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Identity and Environmentalism: The Influence of Community Characteristics

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Abstract

This paper examines the influence of community characteristics on self-proclaimed environmentalism. We find that the composition of a community affects the likelihood that a person claims to be a strong environmentalist, even after controlling for individual characteristics and pro-environment behaviors. Individuals are more likely to definitely agree they are strong environmentalists if they live in areas where a large share of the population has post-graduate degrees and if they live in heavily Democratic areas or heavily Republican areas. These community effects occur only when individuals are predisposed to take on an environmental identity.

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1 Introduction

In the past three decades, surveys have consistently shown that environmental problems are a cause of public concern (Guber, 2003) while recent opinion polls indicate that energy policy and climate change have become important issues for American voters (Bannon et al., 2007). Investigating the socioeconomic profile of self-proclaimed environmentalists can provide insights into the likelihood that changes in social norms and economic conditions will influence behaviors leading to sustainable consumption.¹ In this paper, we examine whether the ideological composition of a community influences an individual's propensity to identify as an environmentalist. In order to study the link between a community's ideology and self-proclaimed environmentalism we focus on two characteristics that typically correlate with pro-environment attitudes and efforts: political preferences and education levels. Using data from a nationally representative household survey and the Census, we estimate multinomial probit models and show a correlation between a person's self-proclaimed environmentalism and educational attainment at the zip-code level and between environmentalism and political preferences at the county level, even after controlling for individual factors and the frequency of pro-environment behaviors.

Recent advances in economic research on identity and, in particular, work by Akerlof and Kranton, motivate this research. Akerlof and Kranton (2000, 2005) argue that individuals gain utility when they behave according to the prescribed behavior that their social categories and particular situations require. In addition, identity is not a fixed stable construct, but situation-

¹ There is evidence that self-proclaimed environmentalism is not simply a label but has practical consequences. Kahn (2007) finds that communities in California with a higher proportion of Green Party registered voters exhibit higher frequencies of pro-environment behaviors. Using survey data, Owen, Videras, and Wu (2008) find that environmentalism is a strong predictor of individual pro-environment efforts. In contrast, using a sample of households in Norway, Holden (2004) finds that households do not have a smaller ecological footprint because of their membership in an environmental organization.

dependent. That is, individuals have multiple “selves” and different situations and social context determine which self individuals subscribe to. In this way, the social context can influence individuals’ identity through the internalization of their reference group’s preferences. The environmental psychology literature also investigates the importance of community factors in shaping personal values and behaviors towards the natural environment. Kempton and Holland (2003) find that engagement in pro-environment practices requires the person’s self-identification as an actor while Opatow and Brook (2003) argue that such identification, an individual’s environmental identity, is shared socially.

Research in social psychology and sociology motivate two specific hypotheses in this paper about how group characteristics might be related to an individual’s sense of self. First, there is evidence that individuals are more likely to associate with others who are like them, what researchers call *homophily*. McPherson, Smith-Lovin and Cook (2001) discuss several studies that show that individuals with similar demographic characteristics associate with each other. Our work expands this literature because it suggests that group composition may actually alter self-perception. Specifically, we show that individuals who live in areas with a very high proportion of people who are likely to support pro-environment policy (areas where a high proportion of individuals vote Democrat) are more likely to self-identify as environmentalists even after controlling for relevant demographic characteristics and, importantly, even after controlling for pro-environment behaviors that might more objectively define environmentalism.

We examine a second hypothesis advanced initially by McGuire and Padawer-Singer (1976) and McGuire (1984): the *distinctiveness hypothesis*.² According to this idea, individuals who have traits that are different from that of the group’s will focus more on those traits when

² For a more recent discussion of the distinctiveness hypothesis, interested readers should see Leonard, Mehra and Katerberg (2008).

formulating a self-concept. For example, a black woman may be more likely to identify as an African-American in a group of white women, but when with a group of black men, may be more likely to identify as a woman. Although much of this work has focused on demographic characteristics, especially race, our findings also support this idea as we show that individuals are more likely to report being an environmentalist when they live in a community with a very low proportion of people who are likely to support pro-environment policy. Therefore, we find evidence consistent with both the homophily hypothesis *and* the distinctiveness hypothesis: individuals who live in either very liberal *or* very conservative areas are more likely to identify themselves as strong environmentalists than those living in politically moderate areas.

Because our research explores the links between individual preferences and characteristics of the community where the individual lives, this paper also relates to the literature on economic outcomes and social interactions. However, while the relationships we find are consistent with community characteristics causing self-identification, we cannot prove causation as our data do not allow us to distinguish among the mechanisms that could explain a relationship between individual and community characteristics (Manski, 2000).

