

# **ONLINE APPENDIX**

## **Moral Values and Voting (JPE)**

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## A Model Derivations

**Cross-sectional variation II: Primaries.** Consider candidates  $k$  and  $l$  such that  $\theta_k > \theta_j \forall j \neq k$  and  $\theta_l < \theta_j \forall j \neq l$ . The probability that  $i$  votes for  $k$  is given by the probability that the utility of voting for  $k$  is higher than the utility of voting for any other candidate. Denote  $u_{i,\bar{k}} = \argmax_{j \neq k} u_{i,j}$ . We then have:

$$Pr(u_{i,k} > u_{i,j}) \forall j \neq k = Pr(u_{i,k} > u_{i,\bar{k}}) = Pr(\alpha_{k,\bar{k}} + \beta_{k,\bar{k}}\theta_i + \delta_{k,\bar{k}}x_i > \epsilon_{i,k,\bar{k}}) \quad (1)$$

In words, for each realization of the noise terms, there is a candidate  $\bar{k}$  who for voter  $i$  delivers the highest utility in the set of candidates  $J \setminus k$ . However, regardless of the identity of  $\bar{k}$ , by assumption we have  $\beta_{k,\bar{k}} > 0$  because  $k$  is the most universalist candidate. I now seek to show that for two voters  $a$  and  $b$  with  $\theta_a > \theta_b$  and  $x_a = x_b \equiv x$ , we have that

$$\begin{aligned} & Pr(\alpha_{k,\bar{k}} + \beta_{k,\bar{k}}\theta_a + \delta_{k,\bar{k}}x > \epsilon_{a,k,\bar{k}}) \\ & > Pr(\alpha_{k,\bar{k}} + \beta_{k,\bar{k}}\theta_b + \delta_{k,\bar{k}}x > \epsilon_{b,k,\bar{k}}) \end{aligned}$$

We will evaluate this expression separately for different types of realizations of the noise terms. That is, fix a realization of  $\epsilon_{a,k,\bar{k}} = \epsilon_{b,k,\bar{k}} \equiv \epsilon_{k,\bar{k}}$  and evaluate whether a change in voter type ( $\theta_a > \theta_b$ ) affects choices.

There are three cases of realizations of the noise terms to consider. First, there may be realizations such that both  $\theta_a$  and  $\theta_b$  imply a vote for candidate  $k$ :

$$\alpha_{k,\bar{k}} + \beta_{k,\bar{k}}\theta_a + \delta_{k,\bar{k}}x > \alpha_{k,\bar{k}} + \beta_{k,\bar{k}}\theta_b + \delta_{k,\bar{k}}x > \epsilon_{k,\bar{k}} \quad (2)$$

By the same logic, there may be realizations of the noise terms such that both  $\theta_a$  and  $\theta_b$  lead to a vote for candidate  $\bar{k}$ . However, by continuity of  $f(\epsilon)$  and the assumption that the choice probabilities for all candidates and voters are strictly interior, there exists a set of realizations of the noise terms such that

$$\alpha_{k,\bar{k}} + \beta_{k,\bar{k}}\theta_a + \delta_{k,\bar{k}}x > \epsilon_{i,k,\bar{k}} > \alpha_{k,\bar{k}} + \beta_{k,\bar{k}}\theta_b + \delta_{k,\bar{k}}x + \epsilon_{k,\bar{k}} \quad (3)$$

That is, there exist realizations of the noise terms such that the utility of voting for candidate  $k$  and the utility of voting for candidate  $\bar{k}$  are sufficiently close to each other, so that increasing  $\theta_i$  from  $\theta_b$  to  $\theta_a$  makes the voter switch from candidate  $\bar{k}$  to  $k$ .

In summary, for two types of realizations of the noise terms,  $a$  and  $b$  exhibit the same voting behavior, and in one type of realizations (which has strictly positive probability),  $a$  votes for  $k$  while  $b$  does not. This establishes the desired inequality (1).

**Time variation in types of nominees.** Consider voters  $a$  and  $b$  with  $\theta_a > \theta_b$  and  $x_a = x_b \equiv x$ . As per the discussion in the main text, we are interested in establishing when the following condition holds:

$$Pr(u_{a,k} > u_{a,l}) - Pr(u_{a,k'} > u_{a,l'}) \quad (4)$$

$$= Pr(\alpha_{k,l} + \beta_{k,l}\theta_a + \delta_{k,l}x > \epsilon_{a,k,l}) - Pr(\alpha_{k',l'} + \beta_{k',l'}\theta_a + \delta_{k',l'}x > \epsilon_{a,k',l'}) \quad (5)$$

$$\stackrel{?}{>} Pr(\alpha_{k,l} + \beta_{k,l}\theta_b + \delta_{k,l}x > \epsilon_{b,k,l}) - Pr(\alpha_{k',l'} + \beta_{k',l'}\theta_b + \delta_{k',l'}x > \epsilon_{b,k',l'}) \quad (6)$$

$$= Pr(u_{b,k} > u_{b,l}) - Pr(u_{b,k'} > u_{b,l'}) \quad (7)$$

Define the intervals

$$I_1 = [\alpha_{k,l} + \beta_{k,l}\theta_b + \delta_{k,l}x, \alpha_{k,l} + \beta_{k,l}\theta_a + \delta_{k,l}x] \quad (8)$$

$$I_2 = [\alpha_{k',l'} + \beta_{k',l'}\theta_b + \delta_{k',l'}x, \alpha_{k',l'} + \beta_{k',l'}\theta_a + \delta_{k',l'}x] \quad (9)$$

In order for the inequality to hold,  $f(\epsilon)$  needs to be distributed such that there is more probability mass in  $I_1$  than in  $I_2$ .  $I_1$  has width  $\beta_{k,l}(\theta_a - \theta_b)$ , which is larger than the width of  $I_2$ , given by  $\beta_{k',l'}(\theta_a - \theta_b)$ . A sufficient condition is that

$$\frac{\beta_{k,l}}{\beta_{k',l'}} = \frac{\theta_k - \theta_l}{\theta_{k'} - \theta_{l'}} > \frac{\sup_{\epsilon \in I} f(\epsilon)}{\inf_{\epsilon \in I} f(\epsilon)} \quad (10)$$

which says that  $f(\epsilon)$  is locally not “too different” from a uniform distribution, relative to the magnitude of the cross-candidate differences in moral types captured by  $\beta_{k,l}$  and  $\beta_{k',l'}$ . Formally, this condition is sufficient because

$$\int_{\beta_{k,l}\theta_b}^{\beta_{k,l}\theta_a} f(\epsilon)d\epsilon \geq \beta_{k,l}(\theta_a - \theta_b)\inf_{\epsilon \in I} f(\epsilon) > \beta_{k',l'}(\theta_a - \theta_b)\sup_{\epsilon \in I} f(\epsilon) \geq \int_{\beta_{k',l'}\theta_b}^{\beta_{k',l'}\theta_a} f(\epsilon)d\epsilon \quad (11)$$

## B Additional Figures

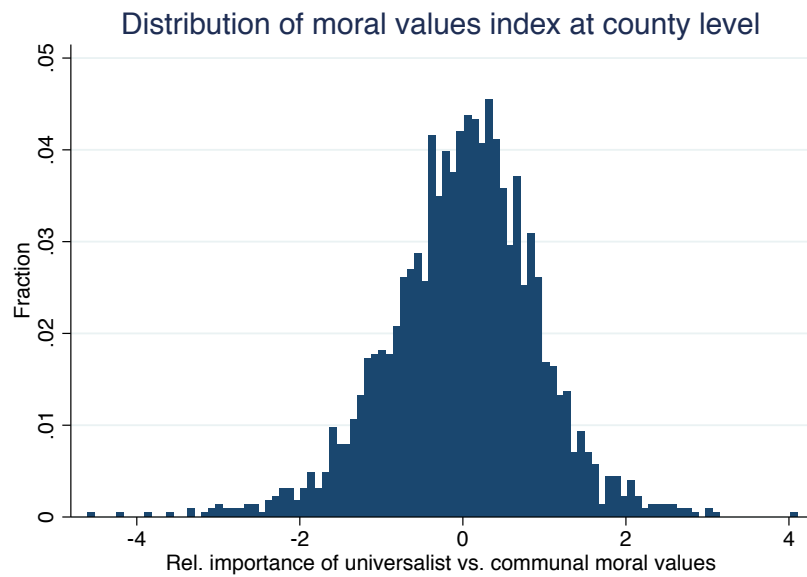


Figure 1: Distribution of relative importance of universalist moral values at the county level.

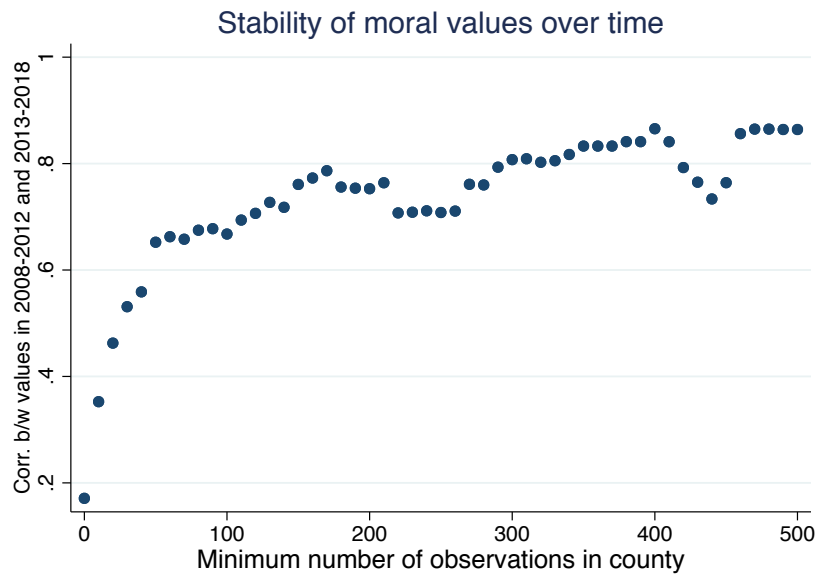


Figure 2: Stability of moral values at the county level. The figure depicts the correlation coefficient between values in 2008-2012 and 2013-2017 at the county level. The x-axis denotes the cutoff in terms of minimum number of respondents in a county used to compute the correlation coefficient.

