

**Online Appendix for
“Why People Vote: Estimating the Social Returns to Voting”**

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Online Appendix for
“Why People Vote: Estimating the Social Returns to Voting”

This document contains supporting information for the paper, “Why People Vote: Estimating the Social Returns to Voting.” The document consists of three sections:

Section 1 provides a detailed description of the multilevel regression with post-stratification (MRP) procedure.

Section 2 provides detailed coding rules.

Section 3 contains a series of supplementary tables and figures.

Section 1: Detailed description of multilevel regression with post-stratification (MRP) procedure

To obtain more accurate estimates of county-level attitudes about norms, we use multilevel regression with post-stratification (MRP). In our case, we are interested in comparing the county-level opinions on social norms to county turnout. The National Annenberg Election Study (NAES) in 2000 sampled thousands of citizens by telephone, but even this large undertaking did not yield more than a single respondent in many counties. We use MRP to estimate social norms in every county in which at least one NAES respondent was interviewed and answered the social norm question.

We first estimate a hierarchical model of the survey response to the norm question as a function of each individual respondent's demographics and with county and state random effects. We use two demographic indicators. The first is four indicators for age category (20-29, 30-44, 45-64, 65+), and the second is twenty-four indicators for three categories of race (black, Hispanic, rest) crossed with gender (male, female) and crossed with the four age categories. Our individual models therefore estimate the relationship of these 30 explanatory variables (one indicator for each category) with the survey response to the social norm item. The models also estimate state and county random effects. We transform the ordered response into a 0-1 scale and use a linear model. The estimation allows us to predict the average response for any respondent in any county with survey coverage, given the estimated coefficients on the demographic predictors and the estimated state and county random effects.

We then use the model to predict the responses for every demographic category in every county. These predictions are collapsed with weighting information available from the distributions of each demographic category in each county from the 2000 United States Census. For example, the Census tells us that in Los Angeles County there were 75,751 black females aged 20-29, 63,583 black males aged 20-29, and 277,797 white males aged 20-29. For each of these categories we use the model results to predict each group's average response to the social norms item, and then we calculate the county-level weighted average response, weighted by the number of citizens in that demographic group (i.e., in Los Angeles the white male aged 20-29 estimate would have four times the weight of the black male aged 20-29 estimate because of the Census population counts). We use this procedure to estimate opinion for each county with at least one NAES respondent answering the social norm question.

Section 2: Detailed coding rules

Note: See Table A1 of this document for summary statistics.

Race (2009 CCES and MTurk Sample): “What racial or ethnic group or groups best describes you?” Response options: White; Black; Hispanic; Asian; Native American; Mixed; Other.

Age (2009 CCES and MTurk Sample): “What is the year of your birth?”

Gender (2009 CCES and MTurk Sample): “What is your gender?” Response options: female; male.

Education (2009 CCES and MTurk Sample): “What is the highest level of education you have achieved?” Response options: no high school diploma; high school graduate; some college, no degree; 2-year college degree; 4-year college degree; post-graduate degree.

Income (2009 CCES): “Thinking back over the last year, what was your family's annual income?” Response options: less than \$10,000; \$10,000 - \$14,999; \$15,000 - \$19,999; \$20,000 - \$24,999; \$25,000 - \$29,999 ; \$30,000 - \$39,999; \$40,000 - \$49,999; \$50,000 - \$59,999; \$60,000 - \$69,999; \$70,000 - \$79,999 ; \$80,000 - \$99,999; \$100,000 - \$119,999; \$120,000 - \$149,999; \$150,000 or more; Prefer not to say.

Party ID (2009 CCES and MTurk Sample): “Generally speaking, do you usually think of yourself as a Democrat, a Republican, an Independent, or what?” If Democrat: “Would you call yourself a strong Democrat or not a very strong Democrat?” If Republican: “Would you call yourself a strong Republican or not a very strong Republican?” If Independent/something else: “Do you think of yourself as closer to the Democratic party, closer to the Republican party, or equally close to both parties?”