Finally, this paper contributes to the vast literature on the determinants of environmentalism. This research usually focuses on the categorization of values and norms and their influence on attitudes, intentions, and behaviors. (See, among many others, the research by Thøgersen and Olander (2002), Dunlap et al. (2000), and Stern (2000)). In this paper, we contribute to this literature by focusing on people's identity as environmentalists and the influence of community characteristics on an individual's self-proclaimed environmentalism, rather than on the set of values that define environmentalism.

The paper proceeds as follows. Section 2 presents the data and empirical model. Section 3 discusses the results and section 4 concludes.

2 Data and Empirical Identification

We use data for approximately 1,700 respondents from a nationally representative household survey conducted in September and October of 2007. The respondents were recruited via random digit dialing to be part of the Knowledge Networks Internet panel. Knowledge Networks provides households Internet access to avoid the biased sample that results from requiring participants to obtain Internet access on their own.^{3,4} The survey instrument contained fifty questions.⁵ The first set of questions asked about general attitudes toward the natural environment. The second group elicited how frequently individuals engage in pro-environment behaviors out of concern for the environment. Third, the survey evaluated the respondents' general knowledge of environmental problems. Finally, the survey asked questions about time preferences, risk aversion, and attitudes towards free riding. We augment the survey with respondent demographics and an array of individual characteristics that Knowledge Networks collects as part of their "public affairs profile," a series of questions that are asked periodically of all members of the panel.

³ Internet surveys have several advantages. They allow for more complex questions than can be asked in a telephone survey and are less likely to be subject to interviewer bias (trying to please the interviewer by responding the "right way") than telephone or face-to-face surveys are. See Krosnick and Chang (2001) for a comparison of random digit dialing telephone interviews, the Knowledge Networks Internet panel, and other Internet panels. Knowledge Networks does not accept volunteer panelists.

⁴ The response rate among Knowledge Networks panelists for our survey was 66%. Berrens et al. (2004) also present results using a survey implemented by Knowledge Networks (KN) on willingness to pay for climate change mitigation and Cameron and DeShazo (2001, 2004) show that their KN sample is comparable to data from the 2000 Census.

⁵ The entire survey as well as more detailed information about the survey methodology can be obtained from http://www.hamilton.edu/levitt/Sustainability/Environmental_survey_2008.html.

We are interested in understanding what factors affect an individual's self-identification as an environmentalist. The dependent variable in our models is the answer to the question of whether or not individuals considered themselves to be environmentalists. The possible responses are "no," "yes, somewhat," and "yes, definitely." Approximately eight percent of individuals in the sample say they are definitely environmentalists. Forty-nine percent answer "yes, somewhat" and forty-three percent say they are not environmentalists. Although researchers typically use a binary classification for environmentalism, we find interesting results when we treat this variable as a three-category response. Although this dependent variable is ordered, we estimate a multinomial probit given that we reject the assumption of parallel regression at a 5% significance level.

Our respondents answered the same question approximately six months before they completed our survey, as part of Knowledge Networks' public affairs profile. We repeated the question to explore whether individuals might want to appear to have the "right" attitudes in our survey. We find that only seven people who said they were definitely not an environmentalist six months earlier claim to definitely be an environmentalist in our survey. On the other hand, there are 96 individuals who claimed to be strong environmentalists in the Knowledge Networks' public affairs profile whose answer in our survey was "yes, somewhat" (87 respondents) or "no" (9 respondents). Thus, with regard to self-proclaimed environmentalism, our responses are more conservative than those in the Knowledge Networks' public affairs profile. We hypothesize that taking a survey specifically on environmental issues might have made respondents more thoughtful about their identity as an environmentalist. It is also worth noticing that self-proclaimed environmentalism correlates strongly with responses to attitudinal questions about

the natural environment and actual pro-environment efforts. Overall, we believe our dependent variable is a reliable measure of the respondents' environmental identity.⁶

As we mention above, our main hypothesis is that the ideological composition of a community might influence an individual's propensity to identify as an environmentalist. To measure a community's ideology we focus on political preferences and educational attainment. We use Census data at the zip-code level to calculate the share of individuals (25 years of age and older) with a postgraduate degree. We use county-level voting data from the 2004 presidential election to compute aggregate political preferences.⁷ To examine the distinctiveness and homophily hypotheses, we proxy political preferences with the variables *low_kerry* and *high_kerry*. The variable *low_kerry* takes on the value of 1 if the respondent lives in a county where the Democratic candidate, John Kerry, received less than 40 percent of the votes; *high_kerry* that takes on the value of 1 for those living in counties that had a percentage of Kerry supporters over 60 percent in 2004.^{8,9} One advantage of using data at these levels of aggregation is that statistically significant effects due to self-selection are less likely than if we defined "community" at a much finer level: individuals are less likely to self-select into counties than into census blocks, for example. On the other hand, it might be more difficult to find an effect of ideological composition on an individual's environmental identity.

