	8.0	.08	
Income	7.5	3.5	8.6	5.0	7.5	2.6	
Race (White)	91.9%		98.4%		95.6%		
<b>Conservatism</b>							
Conservative beliefs	48.2	9.0	50.7	8.4	50.6	8.7	b>a <sup>1</sup> ; c>a <sup>1</sup>
Theological issues	3.3	0.85	3.3	0.87	2.8	0.92	b>c <sup>1</sup> ; a>c <sup>1</sup>
View of Bible	3.2	1.1	3.3	0.96	3.6	0.77	b>a <sup>1</sup> ; c>a <sup>1</sup>
<b>Sanctification</b>							
Nature is sacred because it is created by God	57.7%		64.3%		71.6%		b>a <sup>1</sup> ; c>b <sup>1</sup> ; c>a <sup>1</sup>
Nature is spiritual or sacred in itself	21.8%		14.9%		7.7%		a>b <sup>1</sup> ; b>c <sup>1</sup> ; a>c <sup>1</sup>
Nature is important, not spiritual or sacred	20.5%		20.7%		20.7%		
Humans should respect nature because it is created by God	4.4	0.65	4.4	0.67	4.7	0.54	c>a <sup>1</sup> ; c>b <sup>1</sup>
<b>Environmental outcomes</b>							
Protective Behaviors	11.6	1.6	11.6	1.6	12.0	1.69	c>b <sup>1</sup> ; c>a <sup>1</sup>
Humans take precedence	10.1	2.8	10.2	2.63	8.8	2.5	b>c <sup>1</sup> ; a>c <sup>1</sup>
Human actions hurt nature	7.9	2.2	7.5	2.2	7.7	2.0	a>b <sup>1</sup> ; c>b <sup>1</sup>
Willingness to sacrifice for environment	10.0	2.7	9.8	2.9	11.3	2.6	c>b <sup>1</sup> ; c>a <sup>1</sup>
Note: <sup>1</sup> Means significantly different at p≤.01							
<sup>2</sup> Means significantly different at p≤.05.							

## PRIMARY ANALYSES

### *Bivariate associations.*

Table 2 describes results of correlational analyses among the religious variables and environmental variables. Overall, among members and elders, stronger theological conservatism was related to greater belief in the sanctification of nature (*r*'s ranged from .08 to .29). Interestingly, among clergy, belief in the sacredness of nature was not related to theological conservatism. In addition, for the three groups, higher levels of conservatism



**TABLE 2**  
**Correlations among religious variables**  
**and environmental outcomes for members, elders, and clergy**

Variables	1	2	3	4	5	6	7	8	9
<b>Conservatism</b>									
1. Rel. beliefs	---								
Members									
Elders									
Clergy									
2. Conservative stand		---							
Members	.44**								
Elders	.53**								
Clergy	.74**								
3. View of Bible			---						
Members	.56**	.36**							
Elders	.58**	.47**							
Clergy	.66**	.56**							
<b>Sanctification</b>									
4. Nature is Sacred				---					
Members	.23**	.07	.14**						
Elders	.16**	.10**	.08*						
Clergy	.01	-.04	0						
5. Respect nature					---				
Members	.17**	0	.12**	.24**					
Elders	.25**	.08*	.11**	.29**					
Clergy	-.01	-.08**	0	.22**					
<b>Environmental Outcomes</b>									
6. Behaviors						---			
Members	-.07	-.13**	-.06	-.08*	.07				
Elders	-.02	-.03	-.04	.03	.08*				
Clergy	-.19**	-.24**	-.14**	.05*	.08**				
7. Sacrifice for nature							---		
Members	-.13**	-.27**	-.13**	.12**	.13**	.29**			
Elders	-.15**	-.26**	-.17**	.16**	.12**	.19**			
Clergy	-.32**	-.36**	-.26**	.12**	.15**	.29**			
8. Humans take precedence								---	
Members	.10**	.34**	.12**	-.05	-.13**	-.27**	-.42**		
Elders	.01	.24**	.12**	-.16**	-.18**	-.14**	-.45**		
Clergy	.35**	.40**	.30**	-.11**	-.18**	-.20**	-.46**		
9. Human actions hurt									---
Members	-.07	-.08*	0	.18**	.13**	.04	.23**	-.14**	
Elders	-.02	-.05	-.04	.17**	.06	.01	.24**	-.23**	
Clergy	-.17**	-.18**	-.11**	.10**	0	.05	.20**	-.25**	