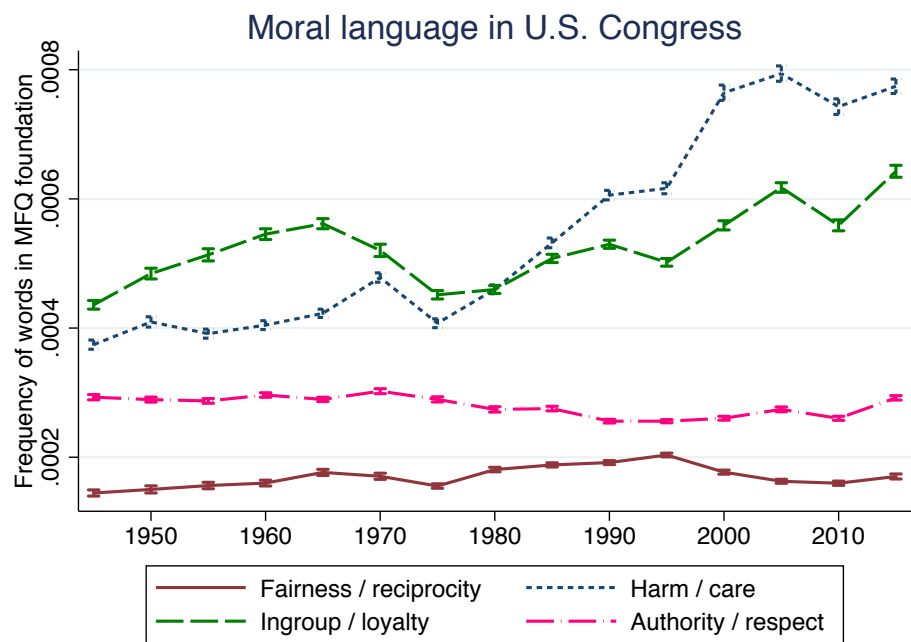


Figure 3: Frequency of words related to MFQ foundations in the U.S. Congress, 1945–2016. The year of observation of each speech is rounded to the nearest multiple of five. The figure disaggregates Figure 2 in the main text by showing the absolute frequency of word use within each of the four MFQ “foundations,” across politicians from all parties. Recall that “fairness / reciprocity” and “harm / care” correspond to universalist values, while “ingroup / loyalty” and “authority / respect” correspond to communal values. The figure shows that the substantial increase in the relative frequency of universalist moral rhetoric is largely driven by an increase in the absolute frequency of universalist words, rather than a decrease in the frequency of communal words.

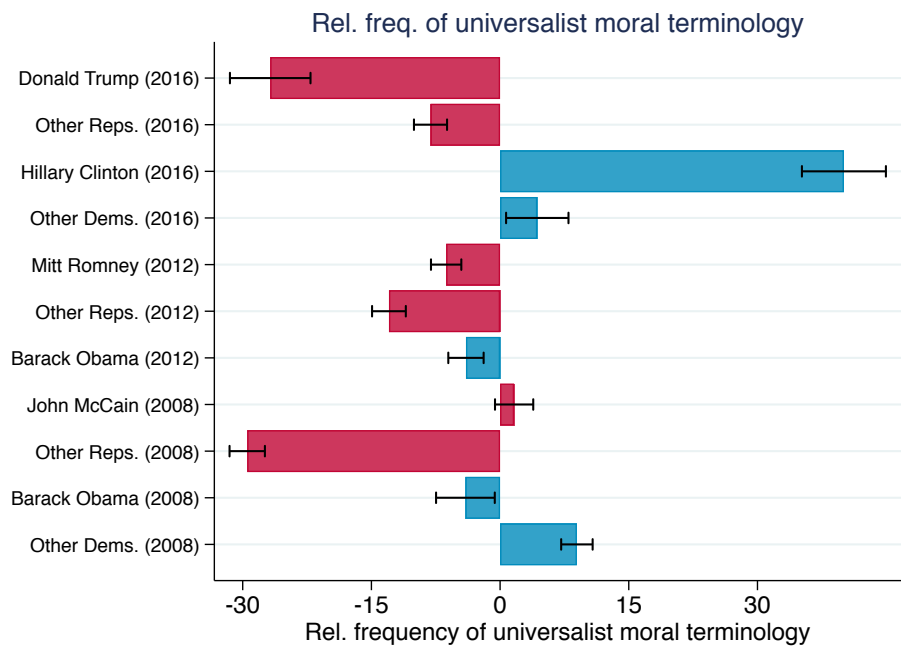


Figure 4: Relative frequency of universalist moral terminology. The bars depict averages across documents, along with standard errors. As in the regressions in Table 3 in the main text, each document is weighted by the square root of the total number of non-stop words. The index of the relative frequency of universalist moral rhetoric is standardized into a z-score and multiplied by 100. The data include all campaign documents.

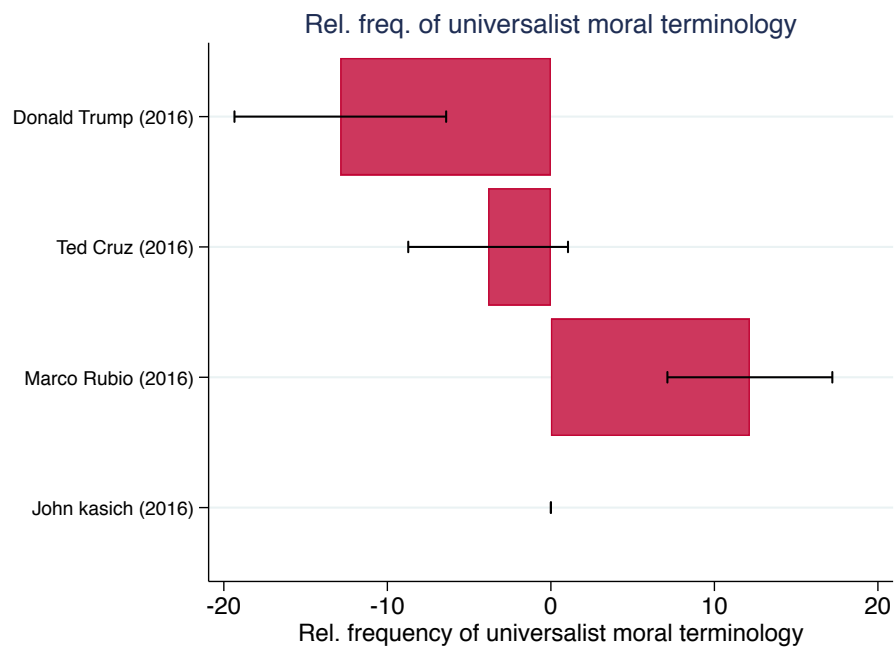


Figure 5: Relative frequency of universalist versus communal moral terminology in the primaries. The bars depict the estimates ( $\pm 1$  SE) for the candidate fixed effects in an OLS regression of the relative frequency of universalist terminology in a campaign document on candidate (or candidate group) fixed effects, controlling for document type FE and campaign day FE (where the first campaign day is defined as January 1st of the year prior to the respective election). The omitted category is John Kasich. As in the regressions in Table 3 in the main text, each document is weighted by the square root of the total number of non-stop words. The index of the relative frequency of universalist moral rhetoric is standardized into a z-score and multiplied by 100. The sample is restricted to campaign documents from during the primaries.

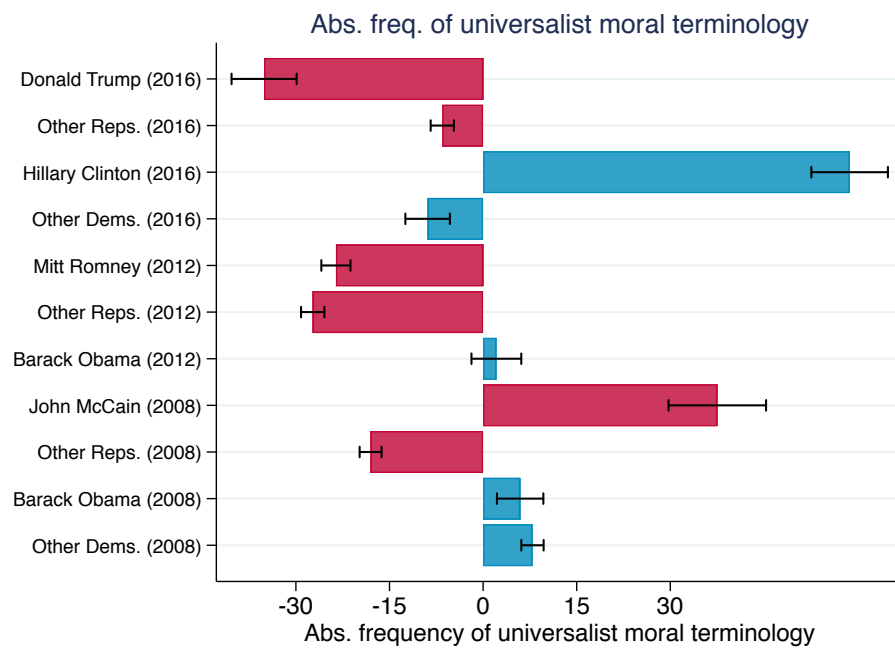


Figure 6: Absolute frequency of universalist moral terminology in the primaries. universalist terminology is computed as the sum of harm / care and fairness / reciprocity, in analogy to equations (16) and (17) in the main text. The bars depict averages across documents, along with standard errors. As in the regressions in Table 3 in the main text, each document is weighted by the square root of the total number of non-stop words. The index of the absolute frequency of universalist moral rhetoric is standardized into a z-score and multiplied by 100. The sample is restricted to campaign documents from during the primaries, where for Obama in 2012 this is defined as during the Republican primaries.