Naturally, individuals who live in highly Democratic areas, for example, are much more likely to be Democrats themselves. Thus, we need controls for personal political preferences and education. We use seven categories for education (high-school dropout is the default). We also

⁶ Nonetheless, when we use the earlier response to the question about environmentalism, the nature of our results is similar, although the coefficients are estimated less precisely.

⁷ The data come from www.uselectionatlas.org.

⁸ The omitted category is those living in areas that are politically more moderate (where Kerry received between 40-60 percent of the 2004 presidential vote).

⁹ We find qualitatively similar results when using a specification that includes a quadratic for the percentage of the Kerry vote (a linear and a squared term).

include a variable that indicates a respondent's political preferences: the variable *democrat* takes on the value of 1 for "Strong Republican" and on the value of 5 for "Strong Democrat."

Other controls include household size, age and age squared, and dichotomous variables for gender, married respondents, an interaction between gender and marital status, homeowners, and African-Americans and Hispanics. These individual characteristics influence identity, may be related to values toward the environment, and are also likely correlated with education levels and political preference. We also include the log of household income at the census block level, the fraction of the population in the respondent's zip code that is classified as being in an urban area, the percent of homeowners in the respondent's zip code, and regional dummies. Descriptive statistics appear in Table 1.

3 Results

In this section, we present results from multinomial probit regression models estimating the likelihood that respondents claim to be strong environmentalists or not environmentalists, relative to those individuals who claim to be "somewhat" environmentalists. Secondly, we present descriptive statistics that suggest community factors matter only for those individuals who are predisposed to claim an environmental identity. Finally, we investigate this finding more systematically by estimating multinomial probit models that use a split sample.

Before discussing the results, it is worth noticing that although the dependent variable is ordered, we obtain richer and sharper results when we estimate a multinomial probit model rather than an ordered probit, even though the main conclusions are the same with either

procedure. Furthermore, we reject (at a 5% significance level) the assumption of parallel regression that is necessary for the ordered probit model.¹⁰

The dependent variable measures the degree to which respondents agree to the following question, “Would you describe yourself as an environmentalist?” Respondents may choose “yes, definitely”, “yes, somewhat”, or “no”. Table 2a shows the coefficient estimates when estimating the probability of “yes, definitely”, relative to the base case of “yes, somewhat.” The first regression in column 1 includes individual controls only. We find that race and political leaning are significant predictors of being a strong environmentalist. African Americans and Hispanics are less likely to claim to be strong environmentalists. Also, the more individuals lean towards describing themselves as a strong Democrat, the more likely they are to be strong environmentalists.

The second column of Table 2a shows the results for a regression that includes community characteristics only. We find that those who live in zip codes that have a higher percentage of people with post-graduate degrees and those living in areas that had a high percentage of Kerry supporters (over 60 percent) in 2004 are significantly more likely to be strong environmentalists than weak environmentalists, holding other community characteristics constant. In results not shown in the tables, the marginal effects imply that living in a highly democratic zip code is associated with an increase in the probability of being a strong environmentalist by 5.5 percentage points. This is unsurprising because those living in highly Democratic areas are much more likely to be Democrats themselves and those in areas with higher levels of education are more likely to have higher levels of income and education as well. It is interesting that there

¹⁰ Although the sampling strategy employed was an equal-probability design which theoretically should have produced a sample that was self-weighting, throughout our analysis we use population weights that are calculated based on respondents demographic characteristics (e.g., race, age, gender, education). See the survey documentation for a more thorough discussion of this issue at: http://www.hamilton.edu/levitt/Sustainability/Environmental_survey_2008.html

is also a positive coefficient on *low_kerry*, an indicator variable for those living in areas where Kerry received less than 40 percent of the votes. This coefficient, however, is statistically insignificant.¹¹

Column three of Table 2a includes community and individual characteristics. Individual political preferences correlate with being a strong environmentalist, though this coefficient is now significant at the 10 percent level. We also find that those living in communities with a high percentage of people with a post graduate education and those living in areas that are highly Democratic are more likely to be strong environmentalists. A calculation of marginal effects shows that a 10 percentage point increase in the number of people with an advanced degree in a given zip code implies a 2.1 percentage point increase in the probability of being a strong environmentalist. The analogous marginal effect for living in a very Democratic area is 5.3 percentage points. These results hold up even after we include a control for the individual's level of education and political preference. Perhaps those who live in highly Democratic areas are more likely to be fervent environmentalists due to the presence of other like-minded citizens.

