

Social Characteristics and Political Identification: Determinants of Environmental Concern?

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ABSTRACT

The greatest issues facing our society today are that of climate change and environmental degradation. Given that natural resources are necessary for human survival, concern for environmental sustainability is paramount. This raises an important question regarding environmental concern: What social characteristics and political identification are prominent among those who express environmental concern? My research seeks to answer this question using an original survey of UW-L students (N = 89). Specifically, I examine the statistical associations between social characteristics, political identification, and environmentalism. The importance of answering this question cannot be understated: the identification of environmentally-conscious individuals can spur grassroots movements, while identifying those who are not concerned can facilitate environmental education. The expectation, based on prior research, is that certain subsets of the population express more concern for the environment than others. While I set out to find a specific demographic profile for environmental concern, the only significant relationships observed was that Democrats tend to express more concern than Republicans, and possibly CLS majors more so than non-CLS majors. Findings regarding other group differences (e.g., males vs. females, low-income vs. high-income) were determined to be inconclusive. It appears that environmental concern is not necessarily a product of basic demographic characteristics, but rather the result of other factors; future research should be aimed at pursuing other possible determinants of environmental concern, particularly “postmaterial” value choices.

INTRODUCTION

“You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make.” – Jane Goodall

In a recent survey conducted by the Pew Research Center (Stokes, Wike, and Carle 2015), only 45% of American respondents labeled climate change as a “very serious problem.” This implies that more than half of the American population does not consider climate change as a very important issue. A lack of environmental concern for a majority of Americans suggests a certain misunderstanding of the negative effects human activity has on the environment, our most important resource. Every day, our society dumps tons of chemicals into the air that destroy the ozone layer, clears rainforests for paper, tissue, and other commodities, pollutes water sources, and eliminates animals’ natural habitats. The way in which our society is structured plays a large role in this environmental onslaught. Meat consumption, heavy reliance on fossil fuels (automobile usage and electricity), and rampant expansion of agricultural fields (deforestation) all have detrimental effects on the environment; yet, a majority of our society does not possess a basic awareness of these facts. To address these concerns, my research seeks to find the determinants of ecological concern. Specifically, an examination will be made to find relationships between basic social characteristics, such as gender, religiosity, social class, area of study, political identification, and environmentalism.

Identifying the causes of environmental concern is particularly needed when considering the drastic ecological degradation taking place, in part, due to human activity. Humans have direct, negative environmental effects. Deforestation destroys natural habitats and ecosystems. Although this is the case, humans continue to deforest the globe at an alarming rate. Around the globe, 13 million hectares of forest are cleared every year, mainly for agricultural purposes (Damette and Delacote 2011). That magnitude of deforestation is unsustainable both

economically and ecologically. Given rising populations, the need for food will increase, thus the necessity for more agricultural fields. Conversely, forests are an essential feature of ecosystems, for animals' natural habitats, biodiversity, and CO₂ emission maintenance. However, many of the significant harms associated with ecological systems are not a direct result of human activity; rather, anthropic action hinders the environment's natural ability to maintain its dynamic equilibrium: "gradual change in environmental conditions, such as human-induced eutrophication and global warming, may have little apparent effect on the state of these systems, but still alter the 'stability domain' or resilience of the current state" (Scheffer et al. 2001: 595). An abundance of such disrupted ecological systems exist, but perhaps the most appropriate example concerns the "Dead Zone" in the Gulf of Mexico, which consists of hypoxia, or oxygen depletion. Rabalais, Turner, and Wiseman (2002) postulated that human activity spurred the "Dead Zone". Specifically, rapid population increase, deforestation, increased nitrogen inputs, and the conversion of natural habitats to agricultural fields have weakened the methods by which the environment naturally removes the nutrients which cause hypoxia. So, by indirect means, humans lessen the environment's inherent capacity of resilience. Therefore, human activity, both direct and indirect, poses serious threats to the environment, as well as the natural resources contained within it.

The problems of the Gulf of Mexico "Dead Zone" and unsustainable deforestation, amongst many others, are only solvable if environmental awareness is present on a large-scale. Our way of living is not maintainable, and can only be modified through providing environmental education to those who need it. As such, determining which groups which can be identified as "environmentalists" and "non-environmentalists" is necessary. "Environmentalists" can facilitate progress in terms of changing our behavior to be more environmentally sustainable, whereas "non-environmentalists" can be specifically targeted to receive ecological education through public policy. Given this, I seek to identify these groups by social characteristics and political identification, considering that such classifications make it more practical to target specific groups for public policy.