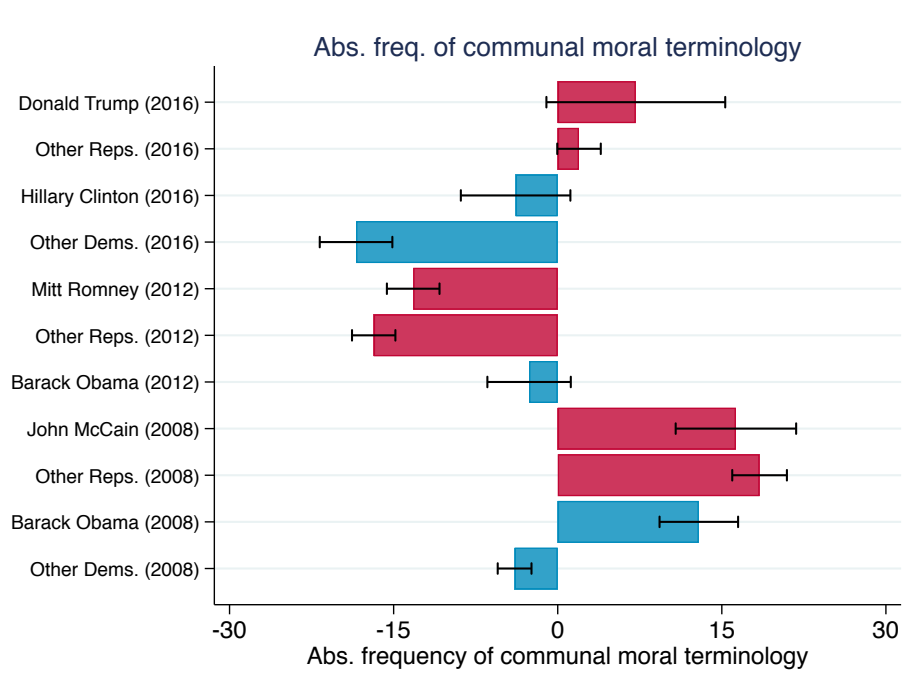


Figure 7: Absolute frequency of communal moral terminology in the primaries. Communal terminology is computed as the sum of ingroup / loyalty and authority / respect, in analogy to equations (16) and (17) in the main text. The bars depict averages across documents, along with standard errors. As in the regressions in Table 3 in the main text, each document is weighted by the square root of the total number of non-stop words. The index of the absolute frequency of communal moral rhetoric is standardized into a z-score and multiplied by 100. The sample is restricted to campaign documents from during the primaries, where for Obama in 2012 this is defined as during the Republican primaries.

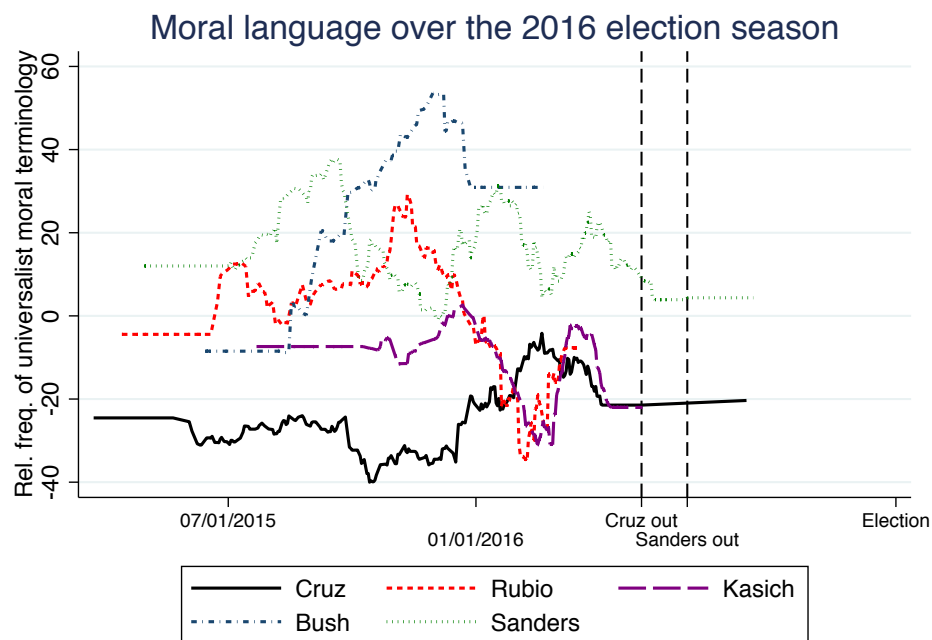


Figure 8: Relative frequency of universalist versus communal moral terminology over the course of the 2016 election season. The relative frequency of universalist moral rhetoric at any given point in time is computed as weighted average using a  $k = 120$  nearest neighbor algorithm, i.e., the 120 campaign documents closest to a given date. As in the regressions, each document is weighted by the square root of the total number of non-stop words. The first and second vertical dashed lines denote the dates on which Cruz and Sanders dropped out of the primaries as the last remaining competitors of Trump and Clinton, respectively. The index of the relative frequency of universalist moral rhetoric is standardized into a z-score and multiplied by 100.

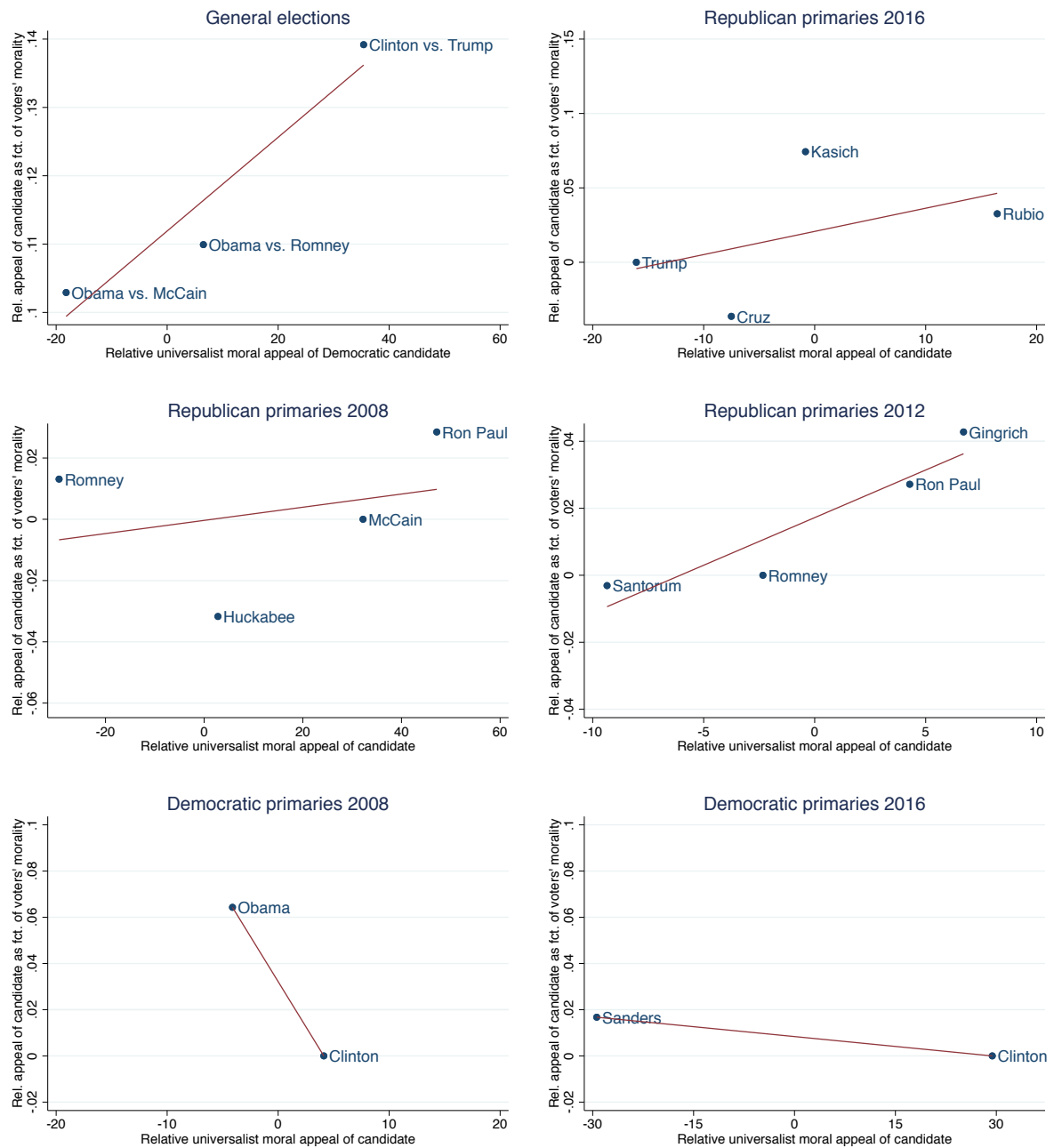


Figure 9: Estimating the model. Each panel focuses on a separate race. The x-axis denotes the relative moral appeal of a candidate, where higher values mean that a candidate is moral universal, i.e.,  $\beta_{j,t}$  in eq. (20) in the main text. The y-axis denotes the relative moral appeal of a candidate as a function of voters' universalist morality, i.e.,  $\beta_{j,t}$  in eq. (19) in the main text. Eq. (19) is estimated with CZ fixed effects. Intuitively, the higher the value on the y-axis, the higher the correlation between a candidate's vote share and universalist moral values.