Ideology (2009 CCES): “Thinking about politics these days, how would you describe your own political viewpoint?” Response options: very liberal; liberal; moderate; conservative; very conservative.

Religious attendance (2009 CCES): “Aside from weddings and funerals, how often do you attend religious services?” Response options: more than once a week; once a week; once or twice a month; a few times a year; seldom; never.

Political Interest (2009 CCES): “Some people seem to follow what's going on in government and public affairs most of the time, whether there's an election going on or not. Others aren't that interested. Would you say you follow what's going on in government and public affairs ... ?” Response options: most of the time; some of the time; only now and then; hardly at all.

Trust Government? (2009 CCES): “Thinking about the federal government in Washington, how much of the time do you think you can trust the federal government to do what is right?” Response options: always; most of the time; some of the time; never.

Section 3: Supplementary tables and figures

Table A1: Demographic Characteristics of CCES and MTurk Samples

Table A2. Social Evaluations Analysis, Vignette Experiments (Full Results)

Table A3. Social Evaluations Analysis, Vignette Experiments (Unweighted Analysis and Analysis without Control Variables)

Figure A1. Average Rankings of Different Characteristics

Table A1. Demographic Characteristics of CCES and MTurk Samples

Variable	2009 CCES	Mechanical Turk Sample
White = 1	0.763 [.4253]	0.835 [.372]
Black = 1	0.106 [.3074]	0.069 [.2533]
Hispanic = 1	0.082 [.2739]	0.038 [.1918]
Other race=1	0.050 [.2171]	0.104 [.3061]
Age (in years)	46.789 [17.0556]	34.907 [12.6079]
Female=1	0.517 [.5001]	0.596 [.4914]
Education (1=No HS; 6=post-grad)	3.147 [1.528]	4.041 [1.3659]
Income (1=<\$10k; 14=>150k; 15=RF)	8.139 [4.0574]	
Income Missing	0.107 [.3099]	
Party ID (-3=S. Dem; 3=S. Rep)	-0.343 [2.1039]	-0.445 [1.9969]
Ideology (-2=V. Lib; 2=V. Cons)	0.104 [.9778]	
Religious Attendance (1 never; 6 more than 1/week)	3.166 [1.6888]	
Political Interest (1 hardly at all; 4 most of the time)	3.356 [.8459]	
Trust Government? (0=never; 3=always)	0.903 [.6933]	
Observations	731	393

Note: Cell entries are sample means; standard deviations in brackets.

Table A2. Social Evaluations Analysis, Vignette Experiments (Full Results)

