

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 political leaning, socio-economic characteristics, and pro-environment behaviors. Individuals are more likely to claim to be strong environmentalists if they live in areas where a larger share of the population has post-graduate degrees, if they live in heavily Democratic areas, or if they live in heavily Republican areas. These community effects occur only when individuals are predisposed to take on an environmental identity.

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1 Introduction

People's concerns for the environment and attitudes towards environmental protection influence the success of policies promoting renewable-energy technologies and sustainable consumption. Because an individual's position in society influences his or her values and preferences, understanding the extent to which environmentalism depends on the characteristics of the community where individuals live is of increasing relevance as policies and efforts by grassroots movements place a greater emphasis on local solutions for sustainability.¹ Akerlof and Kranton (2000) argue that "because identity is fundamental to behavior, choice of identity may be the most important 'economic' decision people make." In this paper, we examine whether an individual's likelihood of identifying as an environmentalist depends on community characteristics.

We focus on two characteristics that typically correlate with pro-environment attitudes: political preferences and education levels. We estimate multinomial probit models using data from a nationally representative household survey that is merged with voting and Census data. We find a relationship between a person's self-proclaimed environmentalism and educational attainment at the zip-code level, and between a person's environmentalism and voting patterns in the county where the person lives, even after controlling for the individual's political leaning and socio-economic factors. We also show that the link between individual environmentalism and community characteristics holds after adding an index of individual pro-environment behaviors as a control variable. Although we cannot interpret the estimate on this control causally, we find

¹ There is evidence that self-proclaimed environmentalism has practical consequences. Kahn (2007) finds that communities in California with a higher proportion of registered Green Party voters have 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.

that adding an objective measure of pro-environment efforts does not change the interpretation of our results. Nonetheless, we emphasize that the goal of this paper is to examine self-proclaimed environmentalism and not environmental behavior.

We base our hypotheses on research in economics and social psychology that argues identity is contextual and community characteristics can shape personal values towards the natural environment and influence individuals through the internalization of group preferences. The environmental psychology literature acknowledges the importance of community factors in shaping personal values and behaviors towards the natural environment. Opatow and Brook (2003) argue that environmental identity, how people define themselves in regards to nature, is shared socially; and Kempton and Holland (2003) find that engagement in pro-environment practices requires the person's self-identification as an actor.

Recent advances in economic research on identity ground our research. Fang and Loury (2005) highlight how human identity includes both a personal and a social aspect to it. These authors note that "embracing an identity is a social event, not merely the expression of an individual's values or preferences." Akerlof and Kranton (2000, 2005) propose an alternative to the standard economic assumption that individual preferences are fixed. According to these authors, individuals' identity or sense of self is associated with social categories (gender, race, age, etc.) and which social category becomes more or less salient depends on the context. In this sense, identity is a multi-dimensional construct that is situation-dependent. Akerlof and Kranton argue that individuals gain utility when they behave according to the prescribed behavior that their social categories and particular situations require.² In our paper, we examine whether

² This approach to identity implies that tastes and preferences can change and be manipulated. Akerlof and Kranton (2005) argue, for example, that management can try to change workers' identity so that workers identify with the company's goals. George (2004) uses the concept of second-order preferences (preferences over preference rankings) to explain paradoxical behaviors and argues that markets can create "unpreferred preferences."

environmentalism is more or less salient depending on the composition of the community along the lines of political preferences and educational attainment.

Research in social psychology and sociology motivate two specific hypotheses about how the social context might make a person's environmentalism more or less salient. 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 examines if group composition correlates with self-perception as well. We expect that people who live in communities where the majority of people share their preferences towards environmental protection are more likely to identify themselves as environmentalists.

We examine a second hypothesis developed by McGuire and Padawer-Singer (1976) and McGuire (1984): the *distinctiveness hypothesis*.³ According to this hypothesis, individuals who have traits that are different from that of the group's will focus more on those traits when 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, we might also expect environmental identity to be more salient if a person who is concerned about environmental protection lives in a community where the majority does not have her pro-environment preferences. In this situation, following Akerlof and Kranton, if environmentalism becomes a salient social category then individuals who care about the environment gain utility by presenting themselves (and behaving) as environmentalists.