This paper will explore the differences between various social groups, including gender, area of study, political party identification, and family wealth, in regards to environmental concern. Section 2 of the paper will review the literature on the determinants of environmental concern, specifically concerning value judgments, national affluence, and social characteristics. Section 3 lists the significant hypotheses for this project. Section 4 presents the methodology behind this research, including the survey questions used. Section 5 outlines the major findings from the survey data. Section 6 offers concluding remarks concerning theoretical explanations for the findings.

LITERATURE REVIEW

A great deal of the research on environmentalism has examined cross-national differences. An often purported precondition for environmentalism is wealth. But, it seems that it is not quite that simple. Poorer countries tend to consider the environment to be a more important issue relative to wealthier countries. While this may be due to fact that poorer countries usually experience worse environmental conditions, it also could be a result of grassroots environmental movements in developing countries (Dunlap and Mertig 1995). However, affluence is negatively correlated with willingness to make economic sacrifices. At the same time, more affluent nations expressed more concern for environmental matters. Therefore, the most logical implication from this is that, as nations become more affluent, the value choice of egoism increases (Dunlap and York 2008). Value choices can also help explain ecological concern. Those who consider the environment as an end in itself, as well as those who think about the environment in terms of how it affects all of humanity, are far more likely to take political action than those who only consider environmental impacts on themselves. These value choices are commonly referred to as 'postmaterialist values'. Essentially, developing countries with emerging economies have 'materialist values', which mainly involve economic factors, such as fighting rising commodity prices, as well as maintaining political order (Stern and Dietz 1994). However, countries with robust, developed economies have progressed past 'materialist values'. This is largely a result of the *de facto* eradication of scarcity in developed economies: "proenvironmental attitudes can be predicted based on the idea that economic affluence allows people to shift their attention from their own material survival to the survival of their natural environment" (Kemmelmeier, Krol, and Kim 2002: 277). While "postmaterial value" choices may not directly be the subject of my research, it is possible that the social experiences of people in the social groups examined instill such values. Although most of past research has consisted of evaluating individuals' value choices and national affluence, identifying individuals in this manner is difficult to determine for programs designated to increase environmental concern.

While the majority of prior relevant research dealt with value choices and national affluence, a few studies did consider the effect that basic social characteristics and political identification have on ecological concern. Women, across an array of environmental issues, tend to display more environmental concern than men. This could be the result of gender socialization: femininity in the United States highlights empathy, nurturance, and care, while

masculinity favors competition, apathy, and control. Due to the separate values inherent in differing gender experiences in the United States, the American culture of gender creates differing environmental concern between genders: women have more concern ecologically than do men (McCright 2010). In terms of political ideology, Democrats generally show more concern than Republicans. This is largely a consequence of the values innate in the parties. Conservative ideology holds core tenets which contradict environmental reform: limited government intervention, laissez-faire capitalism, and traditionalism, or the preservation of the status quo. Given that the environmental movement started and continues to be anti-establishment, possesses anti-capitalist undertones, and promotes vast and robust government intervention to combat environmental harm, Republicans, through conservative ideology, foster less environmental concern. Simply put, the principles of the environmental movement contradict the tenets of Republican political ideology (Nawrotzki 2012). In extension, it would appear that the decision to possess anti- or pro-environment attitudes can be explained by party-sorting theory: individuals who identify with political parties express environmental concern in alignment with their party platforms (Guber 2013). There also exists a disparity in concern regarding affluence. When a country develops, its citizenry no longer face issues relating to survivability or sustenance: absolute poverty is, for the most part, virtually nonexistent. Consequently, the country can focus on post-material concerns, as material issues, such as poverty, have been dealt with. On a more micro-level, wealthier individuals also are more likely to have the post-material values which yield environmental concern: since wealthier individuals have conquered the issue of sustenance and can allocate their resources in a more liberal fashion. Individuals with more income possess the ability to pay for the costs associated with improving the environmental, and are therefore more likely to endorse such attitudes (Franzen and Meyer 2010). In terms of academic discipline, it has been found that different areas of study have different levels of environmental concern. Specifically, business majors have less environmental concern relative to non-business majors, due to the competitive and individualistic nature of an education in that field (Sherburn and Devlin 2004; Lang 2011). Given that studying the liberal arts largely concerns humankind's role in the world, as well as the plethora of courses examining humanity's impact on the environment, it follows that being a part of the College of Liberal Studies at UW-L results in an extended appreciation for the "postmaterial" values of eco-centrism and altruism, which, as shown by Stern and Dietz (1994), lead to higher levels of environmental concern. Religion also has been shown to have an effect on religion: given the mastery over nature inherent in mankind's condition in holy texts, devout religious followers hold that nature is to be exploited, and not necessarily preserved (Arbuckle and Konisky 2015). These studies all provide social groups that are simple to identify, relative to groups which exhibit certain pro-environmental value choices, as previously discussed. Considering this, such research is more useful for public policy regarding environmental education. Given that social movements often are spurred and continued on college campuses, it would be useful to determine the contributors to environmental concern at UW-L, as to find how to expand the environmental movement.