## C Additional Tables for Text Analysis of Presidential Candidates

Table 1: Politicians' moral rhetoric: Absolute frequency of universalist moral language as dependent variable

	<i>Dependent variable:</i> Absolute frequency of universalist moral terminology					
	All candidates			Sample:		
	(1)	(2)	(3)	Trump & Clinton (4)	Pres. nominees (5)	GOP 2016 (6)
1 if Trump	-6.3 (4.3)	-7.6* (4.5)	-4.2 (4.9)	-26.8*** (8.6)	-27.4*** (6.7)	-31.7*** (5.6)
Log [# of non-stop words]		9.1*** (1.2)	8.4*** (1.2)	-0.07 (7.7)	2.5 (1.9)	4.5* (2.4)
Flesch reading ease score		1.9** (1.0)	1.8* (1.0)	-6.2 (7.4)	-5.3** (2.6)	2.7 (1.9)
1 if Republican			-11.4*** (2.0)		2.6 (3.6)	
1 if presidential nominee			8.8*** (2.2)			
Document type FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes	Yes
Campaign day FE	No	Yes	Yes	Yes	Yes	Yes
Observations	16698	16698	16698	1043	5372	3455
R <sup>2</sup>	0.05	0.17	0.18	0.49	0.29	0.32

*Notes.* WLS estimates, robust standard errors in parentheses. The dependent variable is the absolute frequency of universalist moral terminology (normalized by the number of non-stop words), expressed as z-score multiplied by 100. Each document is weighted by the square root of the total number of non-stop words. In columns (1)–(3), the sample includes all candidates in 2008–2016. Columns (4)–(6) restrict the sample to presidential nominees (2008–2016), Republicans (2008–2016), and 2016 Republicans, respectively. Campaign day FE are constructed by defining January 1st of the year prior to the election as first campaign day. Overall morality is constructed like the relative frequency of universalist terminology in eq. (16) in the main text, except that the numerator is given by the sum of the four MFT foundations.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 2: Politicians' moral rhetoric: Absolute frequency of communal moral language as dependent variable

	<i>Dependent variable:</i>					
	Absolute frequency of communal moral terminology					
	All candidates			Sample:		
	(1)	(2)	(3)	Trump & Clinton	Pres. nominees	GOP 2016
1 if Trump	16.7** (6.6)	15.8*** (5.5)	10.8* (5.7)	15.6* (9.3)	31.4*** (6.8)	1.0 (9.1)
Log [# of non-stop words]		-2.8** (1.2)	-2.3** (1.1)	0.7 (8.5)	-4.2** (1.8)	-3.6 (2.5)
Flesch reading ease score		-6.9*** (1.6)	-7.0*** (1.6)	-32.8** (13.6)	-10.9*** (3.0)	-11.5*** (2.5)
1 if Republican			9.9*** (1.8)		-15.2*** (2.8)	
1 if presidential nominee			-2.2 (2.3)			
Document type FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes	Yes
Campaign day FE	No	Yes	Yes	Yes	Yes	Yes
Observations	16698	16698	16698	1043	5372	3455
R <sup>2</sup>	0.02	0.13	0.13	0.55	0.25	0.30

*Notes.* WLS estimates, robust standard errors in parentheses. The dependent variable is the absolute frequency of communal moral terminology (normalized by the number of non-stop words), expressed as z-score multiplied by 100. Each document is weighted by the square root of the total number of non-stop words. In columns (1)–(3), the sample includes all candidates in 2008–2016. Columns (4)–(6) restrict the sample to presidential nominees (2008–2016), Republicans (2008–2016), and 2016 Republicans, respectively. Campaign day FE are constructed by defining January 1st of the year prior to the election as first campaign day. Overall morality is constructed like the relative frequency of universalist terminology in eq. (16) in the main text, except that the numerator is given by the sum of the four MFT foundations.  
\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## D Background and Additional Tables for *Research Now* Survey

### D.1 Sample Characteristics

The population characteristics (except for the election data) are taken from the American Community Survey 2015.

Category	Study sample (%)	Population (%)
<b>2016 election</b>		
Trump	38.1	n/a
Clinton	40.8	n/a
Other	7.5	n/a
Didn't vote	11.8	n/a
Don't remember	1.7	n/a
<b>2016 election if voted and remembers</b>		
Trump	44.2	46.1
Clinton	47.2	48.2
Other	8.6	5.7
<b>Gender</b>		
Male	48.4	48.2
Female	51.6	51.8
<b>Age</b>		
28–29	5.1	4.1
30–34	12.3	10.7
35–39	12.0	10.1
40–49	23.2	21.5
50–59	18.8	21.9
≥60	28.6	31.7
<b>Household income</b>		
<10,000	6.5	7.2
10,000–14,999	5.2	5.3
15,000–24,999	9.9	10.6
25,000–34,999	11.2	10.1
35,000–49,999	13.1	13.4
50,000–74,999	18.6	17.8

75,000–99,999	12.7	12.1
100,000–149,999	13.3	13.1
150,000–199,999	5.4	5.1
≥200,000	4.1	5.3
<b>Educational attainment</b>		
Incomplete high school	11.6	13.3
High school graduate	27.4	27.8
Some college, no degree	20.0	21.1
Associate's degree	8.8	8.1
Bachelor's degree	19.8	18.5
Graduate or professional degree	12.5	11.2
<b>Ethnicity</b>		
White	66.7	62.3
African-American	15.8	17.1
Hispanic	10.8	12.3
American Indian	0.8	0.7
Asian	4.2	5.1
Other	1.8	2.5
<b>Employment</b>		
Full-time employed	58.7	63.7
Not employed full time	41.3	36.3
<b>State</b>		
Alabama	1.7	1.5
Alaska	0.1	0.2
Arizona	2.4	2.1
Arkansas	0.8	0.9
California	10.8	12.0
Colorado	1.5	1.7
Connecticut	1.1	1.2
Delaware	0.3	0.3
District of Columbia	0.3	0.1
Florida	7.6	6.5
Georgia	2.9	3.8
Hawaii	0.5	0.5
Idaho	0.5	0.5
Illinois	4.7	4.1

Indiana	2.3	2.0
Iowa	1.1	1.0
Kansas	0.7	0.9
Kentucky	1.8	1.4
Louisiana	1.6	1.4
Maine	0.5	0.5
Maryland	2.2	1.9
Massachusetts	1.8	2.2
Michigan	3.0	3.2
Minnesota	1.3	1.7
Mississippi	0.7	0.9
Missouri	2.3	1.9
Montana	0.1	0.3
Nebraska	0.7	0.6
Nevada	0.9	0.9
New Hampshire	0.4	0.4
New Jersey	3.0	2.9
New Mexico	0.4	0.7
New York	6.6	6.4
North Carolina	3.8	3.1
North Dakota	0.1	0.2
Ohio	4.2	3.7
Oklahoma	1.2	1.2
Oregon	1.1	1.3
Pennsylvania	4.9	4.2
Rhode Island	0.4	0.3
South Carolina	1.5	1.5
South Dakota	0.1	0.3
Tennessee	1.8	2.1
Texas	7.5	7.9
Utah	0.5	0.8
Vermont	0.1	0.2
Virginia	2.5	2.6
Washington	2.0	2.2
West Virginia	0.6	0.6
Wisconsin	1.5	1.8
Wyoming	0.0	0.2



**City size**

>1 million	15.0	n/a
200,000–1 million	17.6	n/a
50,000–200,000	20.0	n/a
20,000–50,000, close to metro area	14.6	n/a
20,000–50,000, not close to metro area	5.8	n/a
3,000–20,000, close to metro area	9.3	n/a
3,000–20,000, not close to metro area	8.6	n/a
500–3,000, close to metro area	2.5	n/a
500–3,000, not close to metro area	3.7	n/a
<500	3.1	n/a

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Regarding city size, the categories in the American Community Survey 2015 do not map perfectly into my variable. In the ACS, 71.2% live in cities with population of 50,000 or more, 9.5% in cities of size 2,500–50,000 and 19.3% in cities with population less than 2,500. The data above suggest that “too many” respondents live in medium-sized cities. This, however, may well be an artifact given that respondents may not know their city size (or be unsure about the definition of their city) and hence provide answers that are “middle of the road”.

## D.2 Validation of Moral Values Index

Table 4: Moral values, attitudes and behaviors

	Dependent variable: $\Delta$ [Local – global]											
	Support taxation/ redistrib.			Donations			Volunteering			Money allocation task		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Relative importance of universalist vs. communal moral values	-0.15*** (0.02)	-0.11*** (0.02)	-0.14*** (0.02)	-0.092*** (0.02)	-0.100*** (0.03)	-0.13*** (0.04)	-0.067*** (0.02)	-0.078*** (0.02)	-0.070** (0.03)	-0.29*** (0.02)	-0.24*** (0.02)	-0.24*** (0.03)
Log [Pop. density]		-0.020** (0.01)	-0.024 (0.02)		-0.0091 (0.01)	-0.0014 (0.02)		-0.023** (0.01)	-0.032 (0.02)		-0.043*** (0.01)	-0.032 (0.02)
State FE	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No
County FE	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
Additional controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Observations	3926	3864	3864	3872	3810	3810	3830	3769	3769	3527	3395	3395
R <sup>2</sup>	0.02	0.12	0.39	0.01	0.11	0.40	0.00	0.06	0.36	0.08	0.19	0.45

Notes. OLS estimates, robust standard errors in parentheses. In columns (1)–(3), the dependent variable is the extent to which people prefer taxation and redistribution at the community level, relative to the federal level. In columns (4)–(6), the dependent variable is the difference in self-reported donations to local vs. more global entities over the past 12 months. Here, all observations with  $x > |10,000|$  are excluded. In columns (7)–(9), the dependent variable is the difference in self-reported hours volunteered for local vs. more global entities over the past month. Here, all observations with  $x > |100|$  are excluded. In columns (10)–(12), the dependent variable is the dollar amount (out of \$99) that respondents allocated to the local firefighters as opposed to United Way Worldwide in a hypothetical money allocation task. Here, the analysis excludes all observations where the allocation did not add up to  $x \in [98, 100]$ . See Appendix I for a detailed description of each dependent variable. All dependent variables are expressed as z-scores. Additional controls include year of birth fixed effects, gender, income bracket fixed effects, education fixed effects, employment status, race fixed effects, religious denomination fixed effects, occupation fixed effects, altruism, generalized trust, and the absolute value of the moral values index. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

