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Social Class and Concern for Climate Change in UNH College Students

Charlotte Thompson

Abstract

This study explores the relationship between college students' social class and level of concern for climate change. A survey was administered to 355 students at the University of New Hampshire, in the Fall of 2015. Using this data, this paper examines social class, as measured by parental college degree status, in relation to concern for climate change. The results show no statistically significant relationship between the independent and dependent variables for the entire sample, but a statically significant relationship among female respondents who were very concerned about climate change. Specifically, of women whose parents have a college degree, 37% responded with very concerned, only 18% of women whose parents do not have a college degree responded with very concerned. Further research with more in-depth measures of social class and with larger and more representative samples is recommended.

Introduction

There is a serious need to better understand the connection between social factors and an individual's level of concern for environmental problems (Lui et al. 2014; McCright 2010; Nisbet and Myers 2007; Wacholz 2010). I am specifically interested in how social class can impact concern for climate change, as climate change is one of the foremost environmental issues facing the world today (McCright 2010). My research question is: How does a college student's social class influence their level of concern for climate change? In order to make effective public policy, it is incredibly important to understand and to be able to identify underlying factors of a person's level of climate change concern (Lui et al. 2014).

Theories and Previous Research

One theoretical explanation for the potential connection between social class and concern about climate change is based on Maslow's hierarchy of needs (McCright 2010). The theory is "[...] that those with higher social class should be more concerned about environmental problems than those with lower social class; they have satisfied their basic material needs and thus become more concerned about higher level needs [...]" (Lui et al. 2014: 79). In other words, people in lower social classes would be less concerned about climate change because they lack resources such as time and money, to be able to do so. This is the foundation for my research and is important to understand as, "[...] climate change is the most expansive global environmental problem facing humanity [...]" (McCright 2010:67). In order to combat such a comprehensive issue, any barriers to understanding and change need to be understood. Social class may be one of these barriers. However, based on my preliminary research, there has been very limited research in this area. Previous research on the subject, by Lui et al. (2014), Nisbet and Myers (2007), McCright (2010), Shepardson et al. (2011), and Wachholz et al. (2012), has focused on

conceptions of environmental issues broadly, without attention to the potential relationship between concern for climate change and social class.

Using three national public surveys, Lui et al. found that political ideology, beliefs on human-nature relationship, and socioeconomic factors of gender and race were significant and important in explaining citizens' environmental concern (2014). However, they also found that education had little effect on citizen environmental concern (Lui et al. 2014). Myers and Nisbet reviewed longitudinal survey data from 20 years in an attempt to tell a comprehensive story of change in public awareness of climate change, specifically hoping to understanding of causes and perceptions of climate change science (2007). Overall, the general trends point towards increasing knowledge, awareness and understanding over the past 20 years (2007). Research by Shepardson assessed students for their understanding of climate change when teachers were given a specific instructional tool to teach with (2011). He found a range of understanding across students, even when taught with the same material, suggesting that student's beliefs were not based on the knowledge they learned in the classroom. Research conducted by McCright also used national data and found that women expressed greater concern and conveyed greater assessed knowledge about climate change than men (2010). Most similarly to my research, Wachholz et al. surveyed college students using a variety of questions to gauge their awareness and attitudes about climate and a majority expressed concern for climate change (2012).

These studies all contribute to understanding the relationship between social factors and climate change awareness and understanding, however, there are significant gaps in the literature. Few, if any, used socio-demographic information in their analysis as potential influencing factors, indicating a clear need for further research. Specifically, as identified

through Maslow's hierarchy of needs in the context of this previous research, there is a need to understand how social class may interact with concern for climate change.

Hypothesis

These gaps in academic understanding outlined above illustrate the need for further research into the potential connectivity between social class and concern for climate change among college students. My hypothesis is that students whose parents have a college degree, which is a proxy measure of social class, are more likely to be concerned about climate change. The null hypothesis is that social class does not affect a student's concern for climate change. My aim with this research is to create a body of evidence to better inform decision-making about climate change by understanding the social factors that may affect it.

Research Methods

A convenience sample was taken in late November 2015 of UNH students via an email sent by all Sociology Research Methods students. The survey was administered via the online survey program Qualtrics. Each student sent an email request to other UNH students in their social networks, with a link to the survey. Data was completed anonymously and there was no compensation for the research subject. While there are significant drawbacks to using a convenience sample, most notably an unrepresentative sample, for this research a convenience sample was the most feasible, with the limitations taken into consideration in analysis.