HYPOTHESES

The majority of the hypotheses in this study stemmed from the findings and explanations of prior research, as discussed in the literature review. Given these various prior research explanations and logic for certain social characteristics and political affiliation's effect on environmentalism, I posit the following hypotheses:

- H1.* Female students express more environmental concern than male students.
- H2.* Students who identify themselves as Democrats are more environmentally-conscious than self-identified Republican students.
- H3.* Students in wealthier families will be more likely to self-identify as environmentalists than students in less wealthy families.
- H4.* Members of the College of Liberal Studies express more environmental concern, relative to the other colleges.
- H5.* Increasing religiosity (e.g. attending church often) corresponds with lower environmental concern.

These hypotheses represent an attempt to test past studies, as previously indicated. By doing so, I hope to characterize high environmental concern into a specific demographic profile. In specifying such demographic profiles, governmental, nonprofit, and interest groups can target specific groups for pro-environmental activism, or environmental education.

DATA COLLECTION AND METHODS

This research involved the usage of survey data. This survey was conducted amongst UW-L students in December of 2015, using Qualtrics, a tool for creating and managing internet-based surveys. Out of the 1000 individuals solicited, there were 89 respondents. The survey involved questions regarding various determinants of environmental concern, as well as a simple question asking for basic social characteristics and environmental concern. Particularly, determining environmental concern can be problematic. But, for the purposes of this study, and to inform the University of Wisconsin-La Crosse regarding the magnitude of ecological concern of its students, the variable chosen to represent concern deals with implementing a program on-campus. This question in the survey is shown below:

If UW-L were to start a Green Initiative, which included more composting, investing in renewable energy, and providing more events relating to sustainable living, how much of a fee increase would you be willing to pay?

- \$0
- \$10
- \$25
- \$50
- \$100
- Other

By utilizing an economic interpretation of concern, a more relativistic assessment can be made regarding the magnitude of difference between the social groups in this study. These groups involve the following: gender, religiosity, political identification, academic discipline, and social class. The five questions used to determine the classification of individuals into social groups are as follows:

1. *Which school/college do you belong?*

- College of Business Administration
- College of Liberal Studies
- School of Arts & Communication
- College of Science & Health
- School of Education

2. *What is your sex?*

- Male
- Female
- Other

3. *How religious do you consider yourself? (Praying regularly, attending church regularly, etc)*

Religiosity: On a scale from 1 (Irreligious) to 5 (Very Religious)

4. *Which of the following income bracket does your family reside?*

- \$20000 - \$50000
- \$50000 - \$90000
- \$90000 - \$150000
- \$150000+

5. *How do you identify politically?*

- Republican
- Democrat
- Independent

Some of the previous questions had to be re-coded in order to provide a more practical analysis of differences in means. The relevant questions were re-coded, creating binary variables. The questions regarding school/college, sex,

and party identification were coded as CLS and non-CLS, female and non-female, Democrat and non-Democrat, respectively. The question concerning familial income brackets were re-coded as more than \$90000 (More Wealthy) and less than \$90000 (Less Wealthy).

After re-coding the responses in this manner, examining differences in means between the variables was greatly simplified. Differences in means using independent samples t-tests were determined for the re-coded questions, in relation to the question regarding environmental concern. The error bars in the graphs below represent one standard deviation above and below the mean. The responses regarding religiosity were correlated to the environmental concern responses. These responses were transferred from Qualtrics to an Excel file. Afterwards, the Excel spreadsheet was imported to the statistical package “R”, which was used to conduct the relevant hypothesis tests.