Why else might self-proclaimed environmentalism relate to community characteristics? Might there be community effects that influence actual pro-environmental behaviors and, indirectly, one's environmentalism? To examine this issue, the fourth column of Table 2a includes an index of pro-environmental behaviors. The survey asks how often people engage in recycling, altering food consumption, conserving gas, conserving energy use at home, buying environmentally friendly products, contribute to environmental organizations, and suggest to friends or relatives to alter their behavior. Respondents answer either "nearly all the time, frequently, occasionally, or never" for each of these activities. We use an index that linearly

¹¹ The omitted category is those living in areas that are politically more moderate (where Kerry received between 40-60 percent of the 2004 presidential vote).

sums the scores of each individual response (using a 0-3 scale).¹² We cannot interpret the estimate on this control causally as individuals who claim to be environmentalists are much more likely to engage in pro-environmental behaviors. The goal of this exercise is to explore whether there are statistically significant predictors of being an environmentalist even after controlling for an objective measure of actual pro-environment efforts.

The results in the fourth column show that, as expected, the index of pro-environmental behaviors is strongly correlated with being an environmentalist. More interesting is the fact that while personal political preference is no longer significant, county-level political preference remains a significant predictor of being a strong environmentalist. After controlling for individual characteristics, those respondents living in very highly Democratic areas *or* very highly Republican areas are more likely to claim to be environmentalists, relative to those that live in more moderate areas (both of these coefficients are statistically significant). Thus, personal political preferences have an indirect effect on identity (via actual pro-environment efforts) while community preferences have a direct effect on the likelihood of claiming to be an environmentalist. It is striking that those living in very highly Republican areas are also more likely to be strong environmentalists, after controlling for personal political affiliation and education level. These results indicate that individuals are more likely to be strong environmentalists when a large percentage of their peers are either *very similar* or *very different* to them. The effect of community political preferences is weakest for those living in more moderate areas. In addition, living in an area with a high percentage of people with post-graduate degrees increases the likelihood of claiming to be an environmentalist, *ceteris paribus*.

¹² We also repeated all regressions with separate indices for each pro-environmental behavior but found that results were not sensitive.

In sum, these results show that being an environmentalist does not merely reflect how much individuals engage in pro-environmental behaviors, but involves the degree to which they identify themselves for a particular cause. For two individuals who engage in the same frequency of pro-environmental behaviors, those who live in highly Democratic *or* highly Republican communities are more likely to claim to be strong environmentalists, relative to those living in politically moderate areas.

Next, we examine whether there is an interaction between being a Democrat and the effects of living in strongly Democratic and strongly Republican areas. In this regression, we use three interaction variables, *democrat*kerry_low*, *democrat*kerry_med*, and *democrat*kerry_high*. The results in column 5 show that *democrat*kerry_low* and *democrat*kerry_high* are statistically significant, while the *democrat*kerry_med* variable is insignificant. Being a Democrat significantly affects the likelihood of being a strong environmentalist only for those living in highly Republican and highly Democratic areas.

Table 2b presents the results when we estimate the likelihood of being a non-environmentalist relative to the baseline case of “somewhat of an environmentalist.” Column 1 of Table 2b shows results when we include only individual characteristics. We find that the more individuals lean toward being a Democrat, the less likely they are to be non-environmentalists. In addition, those with a doctoral degree are less likely to be non-environmentalists, though this coefficient is only significant at the 10 percent level. The second column of this table shows results for a model that includes community characteristics only. We find that those living in areas with a low percentage of Kerry supporters are more likely to be non-environmentalists, but no other coefficients are statistically significant.

In column 3, we include individual and community characteristics. Leaning Democrat is still negatively related to the probability of being a non-environmentalist. Now the doctoral degree coefficient is significant at the 1 percent level, and those with higher incomes are more likely to be non-environmentalists. However, none of the community characteristics significantly affect the probability of being a non-environmentalist. When we include an index of pro-environmental behaviors, we find that the index strongly correlates with being a non-environmentalist. In the last column of Table 3b, we find that the three interaction terms *democrat*kerry_low*, *democrat*kerry_med*, and *democrat*kerry_high* are significant predictors of being a non-environmentalist. T-tests show that the effects of leaning Democrat on the probability of being a non-environmentalist are the same for individuals living in politically liberal, conservative, and moderate communities.

The results in Tables 2a and 2b indicate that there are differences in the impact of community factors when comparing the change from being a non-environmentalist to a weak environmentalist and the change from being a weak environmentalist and a strong environmentalist. The education level and political climate of one's community strongly influences the likelihood of being a strong environmentalist, relative to a weak environmentalist, but does not affect the probability of being a non-environmentalist versus a weak environmentalist. In addition, we find that being a Democrat significantly affects the likelihood of being a strong environmentalist for those living in either highly Republican or highly Democratic areas.

The distinctiveness and homophily hypotheses suggest that community factors may accentuate existing individual characteristics either because these characteristics are in contrast to those held by the community or because they are similar. Therefore, it is worth investigating

whether the effects of community characteristics are only relevant for those who may be predisposed to identify as environmentalists.