The first page of the survey was a consent form. Participation was completely voluntary and participants were able to opt out at any time or skip any questions. They were made fully aware of the aims of the study and any potential risks or benefits. We did not ask for signatures as the data was collected completely anonymously and agreement to consent on the first page acted as informed consent. I used Qualtrics software to collect and analyze the data.

There were minimal risks associated with this survey. There could have been questions that evoked an emotional response, but as stated above, participants could skip any questions or opt out of the survey. The benefits of the research were for the students of Sociology Research Methods to gain research experience. However, they also extended beyond that to include the possibility for better understanding major issues like student perception of climate change at UNH, and foundational data further research.

For my research, my independent variable was parents educational status (college or no college) measured as a proxy for social class. The survey asked respondents this: Do either of your parents have a college degree? Response options included Yes/No/Don't Know. My dependent variable was level of concern for climate change, answered by question 31 on our survey: What are your thoughts on climate change? Response options included: very concerned, concerned, unconcerned, and very unconcerned.

Results

Section 1

In total, 355 students took the survey with 318 completing every question. As shown in Figure 1, overall, 76% of respondents were ages 19 to 21, with 20 being the mode, closely followed by 21. Sixty five percent of the respondents were female, with 33% identifying as male and 1% non-binary. The overwhelming majority were white (93%), with Asian/Pacific Islander and Latino/Hispanic each making up 2%.

	Response	Number	Percent
Age	18	42	12%
	19	73	21%
	20	96	28%
	21	91	27%
	22	29	8%
	23+	12	3%
	Total	343	
Gender	Male	114	33%
	Female	224	65%
	Non-Binary	5	1%
	Total	343	
Race	White	315	93%
	Black/African American	2	1%
	Asian/Pacific Islander	6	2%
	Latino/Hispanic	6	2%
	Middle Eastern	3	1%
	Other	7	2%
	Total	339	

Figure 1: Summary Respondent Statistics Soc 601 Fall 2015 Survey

Section 2

Results for my independent variable, parental college education, are shown below in Figure 2. Out of 343 people who answered the question, 84% had parents with a college education. Only 16% of respondents' parents did not have a college education. Two people did not know.

#	Answer	Response	%
4	Yes	287	84%
5	No	54	16%
6	I don't know	2	1%
	Total	343	100%

Figure 2: Responses to question: Do either of your parents have a college degree? Soc 601 Fall 2015 Survey

Results for my dependent variable, concern for climate change, are shown in Figure 3. Out of 324 people who answered the question, 81% of people responded with concerned or very concerned, with only 19% responding with unconcerned or very unconcerned. Specifically, 33% of people said very concerned and only 3% said very unconcerned.

#	Answer	Response	%
1	Very concerned	107	33%
2	Concerned	156	48%
3	Unconcerned	51	16%
4	Very unconcerned	10	3%
Total		324	100%

Figure 3: Responses to question: What are your thoughts on climate change? Soc 601 Fall 2015 Survey

Section 3

Results from a chi-square test of significance between my independent variable, parental college degree, and dependent variable, concern for climate change, are summarized below. Overall, the majority of people are concerned or very concerned regardless of parental college degree. Seventy six percent of people whose parents do not have a college degree responded with concerned or very concerned, while 82% of people whose parents do have a college degree did. Interestingly, 34% of people whose parents have a college degree responded with very concerned, while only 26% of people whose parents do not have a college degree did. Using the chi-square significance test with these results, there is no statistically significant association between my independent and dependent variables. The p-value is .89, outside of our accepted margin of error of .1. However, when analyzed further, patterns do appear.