RESULTS

Considering that this study seeks to characterize a specific demographic profile regarding high environmental concern, each hypothesis will be addressed in order, as to, hopefully, build upon each other into a particular grouping. Regarding the hypotheses which utilize difference in means, independent samples t-tests were conducted.

Hypothesis 1

The first hypothesis concerned the role of gender in the determination of environmental concern. There were 86 responses to this question. Of those who responded, 56% identified as female, whereas 44% identified as male. In order to determine whether or not females expressed more concern than males, a test was ran to report difference in means. The results from that, as shown in Figure 1, give the mean environmental concern by sex, demonstrated in dollars. Females, on average, were willing to increase student fees by \$41.77, whereas males only would increase student fees, on average, by \$37.50. While females did exhibit more concern than men in this study, the finding was statistically insignificant ($p = 0.292$). So, given this, it can be determined that there is insufficient evidence to conclude that females express more environmental concern relative to men.

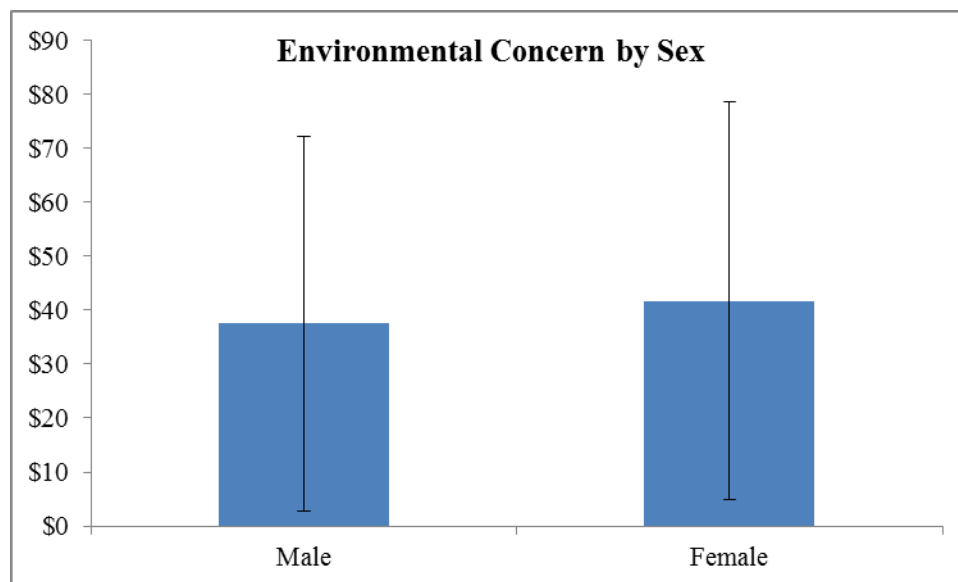


Figure 1. Mean Environmental Concern by Sex

Hypothesis 2

The second hypothesis gave an indication of the ecological sentiments of the two major political parties, Democrats and Republicans. It was hypothesized that Democrats would exhibit more environmental concern in this study, considering that previous research indicated such a finding. Likely as a result of not including those self-identifying as “Independent”, there were only 54 responses to this question. In regards to those responses, 67% were Democrat, while 33% self-labelled as Republican. The results from the difference-of-means test are shown in Figure 2 below. In this study, Republicans were willing to give an additional \$15.00 in student fees for a hypothetical “Green Initiative”, while Democrat willingly would increase fees by \$50.83. Democrats demonstrated a clear tendency to illustrate more environmental concern, with statistical significance ($p < 0.01$). Given such a low p-value,

it can be decisively concluded that Democrats exhibited a higher mean ecological concern, compared to Republicans.