Note: \*\*p≤.01; \*p≤.05  
 Rel. = Religious

were related to less supportive environmental beliefs and willingness to invest in protecting the environment. Specifically, for the clergy, higher levels of conservative beliefs were consistently related to lower pro-environmental behaviors ( $r$ 's ranged from  $-.14$  to  $-.24$ ) and lower belief that human actions hurt nature ( $r$ 's ranged from  $-.11$  to  $-.18$ ). For all three groups, greater theological conservatism was related to decreased willingness to sacrifice for the environment ( $r$ 's ranged from  $-.13$  to  $-.36$ ) and stronger belief that humans take precedence over nature ( $r$ 's ranged from  $.10$  to  $.40$ ). Interestingly, conservatism was, for the most part, not significantly related to environmental behaviors among members and elders (only a stronger conservative stand on theological issues was tied to less pro-environmental behaviors among members;  $r = -.13$ ,  $p \leq .01$ ).

In general, higher levels of sanctification of nature were associated with greater environmentally protective beliefs and greater willingness to invest personal funds for the environment ( $r$ 's ranged from  $.10$  to  $.18$ ). Among the clergy and to some extent, among elders, higher levels of sanctification were related to greater participation in green activities ( $r$ 's ranged from  $.05$  to  $.08$ ). Interestingly, among members, endorsement of the belief that 'nature is sacred because it was created by God' was tied to lower pro-environmental behaviors ( $r = -.08$ ,  $p \leq .05$ ).

### ***Relationship between sanctification of nature and environmentally protective beliefs and behavior.***

Hierarchical regression analyses were performed to determine if sanctifying nature accounted for unique variance in pro-environmental beliefs and behaviors. The socio-demographic variables were entered in the first block of the analyses. Measures of theological conservatism were entered in the second block, and the two items reflecting sanctification of nature were entered in the third block. Tables 3, 4, 5 and 6 describe the results of these analyses.

As can be seen, for clergy, elders, and members, sanctifying nature accounted for small but significant amounts of unique variance over and above the effects of the background measures and conservative religious beliefs in predicting a wide range of pro-environment outcomes ( $R^2_{\text{cha}}$  ranged from  $.01$  to  $.03$  across outcomes). Specifically, across all three groups, greater levels of sanctification of nature were positively associated with lower endorsement of the belief that humans take precedence over nature ( $\beta$  ranged from  $-.07$  to  $-.13$ ), stronger belief that human actions hurt nature ( $\beta$  ranged from  $.12$  to  $.13$ ), and greater willingness to invest in protecting the environment ( $\beta$  ranged from  $.10$  to  $.14$ ).

One item of sanctification, belief that 'humans should respect nature because it was created by God' was predictive of greater participation in green activities ( $\beta$  ranged from  $.09$  to  $.10$ ) for the three groups. However, among members, belief that 'nature is sacred because it was created by God' was associated with lower involvement in green activities ( $\beta = -.08$ ,  $p \leq .10$ ).

Finally, we compared the regression coefficients between the different groups to see if the relationship between sanctification of nature and environmental outcomes varied significantly across the three samples (the last column of Tables 3, 4, 5, and 6). Overall, the results were non-significant with one exception. The groups differed with respect to the associations between the religious variables and pro-environment behaviors. Overall, endorsement of theological conservatism had a more negative effect on environmentally

**TABLE 3**

**Regression estimates of demographic, conservative religious beliefs, and sanctification of nature on belief that humans take precedence over nature.**