³ For a more recent discussion of the distinctiveness hypothesis, interested readers should see Leonard, Mehra and Katerberg (2008).

Note that, conceptually, we are assuming the individual has a given preference for environmental protection and hypothesize that such preference will be more or less salient depending on the person's social context and, in particular, on the composition of the community in terms of preferences related to environmental protection. We find evidence for both the homophily and distinctiveness hypotheses. Indeed, we show that individuals who identify as Democrats and live in areas where a high proportion of individuals vote Democrat are more likely to self-identify as environmentalists, everything else equal (homophily). We also show that, everything else equal, individuals are more likely to report being an environmentalist when they identify as Democrats and live in a community with a very low proportion of people who vote Democrat (distinctiveness).

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), and Johnson, Bowker, and Cordell (2004). In our paper, we add to this literature by focusing on people's identity as environmentalists, rather than on the set of values that define environmentalism, and the influence of community characteristics on an individual's self-proclaimed environmentalism.

Because our research explores the links between individual preferences and characteristics of the community where the individual lives, this paper relates to the literature on economic outcomes and social interactions. 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, our research contributes to the economics literature that challenges the assumption of exogenous preferences (see George, 2004) because we analyze to what extent preferences depend on the social context. In this respect, the inferences we draw from our results have implications for the research program of social economics, specifically, our paper presents additional evidence that values and preferences that affect economic behavior are related to the social context in which the individual is embedded.

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 2007.⁴ 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.^{5,6} The survey instrument contained fifty questions. 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'

⁴ The authors of the paper designed the survey instrument. The survey design and implementation were sponsored by the Blue Moon Fund (<http://www.bluemoonfund.org/>). The survey and information about the survey methodology can be obtained from http://www.hamilton.edu/levitt/Sustainability/Environmental_survey_2008.html.

⁵ Knowledge Networks is an on-line based consumer research company. 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.

⁶ The response rate among Knowledge Networks panelists for our survey was 66 percent. 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.

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.

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.

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.⁷

It is also worth noticing that self-proclaimed environmentalism is related to the responses to attitudinal questions about the natural environment showing there is a consistent set of values towards the natural world according to degree of environmentalism. For example, almost 79 percent of strong environmentalists strongly agree with the statement that “humans are severely abusing the environment.” The proportions for weak environmentalist and non-environmentalists are 56 and 32 percent, respectively. We find similar results with other attitudinal variables. Overall, we believe our dependent variable is a reliable measure of the respondents’ attitudes towards the environment.

As we mention above, our goal is to examine whether environmentalism becomes a salient category if either the individual lives in a community where the majority shares similar preferences towards the environment (homophily) or the individual lives in a community where the majority has different preferences towards the natural environment than the individual does (distinctiveness hypothesis). We observe an individual’s stated environmentalism but we do not have data on community-level environmental preferences. To proxy for these preferences we focus on political preferences and educational attainment. These two factors consistently correlate with pro-environment attitudes (and behaviors) both at the community and at the individual level. Higher educational attainment correlates positively with pro-environment attitudes and behaviors (Fischel, 1979; Matsusaka and Kahn, 1997; Kahn, 2002; Guber, 2003). Research on ballots has also shown a relationship between voting for a political party and support for environmental measures and pro-environment behaviors (Matsusaka and Kahn, 1997;

⁷ 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.

Guber, 2003; Kahn, 2007). In addition, we find a relationship in our sample between individuals' political leaning and pro-environment attitudes.⁸ Thus, we argue that a community's educational attainment and voting behavior and are valid proxy variables for the aggregate level of environmentalism. Nonetheless, in communities with lower political participation, aggregate preferences might be less known and actual voting behavior might have a lower effect on how salient a person's environmentalism becomes. To explore this possibility we also examine if the impact of community factors depends on voter turnout.

We use county-level voting data from the 2004 presidential election to compute aggregate political preferences.⁹ We use two 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.^{10,11} 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. For education, 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.

⁸ For example, only 33 percent of individuals who lean Republican strongly agree with the statement that "humans are severely abusing the environment" versus 58 percent who strongly agree with the statement among individuals who lean Democrat or independent. More generally, the results of t-tests show a statistically significant difference in attitudes according to political leaning for all the environmental attitudinal variables in our survey.