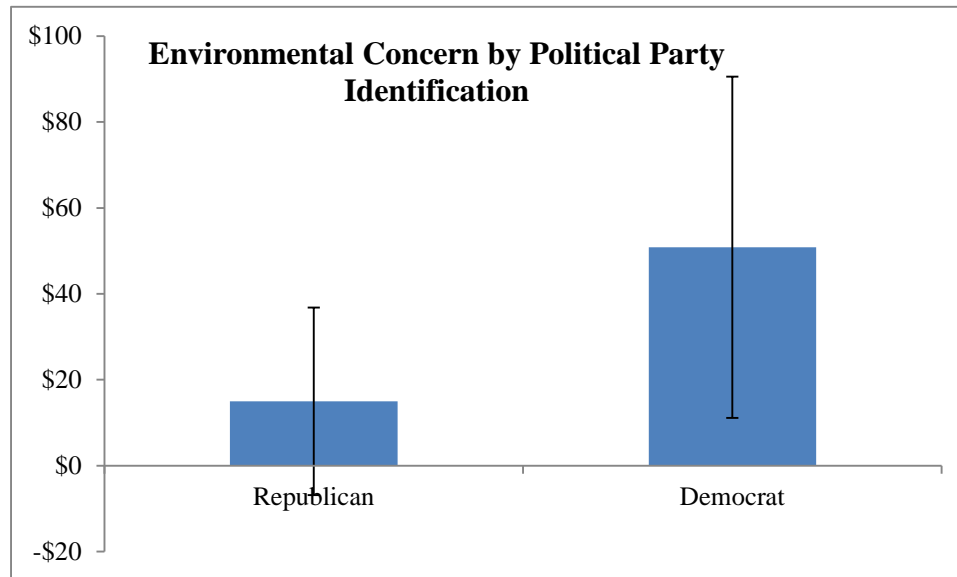


Figure 2. Mean Environmental Concern by Political Party Identification

Hypothesis 3

The third hypothesis considered social class, and its effect on environmental concern. There were 85 responses pertaining to this question. As such, 40% of students in the survey came from wealthier backgrounds, whereas 60% came from relatively less wealthy families. As postulated by prior research, I posited that students from wealthier backgrounds should have more ecological concern compared to students with less wealthy families. The results from the survey are shown in Figure 3 below. Students from less wealthy families had an average environmental concern of \$37.75, while students from wealthier families exhibited an average concern of \$47.21. Even though students with wealthier backgrounds demonstrated more concern relative to their less wealthy counterparts, this finding was statistically non-significant ($p = 0.125$). Notably, students from very wealthy backgrounds (\$150000+) did not convincingly show more environmental concern than all other students, and students from the least wealthy backgrounds (\$20000 - \$50000) did not significantly demonstrate less concern than other students. In other words, dividing up the income brackets in different ways does not influence the result; it can be concluded that social class plays an inconsequential role in establishing pro-environmental sentiments.

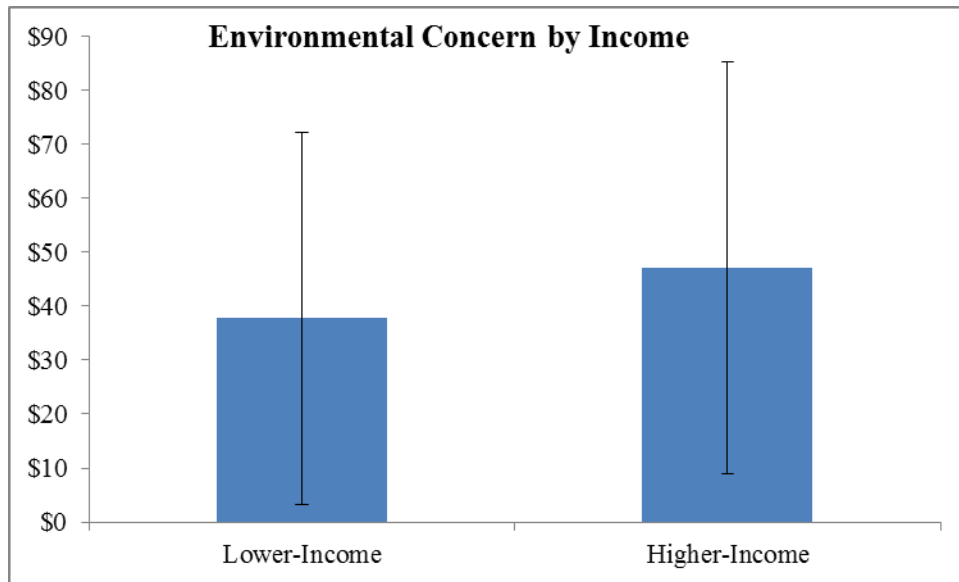


Figure 3. Mean Environmental Concern by Income

Hypothesis 4

The fourth hypothesis was particular to students at the University of Wisconsin-La Crosse. While little prior research has been conducted regarding area of study’s effect on environmentalism, I hypothesized that students in the College of Liberal Studies would have more concern, relative to the other colleges on-campus. In the survey, there were 86 responses to this question. In relation to those responses, 41% belonged to the College of Liberal Studies (CLS), with 59% belonging to other colleges. Notably, this hypothesis had the least amount of relevant research support. The results considering this hypothesis are displayed in Figure 4 below. Interestingly, on average, students outside the CLS wanted a mean student fee increase of \$36.18 for a pro-environmental program on-campus, but CLS students, on average, would pay an increase of \$47.43. Therefore, CLS students did show more concern than non-College of Liberal Studies students. The significance of this claim is worth further discussion ($p = 0.092$). Thus, it could be asserted that area of study does play a role in determining environmental concern.