Table 3 is a first step towards examining this issue, presenting the cross-tabulation between the percent of Democratic respondents who identify as environmentalists and community characteristics. The first panel of Table 3 shows those who say they “lean Democrat,” are Democrats, or are “strong Democrats.” The bottom panel shows those who are “strong Democrats.” Given that Democrats may be more predisposed to environmentalism than others, these statistics suggest that the effects of community characteristics is strongest when living in an area that is populated with people who have either very similar political views or very different political views, with a larger percent of the Democrats being more likely to declare themselves to be strong environmentalists either when they live in highly Republican areas or highly Democratic areas.

We follow up more systematically on these findings by estimating multinomial probit models using a split sample. We estimate each regression on a sub-sample of Democrats and a second sub-sample of Republicans and Independents. Tables 4a and 4b present the results. As expected, the results in Table 4a show that community characteristics do influence those who are predisposed to identifying as environmentalists, Democrats, but do not matter for Republicans and Independents. Those Democrats who live in *either* highly Democratic areas *or* those who live in highly Republican areas are both more likely to identify themselves as strong environmentalists, relative to those living in politically moderate areas. Consistent with previous findings, the results in Table 4b do not provide evidence that community characteristics determine a distinction between those who are not environmentalists and those who are weak environmentalists.

These split-sample results serve as a falsification test and strengthen our conclusions because the effects of community characteristics exist only if individuals are more likely to support pro-environment policy and may be predisposed to identifying as environmentalists. Thus, we find evidence for community effects when we should and do not find evidence when we should not, mitigating concerns that our correlations can be attributed to other factors.

4 Conclusion

Our results document a relationship between individual identity and community characteristics. We find that living in an area in which others either share your values or have very different values accentuate an individual's identification as a strong environmentalist. Although an interesting feature of our results is that identity as an environmentalist is not exclusively related to pro-environment efforts, it is also the case that people who identify as environmentalists engage in more pro-environment behaviors on average than those who do not. Thus, these results suggest that objectively measured behaviors do not completely determine identity. This paper suggests that community composition is an important link in understanding the evolution of environmentalism and social norms that might be conducive to sustainability.

References

- Akerlof, George A., and Rachel E. Kranton, 2000, "Economics and Identity" *the Quarterly Journal of Economics*, 115(3): 715-753.
- Akerlof, George A., and R.E. Kranton, 2005, "Identity and the Economics of Organizations," *the Journal of Economic Perspectives*, 19(1): 9-32.
- Bannon, Brent, DeBell, Matthew, Krosnick, Jon A., Kopp, Ray, and Peter Aldhous, 2007, "America's Evaluations of Policies to Reduce Greenhouse Gas Emissions," manuscript.
- Berrens, Robert P., Alok K. Bohara, Hank C. Jenkins-Smith, Carol L. Silva, and David L. Weimer, 2004, "Information and effort in contingent valuation surveys: application to global climate change using national internet samples," *Journal of Environmental Economics and Management*, 47: 331-363.
- Cameron, Trudy Ann and J.R. DeShazo, 2004, "An Empirical Model of Demand for Future Health States when Valuing Risk-Mitigating Programs," University of Oregon, mimeo.
- DeShazo, J. R., Trudy A. Cameron, and Manrique Saenz, 2001, "Test of Choice Set Misspecification for Discrete Models of Consumer Choice," University of Oregon, mimeo.
- Dunlap, Riley E., Van Liere, Kent D., Mertig, Angela G., and Robert Emmet Jones, 2000, "Measuring endorsement of the New Ecological Paradigm: A revised NEP scale," *Journal of Social Issues*, 56(3): 425-442.
- Holden, Erling, 2004, "Towards sustainable consumption: Do green households have smaller ecological footprints?" *International Journal of Sustainable Development*, 7(1): XXXX.
- Kahn, Matthew E., 2007, "Do Greens drive Hummers or Hybrids? Environmental Ideology as a Determinant of Consumer Choice" *Journal of Environmental Economics and Management*, 54: 129-145
- Kempton, Willet, and Dorothy C. Holland, 2003, "Identity and sustained environmental practice," in *Identity and the Natural Environment*, S. Clayton and S. Opatow, Eds., The MIT Press, Cambridge, Massachusetts.
- Kotchen, M. and Moore, M., 2007, "Private Provision of Environmental Public Goods: Household Participation in Green-Electricity Programs" *Journal of Environmental Economics and Management*, 53:1-16.
- Krosnick, John A. and LinChiat Chang, 2001, "A comparison of the random digit dialing telephone survey methodology with Internet survey methodology as implemented by Knowledge Networks and Harris Interactive," Ohio State University, mimeo.

Guber, Deborah Lynn, 2003, "*The Grassroots of a Green Revolution: Polling America on the Environment*," The MIT Press, Cambridge, Massachusetts.