	(1)	(2)
	Social Evaluation (0 [unfavorable] to 1 [favorable])	
Vote (1=Always)	0.070 [0.024]**	0.028 [0.025]
Vote (1=Usually)	0.011 [0.030]	0.002 [0.024]
Vote (1=Never)	-0.122 [0.028]**	-0.185 [0.030]**
Pays Taxes (1=On time; 0=Late)	0.245 [0.021]**	
Education (1=College degree; 0=HS diploma)	-0.037 [0.021]	
Current Events (1=Stays informed; 0=Does not stay informed)		0.180 [0.019]**
Recycles (1=yes; 0=no)		0.129 [0.019]**
Black = 1	0.042 [0.028]	0.044 [0.032]
Hispanic = 1	0.019 [0.048]	-0.034 [0.042]
Other race=1	-0.014 [0.040]	0.035 [0.037]
Age (in years)	0.006 [0.005]	0.004 [0.004]
Age-squared/100	-0.007 [0.005]	-0.004 [0.004]
Female=1	0.006 [0.020]	-0.015 [0.019]
Religious Attendance (1 never; 6 more than 1/week)	-0.003 [0.007]	0.001 [0.005]
Political Interest (1 hardly at all; 4 most of the time)	0.020 [0.015]	-0.010 [0.015]
Education (1=No HS; 6=post-grad)	-0.016 [0.007]*	-0.016 [0.007]*
Trust Government? (0=never; 3=always)	0.023 [0.018]	0.042 [0.018]*
Income (1=<\$10k; 14=>150k; 15=RF)	-0.003 [0.003]	-0.007 [0.003]*
Income Missing	0.006 [0.040]	-0.008 [0.036]
Ideology = Very Liberal	-0.062 [0.047]	0.068 [0.042]
Ideology = Liberal	-0.021 [0.030]	0.028 [0.028]
Ideology = Conservative	-0.039 [0.033]	-0.019 [0.032]
Ideology = Very Conservative	-0.058 [0.047]	-0.052 [0.041]
Party ID = Strong Democrat	0.044 [0.040]	0.020 [0.031]
Party ID = Weak Democrat	0.017 [0.040]	0.053 [0.037]
Party ID = Lean Democrat	0.009 [0.049]	-0.091 [0.047]
Party ID = Lean Republican	0.030 [0.047]	0.039 [0.037]
Party ID = Weak Republican	0.053 [0.040]	0.079 [0.039]*
Party ID = Strong Republican	0.079 [0.043]	0.112 [0.037]**
Constant	0.355 [0.124]**	0.438 [0.089]**
Observations	731	731
R-squared	0.346	0.363

Note: Results from OLS regression models (weighted). Robust standard errors in brackets. For the voting behavior indicators the excluded category is no mention of this behavior. * significant at 5%; ** significant at 1% (two-tailed tests).
Source - 2009 CCES.

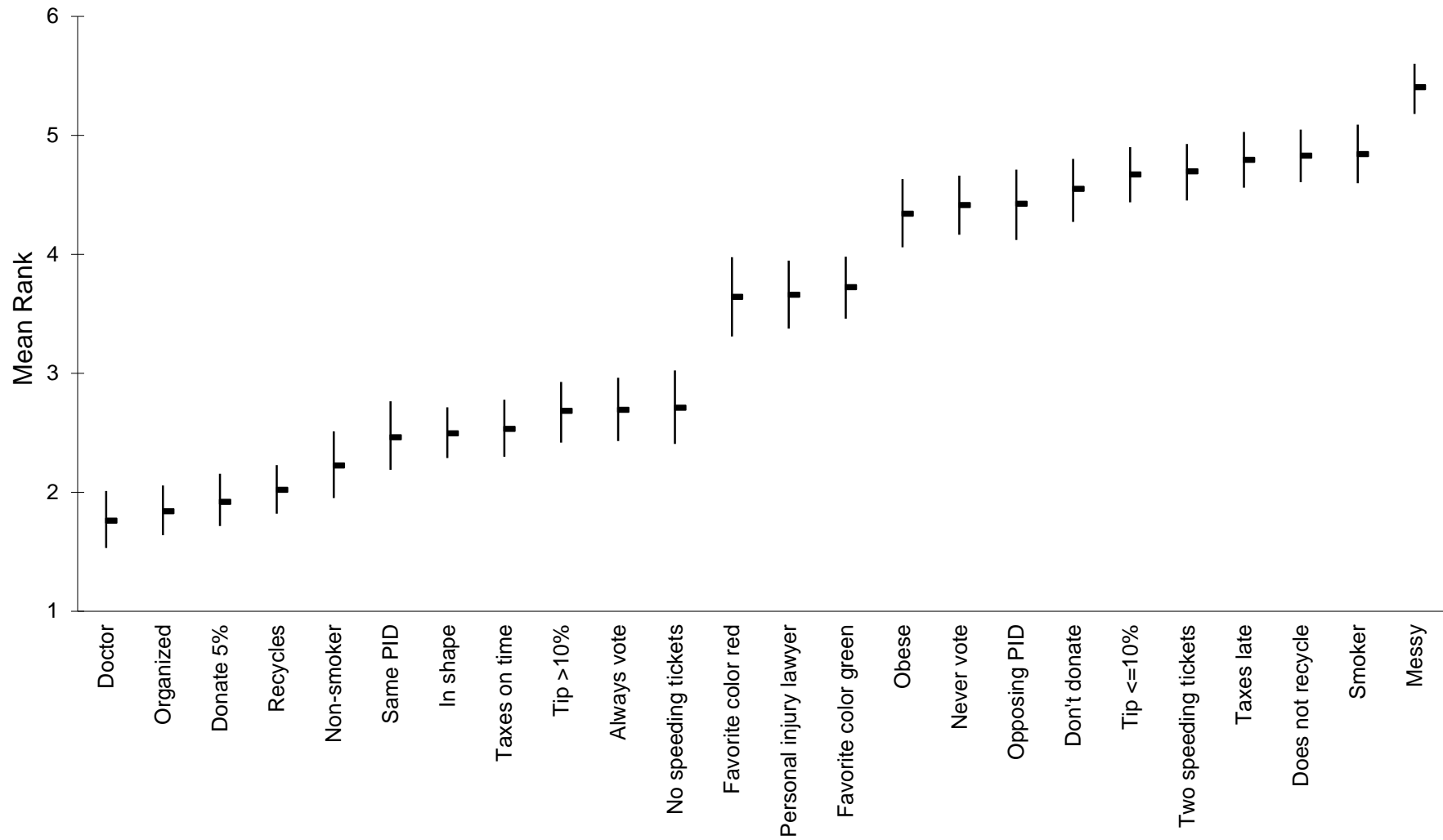
Table A3. Social Evaluations Analysis, Vignette Experiments (Unweighted Analysis and Analysis without Control Variables)