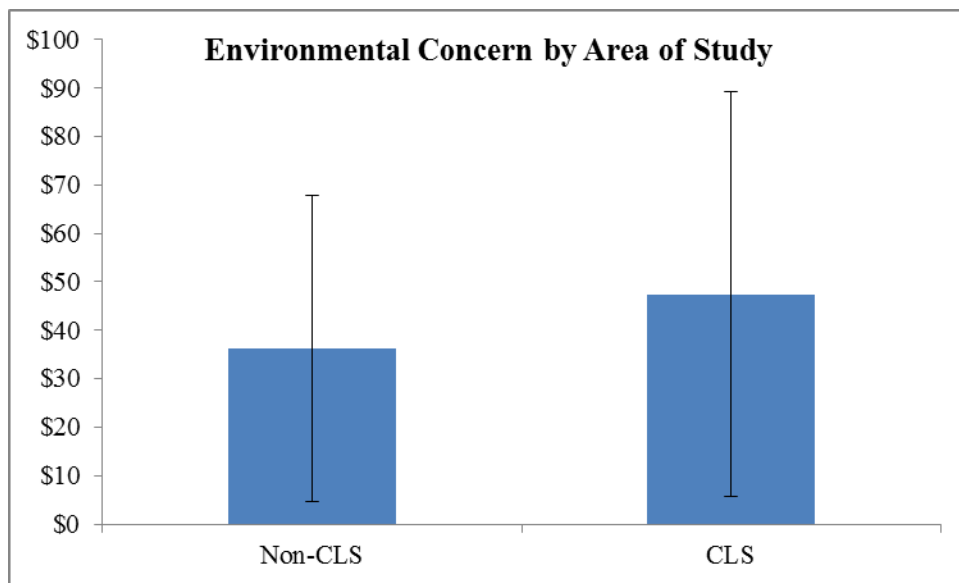


Figure 4. Mean Environmental Concern by Area of Study

Hypothesis 5

The final hypothesis considered religiosity's effect on environmentalism. Past research suggested that, as religiosity increases, environmental concern should decrease. This hypothesis replicates that claim. In total, there were 65 responses to this question. Notably, a considerable amount of respondents identified as "atheist" or "agnostic", and thus withdrew from rating themselves on a religiosity scale. Given this, a correlation test was run between environmental concern and religiosity. A Pearson Correlation Coefficient of -0.091 ($p = 0.466$) was found, as shown in Figure 5 below. This finding indicates that there is no apparent relationship between religiosity and ecological consciousness. As such, it seems that devout religious belief and environmentalism have no intertwining effect, as indicated by prior research.