### D.3 Pre-Registered Index of Relative Importance of Universalist Moral Values

Table 5: Moral values and voting: Pre-registered index of moral values

	Dependent variable:											
	Votes						Evaluation of Trump					
	Trump in election			$\Delta$ [Trump – Ave. GOP]			Trump in primaries			Loyalty vs. economy		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Rel. imp. universalist values (pre-registered index)	-20.3*** (0.80)	-15.3*** (0.95)	-14.8*** (1.24)	-3.05*** (0.47)	-2.09*** (0.72)	-3.12*** (1.08)	-8.89*** (1.28)	-7.05*** (1.32)	-8.01*** (2.19)	-0.13*** (0.02)	-0.095*** (0.02)	-0.087*** (0.03)
Log [Pop. density]		-2.91*** (0.47)	-3.64*** (0.92)		-0.71 (0.49)	-1.18 (1.02)		-1.84** (0.76)	-2.55 (1.69)		-0.018* (0.01)	-0.050** (0.02)
State FE	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No
County FE	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
Additional controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Observations	3471	3342	3342	2973	2860	2860	1888	1817	1817	4011	3864	3864
R <sup>2</sup>	0.17	0.36	0.58	0.01	0.08	0.44	0.02	0.20	0.57	0.02	0.09	0.37

Notes. OLS estimates, robust standard errors in parentheses. Additional controls include year of birth fixed effects, gender, income bracket fixed effects, education fixed effects, employment status, race fixed effects, religious denomination fixed effects, occupation fixed effects, altruism, generalized trust, and the absolute value of the moral values index.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## D.4 No State Fixed Effects

Table 6: Moral values and voting: Individual-level evidence (no state FE)

	<i>Dependent variable:</i>								
	Votes in presidential election			Votes in GOP primaries					
	1 if voted for Trump	$\Delta$ [Trump – Ave. GOP]		1 if voted for Trump					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Absolute importance of universalist moral values	-20.3*** (0.83)			-2.23*** (0.67)			-6.01*** (1.36)		
Absolute importance of communal moral values	24.1*** (0.74)			4.31*** (0.60)			15.9*** (1.41)		
Relative importance of universalist vs. communal moral values		-21.6*** (0.61)	-17.4*** (0.87)		-3.27*** (0.48)	-2.57*** (0.75)		-10.1*** (1.23)	-8.21*** (1.35)
Year of birth FE	No	No	Yes	No	No	Yes	No	No	Yes
Race FE	No	No	Yes	No	No	Yes	No	No	Yes
Income bracket and education FE	No	No	Yes	No	No	Yes	No	No	Yes
Religious denomination FE	No	No	Yes	No	No	Yes	No	No	Yes
Occupation FE	No	No	Yes	No	No	Yes	No	No	Yes
Gender and employment status	No	No	Yes	No	No	Yes	No	No	Yes
Local population density	No	No	Yes	No	No	Yes	No	No	Yes
Altruism and generalized trust	No	No	Yes	No	No	Yes	No	No	Yes
Abs. value of moral values index	No	No	Yes	No	No	Yes	No	No	Yes
Observations	3471	3471	3342	2973	2973	2860	1888	1888	1817
R <sup>2</sup>	0.20	0.20	0.36	0.01	0.01	0.06	0.06	0.03	0.18

*Notes.* OLS estimates, robust standard errors in parentheses. In columns (1)–(3), the dependent variable is a binary indicator that equals 100 if the respondent voted for Trump in the general election and zero if the respondent voted for Clinton. In columns (4)–(6), the dependent variable is the difference in the propensity to vote for Trump and the average propensity to vote for Romney and McCain, where the propensity to vote for a given candidate is a binary indicator that equals 0 if the respondent voted for a different candidate and 100 if they voted for the respective candidate. The difference in sample size between columns (1)–(3) and (4)–(6) is that a respondent had to vote in all elections 2008–2016 to be included in columns (4)–(6). In columns (7)–(9), the dependent variable is a binary indicator that equals 100 if the respondent voted for Trump in the 2016 GOP primaries. See Appendix I for a description of the covariates. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## D.5 Alternative Dependent Variables

Table 7: Moral values and voting: Individual-level evidence (robustness)

	Dependent variable:								
	Votes								
	$\Delta$ Vote [Trump – Ave. GOP (NV)]	$\Delta$ [Trump – Romney]	$\Delta$ [Trump – McCain]	$\Delta$ [Trump – Romney]	$\Delta$ [Trump – McCain]	$\Delta$ [Trump – Romney]	$\Delta$ [Trump – McCain]	$\Delta$ [Trump – Romney]	$\Delta$ [Trump – McCain]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Relative importance of universalist vs. communal moral values	-3.56*** (0.47)	-2.66*** (0.72)	-2.74*** (0.95)	-2.76*** (0.50)	-1.81** (0.79)	-2.62** (1.10)	-3.88*** (0.57)	-3.08*** (0.91)	-3.78*** (1.29)
Log [Pop. density]		-0.30 (0.42)	-0.74 (0.88)		-0.68 (0.48)	-1.15 (1.02)		-0.73 (0.54)	-1.01 (1.12)
State FE	No	Yes	No	No	Yes	No	No	Yes	No
County FE	No	No	Yes	No	No	Yes	No	No	Yes
Additional controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Observations	3775	3637	3637	3150	3032	3032	3049	2930	2930
R <sup>2</sup>	0.01	0.07	0.39	0.01	0.08	0.43	0.01	0.07	0.43

Notes. OLS estimates, robust standard errors in parentheses. In columns (1)–(3), the dependent variable is the difference in the propensity to vote for Trump and past Republicans. The difference to the main measure described in the main text is that here non-voters are coded as 50, rather than being excluded. In columns (4)–(9), the dependent variable is the difference between Trump and Romney or McCain, respectively, constructed as described in the main text (i.e., excluding people who did not vote). Additional controls include year of birth fixed effects, gender, income bracket fixed effects, education fixed effects, employment status, race fixed effects, religious denomination fixed effects, occupation fixed effects, altruism, generalized trust, and the absolute value of the moral values index.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 8: Moral values and voting: Turnout as dependent variable

	<i>Dependent variable:</i> Turnout in pres. election $\Delta$ [2016 – Ave.]			
	(1)	(2)	(3)	(4)
Absolute importance of universalist moral values	-1.48** (0.59)			
Absolute importance of communal moral values	1.65*** (0.57)			
Relative importance of universalist vs. communal moral values		-1.52*** (0.48)	-1.11** (0.57)	-1.63** (0.76)
State FE	Yes	Yes	Yes	No
County FE	No	No	No	Yes
Year of birth FE	No	No	Yes	Yes
Race FE	No	No	Yes	Yes
Income bracket and education FE	No	No	Yes	Yes
Religious denomination FE	No	No	Yes	Yes
Occupation FE	No	No	Yes	Yes
Gender and employment status	No	No	Yes	Yes
Local population density	No	No	Yes	Yes
Altruism and generalized trust	No	No	Yes	Yes
Abs. value of moral values index	No	No	Yes	Yes
Observations	4011	4011	3864	3864
$R^2$	0.01	0.01	0.06	0.39

*Notes.* OLS estimates, robust standard errors in parentheses. The dependent variable is the difference between the propensity to vote in the 2016 presidential election and the average propensity to vote in 2012 and 2008. See Appendix I for a description of the covariates. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 9: Moral values and voting: 2012

	<i>Dependent variable:</i> 1 if voted for Romney in presidential election 2012				
	OLS	OLS	OLS	OLS	OLS
	(1)	(2)	(3)	(4)	(5)
Absolute importance of universalist moral values	-18.2*** (0.84)				
Absolute importance of communal moral values	19.4*** (0.77)				
Relative importance of universalist vs. communal moral values	-18.2*** (0.64)	-16.4*** (0.90)	-9.51*** (1.11)	-9.45*** (1.47)	
Political liberalism			-12.2*** (0.87)	-11.6*** (1.21)	
Log [Household income]			1.96** (0.89)	1.66 (1.09)	
Education			3.28*** (0.92)	2.93** (1.25)	
Log [Population density]			-2.89*** (0.92)	-1.83 (2.01)	
Religiosity			3.74*** (0.98)	2.79** (1.25)	
State FE	Yes	Yes	Yes	Yes	No
County FE	No	No	No	No	Yes
Additional controls	No	No	Yes	Yes	Yes
Observations	3366	3366	3293	2745	2745
$R^2$	0.19	0.19	0.34	0.40	0.63

*Notes.* OLS estimates, robust standard errors in parentheses. The dependent variable is a binary indicator that equals 100 if the respondent voted for Romney in the general election 2012 and zero if the respondent voted for Obama. Additional controls include year of birth fixed effects, gender, income bracket fixed effects, education fixed effects, employment status, race fixed effects, religious denomination fixed effects, occupation fixed effects, altruism, generalized trust, and the absolute value of the moral values index. See Appendix I for a description of all variables. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## D.6 Benchmarking: IV estimates

This Appendix reports a set of robustness checks for the benchmarking analyses in Section 5.4 in the main text. To address concerns about measurement error in the benchmarking variables, I proceed by making use of repeated measurements and instrumental variable estimates (Gillen et al., 2015). Specifically, for the following variables I have access to at least two measurements: political liberalism, household income, and population density:

- Political liberalism: As detailed in Appendix I, the survey contained 13 survey questions that are taken from the 2016 pre-election survey wave of the Cooperative Congressional Election Study. These questions elicit respondents' attitudes on four categories: gun control, environment policies, crime policies, and budget priorities. To arrive at two separate measurements, I proceed as follows. First, I compute the first principal component for the first two (last two) questions for each of the categories gun control, environment policies, and crime policies. Then, I compute a first liberalism score as first principal component of the principal components of the first two questions of each category plus the budget priorities variable. Likewise, I compute a second liberalism score as first principal component of the principal components of the last two questions from each category. These two liberalism scores exhibit a correlation of  $\rho = 0.53$ .
- Household income: The first measure is household income bracket in 10 steps. The second measure is a self-reported measure of (log) household income. The variables exhibit a correlation of  $\rho = 0.59$ .
- Population density: First measure is log population density as computed from a respondent's ZIP code. The second measure is given by a self-reported categorical variable of city size (ten steps). The variables exhibit a correlation of  $\rho = 0.69$ .

Table 10 reports the results of the IV regressions. In columns (1), (4) and (7), the first political liberalism component described above is instrumented with the second one. In columns (2), (5) and (8), log household income is instrumented by income bracket. In columns (3), (6) and (9), log population density is instrumented with self-reported neighborhood size.