Variables	Members (a)			Elders (b)			Clergy (c)			Comparison of unstandardized coefficients in Model 3
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	
Age	.11** (.02)	.09* (.01)	.08* (.01)	.15** (.03)	.14** (.03)	.13** (.03)	0 (0)	.04 (.01)	.02 (.01)	a<b; b>c
Sex	.13** (.69)	.09* (.49)	.07 (.40)	.27** (1.4)	.22** (1.12)	.19** (1.00)	.15** (.91)	.07* (.46)	.07* (.42)	
Marital Status	-.05 (-.35)	-.03 (-.18)	-.01 (-.09)	.03 (.26)	.04 (.32)	.03 (.23)	-.07* (-.53)	-.04 (-.26)	-.03 (-.19)	
Educ.	-.15** (-.27)	-.11* (-.20)	-.11* (-.21)	-.07 (-.12)	-.04 (-.06)	-.04 (-.08)	-.07* (-2.3)	-.04 (-1.4)	-.05 (-1.6)	
Income	-.07 (-.05)	-.05 (-.04)	-.05 (-.04)	0 (0)	.02 (.01)	.01 (.01)	-.05 (-.04)	.01 (.01)	-.02 (.02)	
Race	0 (-.05)	-.01 (-.06)	0 (-.02)	-.02 (-.13)	-.02 (-.10)	-.02 (-.09)	.06* (.24)	.05 (.19)	.05 (.19)	
Religious beliefs		-.06 (-.02)	-.02 (0)		-.15** (-.04)	-.10 (-.03)		.08 (.02)	.10* (.03)	
Conservatism		.31** (1.00)	.30 (.98)		.26** (.78)	.26** (.77)		.26** (.71)	.24** (.64)	
View of Bible		0 (0)	0 (.02)		.05 (.15)	.05 (.13)		.09* (.31)	.09* (.31)	
Nature as sacred			-.10* (-.54)			-.09* (-.48)			-.07* (-.38)	
Respect for nature			-.11** (-.47)			-.13** (-.51)			-.12** (-.58)	
R <sup>2</sup>	.064**	.143**	.168**	.103**	.154**	.181**	.04**	.185**	.207**	
R <sup>2</sup> Change		.079**	.024**		.051**	.027**		.143**	.022**	
N	631	631	631	586	586	586	1195	1195	1195	

Note: \*p≤.10; \*\*p≤.05; \*\*\*p≤.01

Educ. = Education

Values in parentheses are unstandardized regression coefficients.

supportive behaviors among clergy when compared to elders. Also, compared to members, a stronger view on one of the items of sanctification ('nature is sacred') was tied to greater pro-environment behaviors among clergy. Interestingly, a higher score on this item of sanctification was tied to lesser involvement in pro-environment behaviors among members. The implications are discussed in the next section.

**TABLE 4**

**Regression estimates of demographic, conservative religious beliefs, and sanctification of nature on belief that human actions hurt nature.**

Variables	Members (a)			Elders (b)			Clergy (c)			Comparison of unstandardized coefficients in Model 3
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	
Age	-.01 (.0)	0 (0)	0 (0)	.06 (.0)	.06 (.0)	.07 (.01)	.03 (.0)	0 (0)	.01 (0)	b>c
Sex	-.07 (-.29)	-.06 (-.26)	-.04 (-.18)	-.24** (-1.01)	-.24** (-1.04)	-.22** (-.94)	-.13** (-.64)	-.09** (-.47)	-.09** (-.46)	a>b; b<c
Marital Status	.0 (-.02)	-.01 (-.07)	-.03 (-.16)	-.04 (-.28)	-.04 (-.27)	-.04 (-.26)	.03 (.19)	.01 (.08)	0 (.02)	
Educ	-.14** (-.20)	-.14** (-.21)	-.13** (-.20)	-.16** (-.25)	-.17** (-.26)	-.16** (-.25)	-.01 (-.36)	-.02 (-.58)	-.02 (-.52)	
Income	-.20** (-.13)	-.21** (-.13)	-.20** (-.13)	-.10* (-.04)	-.10* (-.04)	-.10* (-.04)	-.02 (-.01)	-.05 (-.03)	-.06 (-.04)	a<c;
Race	.03 (.12)	.03 (.12)	.02 (.09)	-.06 (-.30)	-.06 (-.31)	-.06 (.32)	.09** (.29)	.10** (.31)	.10** (.31)	b<c
Religious beliefs		-.02 (0)	-.07 (-.02)		.03 (.01)	0 (0)		-.12** (-.02)	-.12** (-.03)	
Conservatism		-.08 (-.20)	-.07 (-.17)		-.03 (-.07)	-.04 (-.08)		-.09* (-.20)	-.09* (-.20)	
View of Bible		0 (.02)	0 (0)		-.08 (-.19)	-.08 (-.18)		.02 (.05)	.02 (.05)	
Nature as sacred			.12** (.53)			.13** (.60)			.12** (.52)	
Respect nature			.12** (.43)			0 (.01)			-.03 (-.13)	a>c; a>b
R <sup>2</sup>	.088**	.094**	.028**	.117**	.124**	.141**	.028**	.058**	.062**	
R <sup>2</sup> Change		.007	.034**		.007	.017**		.030**	.013**	
N	629	629	629	584	584	584	1200	1200	1200	