Leonard, Ana S., Ajay Mehra, and Ralph Katerberg, 2008, "The social identity and social networks of ethnic minority groups in organizations: a crucial test of distinctiveness theory," *Journal of Organizational Behavior* 29: 573-589.

Manski, Charles F., 2000, "Economic analysis of social interactions," *Journal of Economic Perspectives*, 14 (3): 115-136.

McGuire, W.J., 1984, "Search for self: Going beyond self-esteem and the reactive self" in R. A. Zukcer, J. Aronoff, and A.I. Rabin (editors), *Personality and the prediction of behavior* (New York: Academic Press): 73-120.

McGuire, W. J. and Padawer-Singer, A., 1976, "Trait salience in the spontaneous self-concept," *Journal of Personality and Social Psychology*, 33: 743-754.

McPherson, M., L. Smith-Lovin, and J.M. Cook, 2001, "Birds of a feather: Homophily in social networks" *Annual Review of Sociology* 27: 415-439.

Opotow, Susan, and Amara Brook, 2003, "Identity and exclusion in rangeland conflict," in *Identity and the Natural Environment*, S. Clayton and S. Opotow, Eds., The MIT Press, Cambridge, Massachusetts.

Owen, Ann L., Julio Videras, and Stephen Wu, 2008, "More information isn't always better: The case of the voluntary provision of environmental quality," Hamilton College Sustainability Program Working paper #2008-1.

Thogersen, John, and Folke Olander, 2002, "Human values and the emergence of a sustainable consumption pattern: A panel study," *Journal of Economic Psychology*, 23(5): 605-630.

Stern, Paul C., 2000, "Toward a coherent theory of environmentally significant behavior," *Journal of Social Issues*, 56(3): 407-424.

Table 1: Summary Statistics

Variable	Mean	Std. Dev.
Strongenvironmentalist	0.08	0.26
Somewhat environmentalist	0.49	0.50
Not environmentalist	0.43	0.50
Married	0.58	0.49
Female	0.52	0.50
African American	0.10	0.30
Hispanic	0.11	0.32
Age	47.67	16.81
Log HH Inc (census block)	10.53	0.96
Household Size	2.58	1.40
Homeowner	0.69	0.46
High School Graduate	0.30	0.46
Some College	0.21	0.41
Associate Degree	0.06	0.24
Bachelor Degree	0.17	0.38
Post Graduate Degree	0.10	0.31
Index of Political Affiliation	4.21	2.15
Behaviors Index: Index of Pro-Environmental Behaviors	9.70	4.25
<i>Proportions by Zip Code:</i>		
Post Graduate Degree	0.08	0.06
Homeowners	0.68	0.17
Live in Urban Area	0.77	0.31
<i>kerry_low</i> : Less than 40% voted for Kerry	0.29	0.45
<i>kerry_high</i> : Greater than 60% voted for Kerry	0.20	0.40
Observations	1808	

Table 2a: Multinomial Probit Models - Probability of Being a "Strong Environmentalist"

	(1)	(2)	(3)	(4)	(5)
Married	0.054	...	-0.022	0.177	0.168
	(0.274)		(0.279)	(0.188)	(0.284)
Female	-0.195	...	-0.033	-0.245	-0.268
	(0.242)		(0.176)	(0.189)	(0.189)
Married*Female	0.084	...	0.225	-0.032	-0.014
	(0.318)		(0.327)	(0.349)	(0.245)
Black	-0.798***	...	-0.877***	0.065	-0.852**
	(0.280)		(0.207)	(0.386)	(0.399)
Hispanic	-0.469*	...	-0.483*	-0.687**	-0.690**
	(0.270)		(0.279)	(0.301)	(0.298)
Age	-0.029	...	-0.029	-0.044	-0.044
	(0.026)		(0.027)	(0.021)	(0.021)
Age*Age	0.000	...	0.000	0.000**	-0.000
	(0.000)		(0.000)	(0.000)	(0.000)
log (Income)	-0.067	...	-0.081	-0.106	-0.110
	(0.098)		(0.102)	(0.083)	(0.082)
Household size	-0.018	...	0.024	0.035	-0.025
	(0.080)		(0.047)	(0.084)	(0.049)
Homeowner	-0.004	...	0.044	0.012	0.091
	(0.194)		(0.198)	(0.163)	(0.163)
HS graduate	-0.259	...	0.061	0.119	0.119
	(0.269)		(0.276)	(0.202)	(0.202)
Some College	0.224	...	-0.206	0.091	0.097
	(0.286)		(0.298)	(0.216)	(0.320)
Associate Degree	0.299	...	0.281	0.532	0.527
	(0.427)		(0.433)	(0.303)	(0.456)
Bachelor Degree	0.119	...	-0.374*	-0.219	-0.219
	(0.317)		(0.225)	(0.348)	(0.240)
Masters Degree	0.520	...	0.404	0.553	0.563
	(0.338)		(0.280)	(0.291)	(0.291)
Ph.D.	0.841*	...	0.541	0.839*	0.881*
	(0.458)		(0.465)	(0.474)	(0.496)
Democrat	0.094**	...	0.082*	0.067	...
	(0.041)		(0.028)	(0.044)	

Baseline case is "Somewhat of an Environmentalist"; weighted standard errors in parenthesis; the models include regional dummies and percent of zip-code population in urban areas; *** significant at the 1%, **significant at the 5%, * significant at the 10%.