Table 10: Moral values and voting: Benchmarking with IV

	Dependent variable:								
	Votes								
	1 if Trump in pres. election			$\Delta$ [Trump – Ave. GOP] in general election			1 if Trump in GOP primaries		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Relative importance of universalist vs. communal moral values	-8.02*** (1.19)	-14.0*** (0.82)	-14.0*** (0.82)	-2.12** (1.00)	-2.56*** (0.70)	-2.67*** (0.71)	-7.62*** (1.85)	-9.49*** (1.49)	-9.54*** (1.49)
Political liberalism component 1	-30.7*** (2.42)			-2.44 (2.01)			-4.95 (3.19)		
Log [Household income]	3.25*** (1.16)	5.53*** (1.69)	3.03*** (0.98)	-1.37 (0.92)	-2.95* (1.65)	-1.29 (0.92)	-0.66 (1.28)	-0.70 (2.49)	-0.58 (1.23)
Education	-0.34 (0.98)	-0.66 (0.95)	0.15 (0.86)	-3.23*** (0.84)	-2.74*** (0.94)	-3.28*** (0.83)	-9.38*** (1.33)	-9.13*** (1.46)	-9.23*** (1.32)
Log [Population density]	-6.87*** (1.03)	-7.46*** (0.89)	-8.64*** (1.29)	-0.93 (0.95)	-1.08 (0.93)	0.39 (1.32)	-4.14*** (1.46)	-4.35*** (1.45)	-3.53 (2.21)
Religiosity	0.75 (0.97)	2.81*** (0.83)	2.65*** (0.82)	-0.036 (0.81)	-0.036 (0.80)	0.11 (0.79)	-0.25 (1.37)	-0.032 (1.36)	0.0027 (1.36)
Political liberalism		-12.8*** (0.89)	-12.6*** (0.89)		-1.18 (0.82)	-1.31 (0.83)		-0.19 (1.30)	-0.23 (1.30)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2852	2852	2852	2452	2452	2452	1544	1544	1544
R <sup>2</sup>	0.13	0.32	0.32	0.04	0.05	0.05	0.10	0.11	0.11

Notes. IV estimates, robust standard errors in parentheses. In columns (1)–(3), the dependent variable is 1 if the respondent voted for Trump in the 2016 election and 0 if they voted for Clinton. In columns (4)–(6), the dependent variable is the difference between the propensity to vote for Trump and the average propensity to vote for Romney and McCain. In columns (7)–(9), the dependent variable is a binary indicator for whether the respondent voted for Trump in the GOP primaries. Political liberalism, income, and population density are instrumented for as described in the text. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## D.7 Separate MFQ Survey Items

Table 11: Relationship between voting and separate MFQ items (1/12)

	Dependent variable: 1 if voted for Trump in pres. election					
	(1)	(2)	(3)	(4)	(5)	(6)
Harm / care: q. 1	-554.7*** (62.73)					
Harm / care: q. 7		-312.4*** (58.35)				
Harm / care: q. 12			-305.9*** (57.12)			
Harm / care: q. 17				-553.9*** (59.91)		
Harm / care: q. 23					-303.7*** (47.36)	
Harm / care: q. 28						-321.8*** (39.86)
Observations	3471	3471	3471	3471	3471	3471
R <sup>2</sup>	0.02	0.01	0.01	0.02	0.01	0.02

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 12: Relationship between voting and separate MFQ items (2/12)

	Dependent variable: 1 if voted for Trump in pres. election					
	(1)	(2)	(3)	(4)	(5)	(6)
Fairness / recip.: q. 2	-892.4*** (60.56)					
Fairness / recip.: q. 8		-434.1*** (62.63)				
Fairness / recip.: q. 13			-353.4** (167.83)			
Fairness / recip.: q. 18				-649.9*** (54.48)		
Fairness / recip.: q. 24					-176.1*** (51.35)	
Fairness / recip.: q. 29						-497.3*** (55.05)
Observations	3471	3471	3471	3471	3471	3471
R <sup>2</sup>	0.06	0.01	0.02	0.04	0.00	0.04

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 13: Relationship between voting and separate MFQ items (3/12)

	<i>Dependent variable:</i> 1 if voted for Trump in pres. election					
	(1)	(2)	(3)	(4)	(5)	(6)
In-group / loyalty: q. 3	1037.3*** (53.80)					
In-group / loyalty: q. 9		45.2 (58.99)				
In-group / loyalty: q. 14			216.3*** (60.04)			
In-group / loyalty: q. 19				409.4*** (151.75)		
In-group / loyalty: q. 25					203.9*** (47.58)	
In-group / loyalty: q. 30						264.7*** (49.29)
Observations	3471	3471	3471	3471	3471	3471
R <sup>2</sup>	0.10	0.00	0.00	0.06	0.01	0.01

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 14: Relationship between voting and separate MFQ items (4/12)

	<i>Dependent variable:</i> 1 if voted for Trump in pres. election					
	(1)	(2)	(3)	(4)	(5)	(6)
Authority / respect: q. 4	553.5*** (62.25)					
Authority / respect: q. 10		443.4*** (53.94)				
Authority / respect: q. 15			2.12 (60.65)			
Authority / respect: q. 20				365.7*** (66.56)		
Authority / respect: q. 26					453.3*** (44.05)	
Authority / respect: q. 31						506.6*** (50.77)
Observations	3471	3471	3471	3471	3471	3471
R <sup>2</sup>	0.02	0.02	0.00	0.01	0.03	0.03

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 15: Relationship between voting and separate MFQ items (5/12)

	<i>Dependent variable:</i>					
	Pres. election: $\Delta$ [Trump – Ave. GOP]					
	(1)	(2)	(3)	(4)	(5)	(6)
Harm / care: q. 1	-141.2*** (48.04)					
Harm / care: q. 7		-113.2** (45.90)				
Harm / care: q. 12			-161.2*** (44.91)			
Harm / care: q. 17				-96.2** (47.13)		
Harm / care: q. 23					-40.4 (33.88)	
Harm / care: q. 28						55.4* (31.73)
Observations	2973	2973	2973	2973	2973	2973
$R^2$	0.00	0.00	0.00	0.00	0.00	0.00

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 16: Relationship between voting and separate MFQ items (6/12)

	<i>Dependent variable:</i>					
	Pres. election: $\Delta$ [Trump – Ave. GOP]					
	(1)	(2)	(3)	(4)	(5)	(6)
Fairness / recip.: q. 2	-151.9*** (45.95)					
Fairness / recip.: q. 8		-220.1*** (49.45)				
Fairness / recip.: q. 13			-97.5* (55.97)			
Fairness / recip.: q. 18				-80.6* (41.79)		
Fairness / recip.: q. 24					-39.2 (36.13)	
Fairness / recip.: q. 29						42.1 (29.79)
Observations	2973	2973	2973	2973	2973	2973
$R^2$	0.00	0.01	0.00	0.00	0.00	0.00

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 17: Relationship between voting and separate MFQ items (7/12)

	<i>Dependent variable:</i>					
	Pres. election: $\Delta$ [Trump – Ave. GOP]					
	(1)	(2)	(3)	(4)	(5)	(6)
In-group / loyalty: q. 3	207.9*** (39.39)					
In-group / loyalty: q. 9		-14.1 (44.66)				
In-group / loyalty: q. 14			80.1* (45.13)			
In-group / loyalty: q. 19				26.5 (21.79)		
In-group / loyalty: q. 25					65.4* (35.75)	
In-group / loyalty: q. 30						106.2*** (33.65)
Observations	2973	2973	2973	2973	2973	2973
$R^2$	0.01	0.00	0.00	0.00	0.00	0.00

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 18: Relationship between voting and separate MFQ items (8/12)

	<i>Dependent variable:</i>					
	Pres. election: $\Delta$ [Trump – Ave. GOP]					
	(1)	(2)	(3)	(4)	(5)	(6)
Authority / respect: q. 4	64.4 (47.92)					
Authority / respect: q. 10		184.6*** (43.74)				
Authority / respect: q. 15			-152.8*** (50.03)			
Authority / respect: q. 20				-92.1** (42.70)		
Authority / respect: q. 26					134.4*** (31.08)	
Authority / respect: q. 31						76.7** (37.84)
Observations	2973	2973	2973	2973	2973	2973
$R^2$	0.00	0.01	0.00	0.00	0.01	0.00

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 19: Relationship between voting and separate MFQ items (9/12)

	Dependent variable: 1 if voted for Trump in GOP primaries					
	(1)	(2)	(3)	(4)	(5)	(6)
Harm / care: q. 1	-234.0*** (87.50)					
Harm / care: q. 7		-331.5*** (87.49)				
Harm / care: q. 12			-407.0*** (83.46)			
Harm / care: q. 17				-300.2*** (77.60)		
Harm / care: q. 23					163.9** (68.41)	
Harm / care: q. 28						62.6 (55.25)
Observations	1888	1888	1888	1888	1888	1888
R <sup>2</sup>	0.00	0.01	0.01	0.01	0.00	0.00

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 20: Relationship between voting and separate MFQ items (10/12)

	Dependent variable: 1 if voted for Trump in GOP primaries					
	(1)	(2)	(3)	(4)	(5)	(6)
Fairness / recip.: q. 2	-489.6*** (84.12)					
Fairness / recip.: q. 8		-232.7*** (88.85)				
Fairness / recip.: q. 13			-101.2 (109.03)			
Fairness / recip.: q. 18				-187.9*** (68.68)		
Fairness / recip.: q. 24					-139.9** (69.91)	
Fairness / recip.: q. 29						-32.7 (49.08)
Observations	1888	1888	1888	1888	1888	1888
R <sup>2</sup>	0.02	0.00	0.00	0.00	0.00	0.00

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 21: Relationship between voting and separate MFQ items (11/12)

	<i>Dependent variable:</i> 1 if voted for Trump in GOP primaries					
	(1)	(2)	(3)	(4)	(5)	(6)
In-group / loyalty: q. 3	620.8*** (80.20)					
In-group / loyalty: q. 9		138.9* (82.97)				
In-group / loyalty: q. 14			182.0** (85.34)			
In-group / loyalty: q. 19				125.9*** (43.69)		
In-group / loyalty: q. 25					119.7* (66.58)	
In-group / loyalty: q. 30						99.7 (68.53)
Observations	1888	1888	1888	1888	1888	1888
R <sup>2</sup>	0.03	0.00	0.00	0.01	0.00	0.00

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

Table 22: Relationship between voting and separate MFQ items (12/12)

	<i>Dependent variable:</i> 1 if voted for Trump in GOP primaries					
	(1)	(2)	(3)	(4)	(5)	(6)
Authority / respect: q. 4	153.7* (87.29)					
Authority / respect: q. 10		190.6** (76.39)				
Authority / respect: q. 15			-352.9*** (81.49)			
Authority / respect: q. 20				-144.8* (77.23)		
Authority / respect: q. 26					74.2 (62.09)	
Authority / respect: q. 31						169.9** (71.30)
Observations	1888	1888	1888	1888	1888	1888
R <sup>2</sup>	0.00	0.00	0.01	0.00	0.00	0.00

Notes. OLS estimates, robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . See Appendix F for the survey questions. The response to each survey question is normalized by the sum of responses to all MFQ questions.