Note: + p≤.10; \*p≤.05; \*\*p≤.01

Educ. = Education

Values in parentheses are unstandardized regression coefficients.

## DISCUSSION

Overall, a number of patterns emerged in this dataset of Presbyterian members, elders, and clergy that were consistent with our predictions. First, on a descriptive level, members, elders, and clergy in this sample generally endorsed beliefs that nature is sacred.

**TABLE 5**

**Regression estimates of demographic, conservative religious beliefs, and sanctification of nature on willingness to sacrifice for nature.**

Variables	Members (a)			Elders (b)			Clergy (c)			Comparison of unstandardized coefficients in Model 3
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	
Age	.11* (.01)	.14** (.02)	.14** (.02)	.06 (.01)	.05 (.01)	.06 (.01)	.09** (.02)	.05 (.01)	.07** (.02)	
Sex	-.09* (-.49)	-.06 (-.34)	-.04 (-.24)	-.22** (-1.26)	-.18** (-1.01)	-.16** (-.89)	-.04 (-.28)	.03 (.17)	.03 (.21)	a>b
Marital Status	.11* (.71)	.08 (.53)	.07 (.46)	-.06 (-.50)	-.06 (-.54)	-.05 (-.46)	.08* (.61)	.04 (.34)	.03 (.24)	a>b
Education	.03 (.06)	0 (0)	0 (.01)	.07 (.14)	.04 (.08)	.05 (.10)	-.02 (-.59)	-.04 (-1.34)	-.03 (-1.11)	
Income	.10* (.08)	.08 (.05)	.08 (.06)	.09* (.05)	.06 (.03)	.07 (.03)	.11** (.11)	.05 (.05)	.04 (.04)	
Race	-.06 (-.31)	-.06 (-.32)	-.07 (-.35)	-.04 (-.30)	-.05 (-.36)	-.05 (-.38)	.06* (.24)	.07** (.28)	.07** (.29)	a<c; b<c
Religious beliefs		-.01 (0)	-.05 (-.01)		.02 (.01)	-.02 (-.01)		-.10** (-.02)	-.12** (-.03)	
Conservatism		-.28** (-.88)	-.26** (-.84)		-.20** (-.64)	-.20** (-.65)		-.25** (-.73)	-.22** (-.65)	
View of Bible		-.04 (-.09)	-.04 (-.12)		-.10 (-.27)	-.09 (-.27)		-.04 (-.15)	-.04 (-.15)	
Nature as sacred			.10* (.52)			.14** (.83)			.10** (.55)	
Respect for nature			.12** (.50)			.07 (.28)			.12** (.57)	
R <sup>2</sup>	.029**	.113**	.139**	.058**	.114**	.140**	.164**	.388**	.420**	
R <sup>2</sup> Change		.083**	.026**		.056**	.026**		.124**	.026**	
N	618	618	618	578	578	578	1178	1178	1178	

Note: + p≤.10; \*p≤.05; \*\*p≤.01

Values in parentheses are unstandardized regression coefficients.