Table 2a, Continued: Multinomial Probit Models - Probability of Being a "Strong Environmentalist"

	(1)	(2)	(3)	(4)	(5)
Percent Post Graduate	...	4.023***	2.515**	2.530*	2.640**
		(1.143)	(1.040)	(1.148)	(1.309)
Percent Homeowner	...	0.591	0.434	1.058*	1.056*
		(0.555)	(0.415)	(0.621)	(0.632)
kerry_low	...	0.270	0.294	0.505**	...
		(0.196)	(0.205)	(0.157)	
kerry_high	...	0.438**	0.530**	0.732***	...
		(0.205)	(0.209)	(0.227)	
Behaviors Index	...	...	...	0.181***	0.181***
				(0.030)	(0.017)
Democrat*kerry_low	...	...	...	...	0.116**
					(0.058)
Democrat*kerry_med	...	...	...	...	0.002
					(0.047)
Democrat*kerry_high	...	...	...	...	0.143***
					(0.051)
Constant	-0.464	-2.142***	-0.190	-4.605***	-4.290***
	(1.455)	(0.557)	(0.965)	(1.585)	(1.561)
Observations	1,652	1,746	1,612	1,586	1,586

Baseline case is "Somewhat of an Environmentalist"; weighted standard errors in parenthesis; the models include regional dummies and percent of zip-code population in urban areas;

***significant at the 1%, **significant at the 5%, * significant at the 10%.

Table 2b: Multinomial Probits -- Probability of Being a "Non-Environmentalist"

	(1)	(2)	(3)	(4)	(5)
Married	0.151	...	0.102	0.151	0.152
	(0.178)		(0.180)	(0.284)	(0.188)
Female	0.007	...	-0.317	0.114	0.108
	(0.175)		(0.249)	(0.263)	(0.262)
Married*Female	0.048	...	0.143	0.128	0.132
	(0.228)		(0.230)	(0.245)	(0.349)
Black	0.102	...	0.106	-0.839**	0.072
	(0.196)		(0.306)	(0.218)	(0.220)
Hispanic	-0.003	...	-0.058	-0.073	-0.071
	(0.192)		(0.194)	(0.212)	(0.210)
Age	-0.005	...	-0.016	0.005	0.005
	(0.020)		(0.021)	(0.027)	(0.027)
Age*Age	-0.000	...	0.000	-0.000	0.000*
	(0.000)		(0.000)	(0.000)	(0.000)
log (Income)	0.145*	...	0.176**	0.161*	0.161*
	(0.075)		(0.076)	(0.110)	(0.110)
Household size	0.027	...	-0.011	-0.025	0.035
	(0.045)		(0.081)	(0.050)	(0.084)
Homeowner	-0.033	...	0.057	0.092	0.024
	(0.146)		(0.152)	(0.244)	(0.248)
HS graduate	0.115	...	-0.253	-0.283	-0.255
	(0.187)		(0.189)	(0.312)	(0.306)
Some College	-0.161	...	0.170	0.017	0.016
	(0.200)		(0.204)	(0.324)	(0.216)
Associate Degree	0.202	...	0.111	0.341	0.338
	(0.283)		(0.286)	(0.456)	(0.303)
Bachelor Degree	-0.288	...	0.026	0.315	0.315
	(0.222)		(0.326)	(0.240)	(0.347)
Masters Degree	-0.314	...	-0.438	-0.263	-0.263
	(0.272)		(0.356)	(0.379)	(0.377)
Ph.D.	-0.789*	...	-1.289***	-1.269***	-1.255***
	(0.469)		(0.456)	(0.495)	(0.474)
Democrat	-0.138***	...	-0.140***	-0.100***	...
	(0.028)		(0.043)	(0.031)	

Baseline case is "Somewhat of an Environmentalist"; weighted standard errors in parenthesis; the models include regional dummies and percent of zip-code population in urban areas; ***significant at the 1%, **significant at the 5%, * significant at the 10%.