## D.8 Controlling for Lifetime Income

The main text controlled for estimates of current income. I now report a robustness check in which I work with an estimate of lifetime income. My survey asked respondents to provide a continuous estimate of annual pre-tax household income. 3,249 participants provided an estimate of at least \$1000; this is the sample I work with. To transform annual income into an estimate of lifetime income, I follow the strategy of [Chetty et al. \(2016\)](#) and assume that cross-sectional variation in income across generations reflects life-cycle patterns. Accordingly, I apply the following steps: (i) assume a uniform 30% income tax rate; (ii) normalize the income of each household relative to that of the average 26-years old American (i.e., assume that variation across cohorts reflects life-cycle patterns); and (iii) compute estimated lifetime income by assuming a 0.5% wage growth and a discount factor of 3% ([Chetty et al., 2016](#)).



Table 23: Moral values and voting: Controlling for lifetime income

	Dependent variable:									
	Votes in presidential election					Votes in GOP primaries				
	$\Delta$ [Trump – Ave. GOP]					1 if voted for Trump				
	OLS	OLS	PDS	OLS	PDS	OLS	OLS	PDS	OLS	PDS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Relative importance of universalist vs. communal moral values	-14.0*** (0.81)	-12.5*** (1.38)	-12.4*** (1.05)	-2.55*** (0.71)	-3.65** (1.42)	-1.92** (0.94)	-9.09*** (1.51)	-4.76* (2.74)	-7.53*** (1.56)	
Political liberalism	-12.7*** (0.89)	-10.9*** (1.22)	-12.3*** (0.89)	-1.36 (0.83)	-0.57 (1.21)	-1.76** (0.87)	-0.40 (1.33)	-1.26 (2.42)	-1.18 (1.32)	
Standardized values of (ln_life_inc)	3.99*** (0.96)	1.04 (1.38)		-1.53 (1.00)	0.18 (1.41)		0.54 (1.44)	-1.03 (2.67)		
Education	-0.90 (0.91)	-0.89 (1.35)		-3.22*** (0.90)	-3.23** (1.45)	-3.49*** (0.85)	-9.43*** (1.42)	-7.50*** (2.78)	-8.77*** (1.27)	
Log [Population density]	-7.61*** (0.90)	-6.01*** (1.92)	-3.74*** (0.82)	-0.86 (0.93)	-2.51 (2.21)		-4.82*** (1.47)	-4.25 (3.89)		
Religiosity	2.90*** (0.83)	3.74*** (1.31)	4.40*** (0.86)	-0.0036 (0.80)	1.27 (1.26)	0.15 (0.83)	-0.17 (1.39)	-0.10 (2.82)		
State FE	Yes	No	No	Yes	No	No	Yes	No	No	No
County FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
Additional controls	No	Yes	Yes	No	Yes	No	No	Yes	No	No
Observations	2780	2780	2780	2392	2392	2392	1494	1494	1494	1494
R <sup>2</sup>	0.33	0.65		0.05	0.48		0.12	0.61		

Notes: OLS estimates, robust standard errors in parentheses. In columns (1)–(4), the dependent variable is the average propensity to vote for Romney and McCain, where the propensity to vote for a given candidate is a binary indicator that equals 0 if the respondent voted for a different candidate and 100 if they voted for the respective candidate. In columns (5)–(8), the dependent variable is the difference between the propensity to vote for Trump and the average propensity to vote for Romney and McCain. In columns (9)–(12), the dependent variable is a binary indicator for whether the respondent voted for Trump in the GOP primaries. See Appendix I for a description of all variables. Additional controls include year of birth fixed effects, gender, employment status, race fixed effects, religious denomination fixed effects, occupation fixed effects, altruism, generalized trust, and the absolute value of the moral values index. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## E Additional Tables for County-Level Analysis

### E.1 Correlates of County-Level Values

Table 24: Correlates of county-level moral values

	<i>Corr. b/w rel. imp. of universalist versus communal moral values and:</i>				
	Unemp.	Log [HH inc.]	Log [Pop. dens.]	Racism	Frac. religious
<i>Partial corr. (State FE)</i>	−0.02	−0.01	0.11***	0.00	−0.08***
95% CI	[−0.06, 0.02]	[−0.05, 0.03]	[0.07, 0.15]	[−0.04, 0.04]	[−0.12, −.04]
<i>Partial corr. (CZ FE)</i>	0.01	−0.05**	0.12***	n/a	−0.03

*Notes.* The first row reports the partial correlations between county characteristics and the relative importance of universalist moral values (conditional on state fixed effects), and the second row corresponding confidence intervals. The third row reports partial correlations conditional on commuting zone effects. The racism index measures the relative search frequency for “nigger(s)” on Google in a Designated Market Area (DMA), which is strongly predictive of Obama’s vote share ([Stephens-Davidowitz, 2014](#)). The racism variable was assigned to all counties in a DMA. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## E.2 Replication using common CBSA Sample

Table 25: Moral values and county-level voting patterns (CBSA sample)

	Dependent variable: Vote shares											
	Presidential election						GOP primaries Trump					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Rel. importance of universalist vs. communal moral values	-2.93*** (0.45)	-1.94*** (0.35)	-2.16*** (0.34)	-2.00*** (0.56)	-0.61*** (0.19)	-0.30** (0.15)	-0.43*** (0.16)	-0.30 (0.25)	-0.77*** (0.23)	-0.55*** (0.19)	-0.82*** (0.27)	-0.93* (0.51)
Log [Median HH income]		4.48** (2.01)	13.4*** (2.35)	12.3*** (3.23)		-6.45*** (0.83)	-6.44*** (1.01)	-8.43*** (1.41)		-2.98*** (1.10)	-4.58*** (1.73)	-5.81** (2.67)
Unemployment rate		-0.45** (0.18)	-0.13 (0.19)	-0.24 (0.29)		0.21*** (0.08)	0.28*** (0.09)	0.30** (0.13)		0.81*** (0.09)	0.70*** (0.16)	0.56** (0.24)
Racism index		2.48*** (0.50)	1.13 (0.95)	-0.059 (3.22)		0.82*** (0.21)	0.22 (0.35)	0.064 (0.78)		0.90*** (0.24)	0.58 (0.63)	-0.39 (1.18)
Log [Population density]		-6.61*** (0.26)	-7.22*** (0.26)	-7.49*** (0.34)		-2.49*** (0.12)	-3.12*** (0.12)	-3.32*** (0.16)		-1.70*** (0.16)	-2.37*** (0.21)	-2.59*** (0.30)
Fraction religious		11.3*** (2.83)	7.57*** (2.88)	4.25 (3.88)		1.16 (0.99)	0.30 (0.89)	-0.43 (1.17)		-3.59*** (1.36)	-3.82** (1.93)	-7.52*** (2.75)
Abs. value of moral values index		-0.38 (0.57)	-0.50 (0.52)	-0.47 (0.83)		0.25 (0.25)	0.024 (0.23)	0.20 (0.35)		-0.20 (0.30)	-0.072 (0.39)	0.26 (0.71)
Latitude		0.20 (0.28)	0.16 (0.86)	0.64 (1.38)		0.13 (0.11)	-0.15 (0.38)	0.43 (0.61)		-0.72*** (0.13)	-0.98 (0.61)	-1.19 (1.17)
Longitude		0.016 (0.18)	-0.066 (0.66)	-0.64 (1.06)		0.14 (0.09)	0.21 (0.29)	0.75 (0.50)		0.16 (0.10)	0.92 (0.65)	2.09** (0.94)
State FE	Yes	Yes	No	No	Yes	Yes	No	No	Yes	Yes	No	No
Commuting zone FE	No	No	Yes	No	No	No	Yes	No	No	No	Yes	No
CBSA FE	No	No	No	Yes	No	No	No	Yes	No	No	No	Yes
Observations	1640	1635	1635	1635	1640	1635	1635	1635	1552	1547	1547	1547
R <sup>2</sup>	0.35	0.61	0.83	0.88	0.38	0.63	0.85	0.89	0.83	0.87	0.89	0.92

Notes. County-level OLS estimates, robust standard errors in parentheses. The dependent variable in columns (1)–(4) is Trump's vote share in the 2016 general election. The dependent variable in columns (5)–(8) is the difference between Trump's vote share in the election and the average GOP vote share in presidential elections between 2000 and 2012. The dependent variable in (9)–(12) is Trump's vote share in the GOP primaries. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

### E.3 Universalist and Communal Values Separately

Table 26: Moral values and county-level voting patterns

	<i>Dependent variable:</i>					
	Vote shares					
	Presidential election		Δ [Trump – Ave. GOP]		GOP primaries	
	Trump				Trump	
	(1)	(2)	(3)	(4)	(5)	(6)
Abs. importance of universalist values	-0.88*** (0.27)	-0.74*** (0.28)	0.22 (0.14)	0.082 (0.15)	0.15 (0.16)	0.17 (0.20)
Abs. importance of communal values	1.91*** (0.31)	1.94*** (0.33)	0.81*** (0.14)	0.72*** (0.15)	0.76*** (0.17)	0.89*** (0.22)
State FE	Yes	No	Yes	No	Yes	No
Communiting zone FE	No	Yes	No	Yes	No	Yes
Observations	2255	2255	2255	2255	2116	2116
R <sup>2</sup>	0.36	0.66	0.39	0.69	0.81	0.85