⁹ The data come from www.uselectionatlas.org.

¹⁰ 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).

¹¹ 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).

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 include a variable that indicates a respondent's political preferences: the variable *democrat* is measured on a seven point scale (1 representing "Strong Republican", 7 representing "Strong Democrat"). We note that this variable measures the individual's political leaning at the time of the survey and not official party affiliation or voting behavior.

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 also influence identity and may be related to values towards the environment. They are important to include as control variables because they 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 according to political leaning.

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.¹²

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 of the votes) in 2004 are significantly more likely to be strong environmentalists than weak environmentalists, holding other community characteristics

¹² 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

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 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.¹³

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, everything else equal. A calculation of marginal effects shows that a 10 percentage point increase in the number of people with an advanced degree is associated with 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 strong 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-environment behaviors and, indirectly, one's environmentalism? To examine this issue, the fourth column of Table 2a

¹³ 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).

includes an index of pro-environment 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 sums the scores of each individual response (using a 0-3 scale).¹⁴ We cannot interpret the estimate on this control causally as individuals who claim to be environmentalists are much more likely to engage in pro-environment behaviors and there might be a variable affecting both attitudes and 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-environment 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. 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

¹⁴ We also repeated all regressions with separate indices for each pro-environment behavior and found that the results are robust.

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*.

These results show that being an environmentalist does not merely reflect how much individuals engage in pro-environment behaviors, but involves the degree to which they identify themselves for a particular cause. For two identical individuals who engage in the same frequency of pro-environment behaviors, the person who lives in a highly Democratic or a highly Republican community is more likely to claim to be a strong environmentalist than the person living in politically moderate areas.

Next, we examine whether there is an interaction effect between being a Democrat and 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*.¹⁵ 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-

¹⁵ In this specification we need to exclude the Democrat index to avoid perfect collinearity.

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-environment behaviors, we find that these behaviors strongly correlate with being a non-environmentalist. In the last column of Table 2b, 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.

To measure community political preferences we use actual votes cast, but voter turnout varies by community. In counties with low turnout, aggregate preferences might be less known and actual voting behavior might have a lower effect on a person's environmentalism. To determine how voter turnout affects our results, we split the sample based on median registered-voter turnout and estimate the models in columns 3-5 in Tables 2a and 2b. Although we do not report the detailed results, we find that the signs of the effects are generally the same as those we report above. In the above-the-median registered-voter turnout sample, the coefficients on the community-level variables and interaction effects have the same signs and mostly maintain the

same levels of statistical significance. In the below-the-median turnout sample, the coefficients on community-level variables and interaction effects when estimating the probability of being a strong environmentalist have the same signs but are statistically insignificant except for percent of post graduates. When we estimate the probability of being a non-environmentalist for below-the-median turnout communities, the coefficients have the same signs of the full-sample results and some of them are still statistically significant: percent of homeowners is significant at the 10 percent level, the coefficient on *democrat*kerry_med* is still significant at the 5 percent, and the coefficient on *democrat*kerry_high* has a p-value of 10.7 percent. Overall, the results of this exercise show that community characteristics do affect how salient identity becomes, but these effects are stronger in communities where political participation is high.

In sum, 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. It presents 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: a larger percent of the Democrats are 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 probits 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 Conclusions

Our results document a relationship between individual identity and community characteristics. We find that living in an area in which others either share your preferences towards the environment or have very different preferences accentuate an individual's identification as a strong environmentalist. We also find that the effects of community characteristics are stronger in communities where political participation (as measured by registered-voter turnout) is high.

An interesting feature of our results is that identity as an environmentalist is not exclusively related to pro-environment efforts (although 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.

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Table 1: Summary Statistics

Variable	Mean	Std. Dev.
<i>Individual Characteristics:</i>		
Strong environmentalist	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
Democrat Index (1-7 index: 1=Strong Republican, 7=Strong Democrat)	4.21	2.15
Behaviors Index: Index of Pro-environment 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>Proportions by County:</i>		
<i>kerry_low</i> : Fewer than 40% in county voted for Kerry	0.29	0.45
<i>kerry_high</i> : Greater than 60% in county 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_Ind	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%)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Leans democrat, democrat, or strong democrat						
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%)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Strong democrat						
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%.