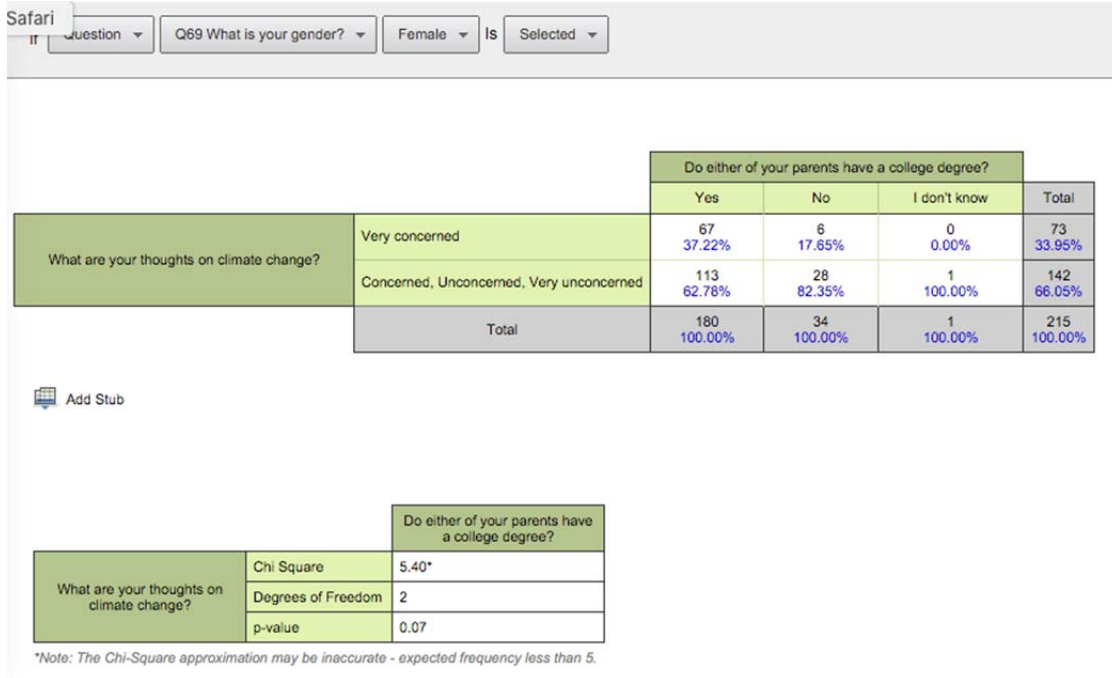


Figure 4 Cross-tabulation and chi-square significance test of IV and DV with filtered responses Soc 601 Fall 2015 Survey

Results from female respondents are shown in Figure 4. The categories of concerned, unconcerned and very unconcerned were merged in an effort to compare them to those who responded with very concerned. A filter was added, using the gender question, to only look at responses by women.

Using these variable categories and the gender filter, a cross-tabulation and chi-square test of significance indicates a statistically significant relationship between parental college degree and concern about climate change for women. Of women whose parents have a college degree, 37% responded with very concerned, only 18% of women whose parents do not have a college degree responded with very concerned. This relationship is not statistically significant with men. A chi-square test of significance results in a p-value of .07, below our margin of error of .1 percent.

Using parental college degree as a proxy for social class, compared to concern about climate change, throughout the sample, I fail to reject my null hypothesis, as there is no statistically significant relationship. However, analyzed more specifically, it is possible to say that a women's social class, measured by parental college degree, influences her level of climate change concern with a 10% margin of error. Using those categories and filters, I reject my null hypothesis.

Conclusion

Broadly speaking, no statistically significant relationship between male college student's social class, measured by parental college education, and concern for climate change was found in this study. However, a statistically significant relationship was found when analyzed further for women, social class and the response very concerned. This pattern is not found for men, indicating the potential moderating effect gender can have.

The results of the survey suggest that a women's social class affects the severity of climate change concern. This means that social class alone (using the proxy measure) does not influence a persons' attitudes about climate change, but gender has a moderating effect. This gendered difference aligns with previous studies that also found women to be more aware and concerned about varying environmental issues, and is important to consider in future work (McCright 2010).

There are, however, important limitations to recognize. The sample was a convenience sample, which could have biased my findings. Overall, the population of the University of New Hampshire is relatively homogenous, so the practical application of this research outside of the school is also important acknowledge. The question wording and use of one proxy measure of social class could have affected the results, and there is a need for more in-depth study, using

comprehensive measures of social class, into the potential relationship with environmental concern.

Overall, this research provides a foundation to begin to understand how socio-demographic factors, like socioeconomic status, can influence major environmental issues like climate change. Much more future research needs to be completed to fully understand all factors, but the practical implications for policy makers, scientists, and solutions are undeniable. If we are going to fight climate change and create effective solutions, we need to understand how major social factors and institutions influence peoples' awareness and understanding. Only once we fully understand the issue, can steps be made and solutions create to alleviate it.

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