	(1)	(2)	(3)	(4)	(5)	(6)
	Social Evaluation (0 [unfavorable] to 1 [favorable])					
	Unweighted Analysis with Controls		Weighted Analysis without Controls		Unweighted Analysis without Controls	
Vote (1=Always)	0.061 [0.021]**	0.033 [0.022]	0.058 [0.025]*	0.003 [0.027]	0.056 [0.021]**	0.023 [0.022]
Vote (1=Never)	-0.117 [0.023]**	-0.159 [0.026]**	-0.134 [0.031]**	-0.213 [0.036]**	-0.124 [0.022]**	-0.174 [0.026]**
Vote (1=Usually)	0.021 [0.022]	0.033 [0.023]	-0.003 [0.032]	-0.016 [0.025]	0.014 [0.022]	0.026 [0.022]
Pays Taxes (1=On time; 0=Late)	0.257 [0.016]**		0.247 [0.022]**		0.253 [0.016]**	
Education (1=College degree; 0=HS diploma)	-0.060 [0.016]**		-0.033 [0.022]		-0.060 [0.016]**	
Current Events (1=Stays informed; 0=Does not stay informed)		0.205 [0.016]**		0.165 [0.022]**		0.195 [0.017]**
Recycles (1=yes; 0=no)		0.120 [0.017]**		0.132 [0.021]**		0.125 [0.017]**
Constant	0.466 [0.089]**	0.402 [0.085]**	0.488 [0.025]**	0.455 [0.025]**	0.494 [0.019]**	0.416 [0.021]**
Observations	731	731	731	731	731	731
R-squared	0.353	0.326	0.311	0.282	0.326	0.280

Note: Results from OLS regression models. Robust standard errors in brackets. For the voting behavior indicators the excluded category is no mention of this behavior.

* significant at 5%; ** significant at 1% (two-tailed tests). Source - 2009 CCES.

Figure A1. Average Rankings of Different Characteristics



Note: Traits are ranked from 1 (best) to 6 (worst). Bars are bootstrapped 95% confidence intervals. Source - MTurk Behavior Ranking Experiments.