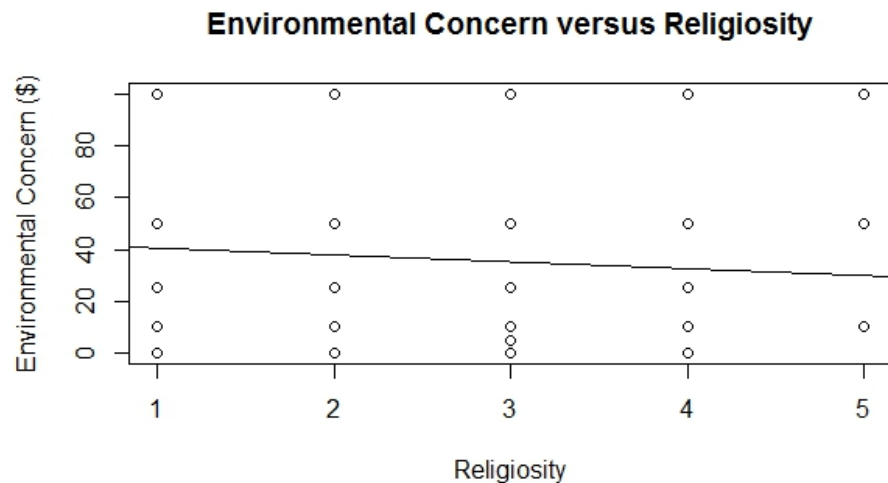


Figure 5. Environmental Concern versus Religiosity

DISCUSSION

The results in this study did not convey a specific demographic profile for high levels of environmentalism. Rather, the hypotheses regarding social characteristics were all found to be insubstantial or inconclusive; sex, social class, academic discipline, and religiosity all had no discernable relationship with environmental concern. Therefore, it would appear that the determinants of ecological sensitivity are less straightforward than simple mechanisms such as social characteristics. Instead, high levels of environmental concern are likely the result of more complex matrices, such as left-leaning political alignment, direct experience with environmental harms, and "postmaterial" value choices (Rohrschneider 1990). Consequently, it is likely that targeting certain population segments for environmental education is impractical and inappropriate. Promoting educational experiences which encourage the attainment of values such as altruism and eco-centrism could prove to be most productive in developing mass increases in environmental concern.

As described by numerous articles (Rohrschneider 1990; Dunlap and York 2008; Stern and Dietz 1994), "postmaterial" value choices help formulate and promote environmental concern. As previously demonstrated, College of Liberal Studies students showed a higher level of environmental concern relative to non-CLS students. Interestingly, prior research on this issue found a negative relationship between business majors and environmental concern (Sherburn and Devlin 2004; Lang 2011). Business majors are trained to make value choices such as individualism and competition, which are in contrast to the sense of cooperation intrinsic to "postmaterial" values which lead to environmental concern. However, an education in liberal studies aims to promote the necessary "postmaterial" values. The reasoning for this is as follows: fundamentally, an education in liberal studies instills an advanced perception of self and society, including humanity's role in a symbiotic world. In other words, a liberal studies education does not directly lead to environmental concern, but could potentially facilitate an indirect, latent effect on environmentalism. Science and social science majors, over the course of their college careers, show an increase in concern for ecological matters (Ridener 1999). While there is no current, clear academic explanation for liberal studies students demonstrating more concern relative to other students, I postulate that it is due to the value choices ingrained by learning about humankind's relationship with the world around her. More research should be conducted on this topic, as to entertain possible associations between college major and value choices.

However, political identification in this study did give an indication of environmental concern; specifically, Democrats exhibit high levels of concern (\$50.83), whereas Republicans show lower levels (\$15.00). One possible explanation for this stark difference involves the intertwining of political party polarization and party sorting theory. Both parties alike, the Republicans and Democrats, have become more polarized. As described by Guber (2013), the polarization of American political parties was framed by political elites. Given this, Democratic political elites instilled the framework of pro-environmental attitudes, whereas Republican elites issued anti-environmental sentiments. Considering this, it is integral to note that responses to environmentalism are generally ideological in nature. In other words, individuals determine their position on environmental issues based on political identification. Therefore, the finding in this study, that Democrats express more concern than Republicans, is consistent with the interrelations of party polarization and party sorting theory.

The sample of UW – La Crosse students in this study exhibited relatively high levels of environmental concern. On average, students in the study were for a fee increase of \$40.57. Given this, on-campus sentiment towards such a “Green Initiative”, which was suggested in the survey, is largely positive. Certainly, more research and data collection should be conducted in order to better inform university officials regarding the expansion of such a program. Given the results from this study, there is evidence that the University of Wisconsin – La Crosse Green Fund could be economically expanded, as to fund more projects relating to sustainability.

LIMITATIONS

Perhaps the most glaring limitation to this study is sample size. In a significant amount of cases, responses to the survey questions were not applicable, or simply not answered. Given a larger sample, more robust forms of statistical analysis could have been pursued in a reasonable fashion, namely regression or factor analysis.

Furthermore, this study dealt exclusively with students at UW-L. Thus, the sample size is very homogenous: only a small part of American culture and society is captured in this demographic. The age, educational attainment, and lifestyle of the sample are all very similar, thus limiting the ability to convincingly represent America as a whole.

Another limitation is purely conceptual: the determinants of environmental concern are complex and multifaceted. While I hypothesized that certain social characteristics are linked to environmental concern, it was shown that such notions are inconclusive. It is clear that such simple parameters are insufficient in determining concern. In terms of future research, interviews or open-ended surveys could provide more in-depth data, which could prove more useful in establishing the causes of concern for the environment.

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