Second, consistent with prior research, holding theologically conservative views was negatively associated with pro-environmental beliefs and behaviors, and willingness to invest in the environment. Third, belief that nature is sacred and to be respected, was associated with stronger pro-environmental beliefs and a greater willingness to invest in protecting the environment. Such beliefs were also predictive of environmental behaviors among clergy. Finally, controlling for background variables, hierarchical regression analyses

**TABLE 6**

**Regression estimates of demographic, conservative religious beliefs, and sanctification of nature on pro-environmental behaviors.**

Variables	Members (a)			Elders (b)			Clergy (c)			Comparison of unstandardized coefficients in Model 3
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	
Age	0 (0)	.01 (0)	.03 (0)	-.02 (0)	0 (0)	0 (0)	.04 (.01)	.02 (0)	.03 (0)	
Sex	-.12** (-.37)	-.11** (-.36)	-.11* (-.33)	0 (.01)	0 (.02)	.03 (.08)	-.04 (-.17)	0 (.01)	0 (.02)	a<b; a<c
Marital Status	.0 (-.02)	-.02 (-.07)	-.02 (-.07)	-.03 (-.16)	-.02 (-.12)	-.01 (-.06)	0 (-.03)	-.03 (-.13)	-.03 (-.17)	b>c
Educ	.12** (.12)	.11* (.11)	.09* (.09)	.21** (.24)	.21** (.24)	.22** (.24)	0 (-.20)	-.02 (-.47)	-.02 (-.37)	a<b;
Income	.06 (.02)	.05 (.02)	.05 (.02)	.08* (.02)	.09* (.02)	.09* (.02)	.09** (.05)	.05* (.03)	.05* (.03)	
Race	-.03 (-.07)	-.03 (-.08)	-.02 (-.06)	-.02 (-.07)	-.02 (-.07)	-.02 (-.07)	-.01 (-.03)	-.01 (-.02)	0 (-.02)	
Religious beliefs		-.04 (-.01)	-.04 (-.01)		.09* (.01)	.06 (.01)		-.05 (-.01)	-.07 (-.01)	
Conservatism		-.09* (-.16)	-.08* (-.15)		.02 (.04)	.03 (.04)		-.19** (-.34)	-.17** (-.30)	b>c;
View of Bible		.05 (.07)	.04 (.06)		-.15** (-.25)	-.15** (-.25)		0 (.02)	0 (.02)	a>b; b<c
Nature as sacred			-.08* (-.24)			.03 (.09)			.04 (.15)	a<c;
Respect nature			.10* (.24)			.10* (.24)			.09** (.28)	
R <sup>2</sup>	.029**	.038**	.049**	.061**	.075	.087	.012	.058	.068	
R <sup>2</sup> Change		.009	.011*		.014*	.012*		.046**	.010**	
N	601	601	601	560	560	560	1141	1141	1141	

Note: + p≤.10; \*p≤.05; \*\*p≤.01

Educ. = Education

Values in parentheses are unstandardized regression coefficients.

revealed that beliefs about the sacredness of nature accounted for unique, though modest, amounts of variance in environmental variables.

The mean scores on the sanctification measure (see Table 1) for each of the three groups indicated that clergy endorsed such beliefs significantly more than elders and members. However, the biblical message that nature is sacred and is to be respected was also linked

to pro-environmental outcomes for elders and members in the Presbyterian Church. This finding is somewhat consistent with previous research indicating that greater religious participation is positively associated with personal environmental action and cultural "greenness" (Kanagy and Willits 1993; Guth et al. 1993; Guth et al. 1995; Eckberg and Blocker 1996). This study is unique, however, in that we identified specific religious and/or spiritual beliefs (i.e., beliefs that nature is sacred) that were predictive of pro-environmental beliefs and behaviors. This finding is particularly noteworthy, since general religious beliefs have not shown a pattern of association with environmental attitudes in prior research, leading Eckberg and Blocker (1996) to conclude that there is probably no "stewardship" effect of Christian theology.