Table 2b, Continued: Multinomial Probits -- Probability of Being a "Non-Environmentalist"

Percent Post Graduate	...	0.137	0.438	0.580	0.601
		(0.924)	(1.182)	(1.320)	(1.136)
Percent Homeowner	...	-0.169	-0.776*	-0.630	-0.651
		(0.368)	(0.588)	(0.452)	(0.448)
kerry_low	...	0.273**	0.186	0.142	...
		(0.133)	(0.145)	(0.238)	
kerry_high	...	-0.030	0.079	0.138	...
		(0.150)	(0.161)	(0.166)	
Behaviors Index	...	...	...	-0.178***	-0.178***
				(0.017)	(0.031)
Democrat*kerry_low	...	...	...	...	-0.076*
					(0.044)
Democrat*kerry_med	...	...	...	...	-0.115***
					(0.032)
Democrat*kerry_high	...	...	...	...	-0.090**
					(0.040)
Constant	-0.665	-0.005	-0.824	1.740	1.822*
	(0.908)	(0.359)	(1.642)	(1.100)	(1.094)
Observations	1,652	1,746	1,612	1,586	1,586

Baseline case is "Somewhat of an Environmentalist"; weighted standard errors in parenthesis; the models include regional dummies and percent of zip-code population in urban areas; ***significant at the 1%, **significant at the 5%, * significant at the 10%.

Table 3: Political Affiliation and Self-Proclaimed Environmentalism

	<u>Highly Republican Areas</u> (2004 Kerry Vote<40%)		<u>Moderate Areas</u> (2004 Kerry Vote 40-60%)		<u>Highly Democratic Areas</u> (2004 Kerry Vote>60%)	
Leans democrat, democrat, or strong democrat	Frequency	Percent	Frequency	Percent	Frequency	Percent
Not an environmentalist	93	37.35	183	35.53	92	33.45
Somewhat of an environmentalist	133	53.41	297	57.67	142	51.64
Strong environmentalist	23	9.24	35	6.8	41	14.91
Total	249	100	515	100	275	100

	<u>Highly Republican Areas</u> (2004 Kerry Vote<40%)		<u>Moderate Areas</u> (2004 Kerry Vote 40-60%)		<u>Highly Democratic Areas</u> (2004 Kerry Vote>60%)	
Strong democrat	Frequency	Percent	Frequency	Percent	Frequency	Percent
Not an environmentalist	20	31.25	55	31.07	27	26.21
Somewhat of an environmentalist	29	45.31	104	58.76	58	56.31
Strong environmentalist	15	23.44	18	10.17	18	17.48
Total	64	100	177	100	103	100

Table 4a: Split Sample Multinomial Probits -- Probability of Being a "Strong Environmentalist"

	Republicans, Independents	Republicans, Independents	Democrats	Democrats
	(1)	(2)	(3)	(4)
Democrat	-0.073	-0.092	0.267**	0.170
	(0.118)	(0.124)	(0.128)	(0.140)
Percent Post Graduate	1.249	2.905	3.795***	3.257*
	(2.236)	(2.415)	(1.423)	(1.771)
Percent Homeowner	-0.452	0.552	1.053	1.779**
	(1.051)	(1.286)	(0.725)	(0.774)
kerry_low	0.024	0.074	0.644**	0.985***
	(0.279)	(0.325)	(0.288)	(0.338)
kerry_high	0.020	-0.043	0.838***	1.125***
	(0.362)	(0.397)	(0.257)	(0.303)
Behaviors Index		0.139***		0.267***
		(0.042)		(0.040)
Observations	756	752	847	834

Baseline case is "Somewhat of an Environmentalist"; the models include all other independent variables in Table 2a and 2b; weighted standard errors in parenthesis; the models include regional dummies and percent of zip-code population in urban areas; ***significant at the 1%, **significant at the 5%, * significant at the 10%.

Table 4b: Split Sample Multinomial Probits -- Probability of Being a "Non Environmentalist"

	Republicans, Independents	Republicans, Independents	Democrats	Democrats
	(1)	(2)	(3)	(4)
Democrat	-0.035	-0.018	-0.039	-0.008
	(0.080)	(0.083)	(0.093)	(0.103)
Percent Post Graduate	-0.290	-0.422	1.054	1.340
	(1.485)	(1.589)	(1.442)	(1.679)
Percent Homeowner	-1.175*	-0.651	-0.723	-0.782
	(0.640)	(0.657)	(0.543)	(0.607)
kerry_low	0.109	0.059	0.223	0.248
	(0.193)	(0.204)	(0.215)	(0.237)
kerry_high	-0.388	-0.103	0.344*	0.286
	(0.259)	(0.264)	(0.207)	(0.215)
Behaviors Index	...	-0.182***	...	-0.179***
		(0.023)		(0.023)
Observations	756	752	847	834

Baseline case is "Somewhat of an Environmentalist"; the models include all other independent variables in Table 2a and 2b; weighted standard errors in parenthesis; the models include regional dummies and percent of zip-code population in urban areas; ***significant at the 1%, **significant at the 5%, * significant at the 10%.