Although beliefs in the sanctification of nature were predictive of pro-environmental beliefs and willingness to invest in the environment among all groups in the Presbyterian Church, these beliefs were more strongly associated with participation in green activities among clergy than members. Furthermore, when compared to elders, theological conservatism had a greater negative effect on pro-environment behaviors of clergy, while greater sanctification was associated with greater participation in green activities for clergy and elders. Perhaps leaders in the church, in contrast to members, are more likely to act on their religious and spiritual convictions since religion is more central to their identity, and they are more motivated to live by their principles. Again, this finding is consistent with research that has linked higher levels of religious participation to pro-environmental behaviors (Eckberg and Blocker 1996; Kanagy and Willits 1993; Wolkomir et al. 1997). It is also possible that clergy and elders have greater 'structural' freedom to act on their personal convictions and beliefs, or have chosen such positions in order to be less dependent on the views of members/congregations (Hadden 1969). Perhaps the negative relationship between pro-environmental behaviors and belief in the sacredness of nature among members highlights the growing distance between clergy and laity. As Hadden (1969) suggested, the clergy may see the church as an institution that can be utilized to mobilize social and political change, while the laity may look to the church as a source of comfort during troubled times. Finally, the pro-environmental stance may also reflect the leaders' effort to maintain the survival of their organization in the midst of declining membership within mainline churches (Finke and Stark 1992). This may be especially relevant considering the growth of alternative and non-institutionalized religion-spiritual groups who have entire web pages devoted to pro-environmental causes.

Our results suggest a number of implications and fruitful directions for future research. Overall, it is important to look at the specific elements of religious belief and/or participation that contribute to environmental attitudes and behaviors. First, on the "sanctification" side, we found that substantive beliefs about the sacredness of nature are an important dimension of religious life. Consistent with Nash's (1989) review of the contemporary "greening" of theology, many modern leaders in the church are able to integrate a concern for the environment within an "ecothology" that emphasizes the sacred quality of the natural world. One implication of these trends in theology and our empirical results is that religious institutions may have important resources that assist in caring for the environment. We propose that, despite any ideological differences, "secular" environmental groups and religious institutions may, in many cases, work side-by-side in a resource collaboration model to further environmental causes. Pargament (1997) has proposed a sim-

ilar model of cooperation between religious institutions and mental health professionals for the treatment of psychological distress. Second, on the "dominion" side, our findings suggest, at the same time, more conservative groups may be resistant to environmental causes. Future research should examine more closely the specific elements of this religious worldview that contribute to less support for the environment (cf. Wolkomir et al. 1997). Third, our data suggest that the positive relationships between religious and environmental variables (particularly environmental behaviors) are stronger among clergy than members. This makes us wonder, along with Kanagy and Willits (1993), the extent to which trends in "ecotheology" have reached the ordinary American churchgoer. Future research could examine individual and institutional factors that contribute to the lack of a pervasive "trickle-down" effect of ideology and behavior in American religious institutions. Closer examinations of the religion-environment connection on both individual and institutional levels may yield more theoretically coherent results and a more fine-grained picture of the complex web of relationships between religious and environmental variables.

The current project is limited by its cross-sectional and correlational design, which does not permit inferences about the causation of environmental beliefs and behaviors. Secondly, this study utilized a brief, two-item measure of the sanctification of nature. Future research would be enhanced by a more detailed measurement of individuals' beliefs about the sacredness of nature (Mahoney et al. 1999). A final limitation is that this study did not include a specific measure of dominion beliefs. Additional studies should include such measures and more clearly delineate the pathways between theological conservatism, dominion beliefs, and less concern for the environment.

Despite these limitations, this study contributes to the growing literature on this topic by concurrently examining opposing "sanctification" and "dominion" effects. More specifically, "sanctification" effects were found in that beliefs about the sacredness of nature were associated with more support for environmentalism, and among clergy and elders, more involvement in "green" activities. "Dominion" effects of religiousness were also found in that theological conservatism was associated with lower pro-environmental beliefs, decreased willingness to invest personal funds to protect the environment, and lower involvement in green activities. It appears then that religious institutions have the potential to support or discourage care for the environment.

## NOTES

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This paper was presented at the 108th annual meeting of the American Psychological Association, August 3-8, Washington DC.

1. A copy of the measures is available from the first author.

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