*Notes.* County-level OLS estimates, robust standard errors in parentheses. The dependent variable in columns (1)–(2) is Trump's vote share in the 2016 general election. The dependent variable in columns (3)–(4) is the difference between Trump's vote share in the election and the average GOP vote share in presidential elections between 2000 and 2012. The dependent variable in (5)–(6) is Trump's vote share in the GOP primaries. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 27: Moral values and county-level voting patterns: Differences-in-differences estimates

	<i>Dependent variable:</i>	
	GOP vote share in year $x$	
	(1)	(2)
Abs. imp. of universalist moral values (in years $[x-1, x+2]$ )	-0.25** (0.11)	-0.25** (0.11)
Abs. imp. of communal moral values (in years $[x-1, x+2]$ )	0.10 (0.11)	0.12 (0.10)
Log [Median HH income]		4.35** (2.07)
Unemployment rate		-0.40*** (0.07)
County FE	Yes	Yes
Election FE	Yes	Yes
Observations	6200	6200
R <sup>2</sup>	0.96	0.96

*Notes.* County-level OLS panel estimates. Standard errors (in parentheses) are clustered at the county level. The dependent variable is the GOP vote share in a given election year, stacked across the general elections  $x \in \{2008, 2012, 2016\}$ . The independent variable is the relative importance of universalist versus communal moral values in  $[x-1, x+2]$ . \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## E.4 Changes in Turnout as Dependent Variable

Table 28: Moral values and county-level turnout

	<i>Dependent variable:</i>			
	Turnout $\Delta$ ['16 – Ave. (2000–2012)]			
	Pres. election		GOP primaries	
	(1)	(2)	(3)	(4)
Rel. importance of universalist vs. communal moral values	-0.051 (0.05)	-0.22 (0.13)	-0.20** (0.09)	-0.65** (0.27)
State FE	Yes	No	Yes	No
CBSA FE	No	Yes	No	Yes
Observations	2255	1640	1940	1434
$R^2$	0.49	0.78	0.66	0.80

*Notes.* County-level OLS estimates, robust standard errors in parentheses. The dependent variable is the difference in turnout between 2016 and the average of 2000–2012, for either the general election or the GOP primaries. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## E.5 GOP Vote Shares and Moral Values: Controlling for Education

Table 29: Moral values and presidential elections 2008-2016: Controlling for education

	<i>Dependent variable:</i> GOP vote share in pres. elections					
	2008			2012		
	(1)	(2)	(3)	(4)	(5)	(6)
Rel. importance of universalist vs. communal moral values	-1.35*** (0.22)	-1.16*** (0.22)	-1.45*** (0.23)	-1.25*** (0.23)	-1.63*** (0.24)	-1.26*** (0.23)
Log [Median HH income]	8.66*** (1.46)	15.0*** (1.65)	8.02*** (1.56)	14.7*** (1.77)	1.68 (1.59)	13.8*** (1.67)
Unemployment rate	-0.68*** (0.13)	-0.77*** (0.13)	-0.87*** (0.13)	-0.97*** (0.13)	-0.68*** (0.14)	-0.86*** (0.14)
Racism index	1.63*** (0.35)	1.79*** (0.35)	1.82*** (0.38)	1.99*** (0.39)	2.16*** (0.40)	2.47*** (0.40)
Log [Population density]	-3.85*** (0.21)	-3.11*** (0.23)	-4.23*** (0.22)	-3.44*** (0.24)	-5.84*** (0.23)	-4.41*** (0.24)
Fraction religious	9.78*** (1.99)	8.45*** (1.92)	9.80*** (2.05)	8.39*** (1.98)	8.99*** (2.08)	6.43*** (1.87)
Abs. value of moral values index	-0.36 (0.35)	-0.38 (0.34)	-0.29 (0.37)	-0.32 (0.36)	-0.14 (0.39)	-0.19 (0.36)
Latitude	0.29 (0.20)	0.39** (0.20)	0.39* (0.22)	0.49** (0.22)	0.43* (0.23)	0.62*** (0.22)
Longitude	-0.050 (0.14)	-0.16 (0.14)	-0.035 (0.15)	-0.15 (0.15)	0.079 (0.16)	-0.13 (0.16)
% high school graduate or less		29.0*** (3.76)		30.9*** (4.00)		56.0*** (3.83)
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2249	2249	2249	2249	2249	2249
R <sup>2</sup>	0.54	0.56	0.55	0.57	0.59	0.64

Notes. County-level OLS estimates, robust standard errors in parentheses. See columns (2) and (3) of Table 6 in the main text for a complete list of the economic and geographic covariates. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## F Moral Foundations Questionnaire

Part 1. When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking? Please rate each statement using this scale:

- 0 not at all relevant (This consideration has nothing to do with my judgments of right and wrong)
- 1 not very relevant
- 2 slightly relevant
- 3 somewhat relevant
- 4 very relevant
- 5 extremely relevant (This is one of the most important factors when I judge right and wrong)

- 1. Whether or not someone suffered emotionally
- 2. Whether or not some people were treated differently than others
- 3. Whether or not someone's action showed love for his or her country
- 4. Whether or not someone showed a lack of respect for authority
- 5. Whether or not someone violated standards of purity and decency
- 6. Whether or not someone was good at math
- 7. Whether or not someone cared for someone weak or vulnerable
- 8. Whether or not someone acted unfairly
- 9. Whether or not someone did something to betray his or her group
- 10. Whether or not someone conformed to the traditions of society
- 11. Whether or not someone did something disgusting
- 12. Whether or not someone was cruel
- 13. Whether or not someone was denied his or her rights

14. Whether or not someone showed a lack of loyalty
15. Whether or not an action caused chaos or disorder
16. Whether or not someone acted in a way that God would approve of

Part 2. Please read the following sentences and indicate your agreement or disagreement:

- 0 Strongly disagree
  - 1 Moderately disagree
  - 2 Slightly disagree
  - 3 Slightly agree
  - 4 Moderately agree
  - 5 Strongly agree
- 
17. Compassion for those who are suffering is the most crucial virtue.
  18. When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.
  19. I am proud of my country's history.
  20. Respect for authority is something all children need to learn.
  21. People should not do things that are disgusting, even if no one is harmed.
  22. It is better to do good than to do bad.
  23. One of the worst things a person could do is hurt a defenseless animal.
  24. Justice is the most important requirement for a society.
  25. People should be loyal to their family members, even when they have done something wrong.
  26. Men and women each have different roles to play in society.
  27. I would call some acts wrong on the grounds that they are unnatural.



28. It can never be right to kill a human being.
29. I think it's morally wrong that rich children inherit a lot of money while poor children inherit nothing.
30. It is more important to be a team player than to express oneself.
31. If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because that is my duty.
32. Chastity is an important and valuable virtue.

The final scores for each moral foundation are then computed by summing responses across the following questions:

Harm / care: 1, 7, 12, 17, 23, 28

Fairness / reciprocity: 2, 8, 13, 18, 24, 29

In-group / loyalty: 3, 9, 14, 19, 25, 30

Authority / respect: 4, 10, 15, 20, 26, 31

Purity / sanctity: 5, 11, 16, 21, 27, 32

Items 6 and 22 are filler questions.

## G Moral Foundations Dictionary

**Care / Harm – Virtue:** safe\*, peace\*, compassion\*, empath\*, sympath\*, care, caring, protect\*, shield, shelter, amity, secur\*, benefit\*, defen\*, guard\*, preserve

**Care / Harm – Vice:** harm\*, suffer\*, war, wars, warl\*, warring, fight\*, violen\*, hurt\*, kill, kills, killer\*, killed, killing, endanger\*, cruel\*, brutal\*, abuse\*, damag\*, ruin\*, ravage, detriment\*, crush\*, attack\*, annihilate\*, destroy, stomp, abandon\*, spurn, impair, exploit, exploits, exploited, exploiting, wound\*

**Fairness / Reciprocity – Virtue:** fair, fairly, fairness, fair-\*, fairmind\*, fairplay, equal\*, justice, justness, justifi\*, reciproc\*, impartial\*, egalitar\*, rights, equity, evenness, equivalent, unbiased\*, tolerant, equable, balance\*, homologous, unprejudice\*, reasonable, constant, honest\*

**Fairness / Reciprocity – Vice:** unfair\*, unequal\*, bias\*, unjust\*, injust\*, bigot\*, discriminat\*, disproportion\*, inequitable, prejud\*, dishonest, unscrupulous, dissociate, preference, favoritism, segregat\*, exclusion, exclud\*

**Ingroup / Loyalty – Virtue:** together, nation\*, homeland\*, family, families, familial, group, loyal\*, patriot\*, communal, commune\*, communit\*, communis\*, comrad\*, cadre, collectiv\*, joint, unison, unite\*, fellow\*, guild, solidarity, devot\*, member, cliqu\*, cohort, ally, insider, segregat\*

**Ingroup / Loyalty – Vice:** foreign\*, enem\*, betray\*, treason\*, traitor\*, treacher\*, disloyal\*, individual\*, apostasy, apostate, deserted, deserter\*, deserting, deceiv\*, jilt\*, imposter, miscreant, spy, sequester, renegade, terroris\*, immigra\*, abandon\*

**Authority / Respect – Virtue:** obey\*, obedien\*, duty, law, lawful\*, legal\*, duti\*, honor\*, respect, respectful\*, respected, respects, order\*, father\*, mother, motherl\*, mothering, mothers, tradition\*, hierarch\*, authorit\*, permit, permission, status\*, rank\*, leader\*, class, bourgeoisie, caste\*, position, complian\*, command, supremacy, control, submi\*, allegian\*, serve, abide, defere\*, defer, revere\*, venerat\*, comply, preserve, loyal\*

**Authority / Respect – Vice:** defian\*, rebel\*, dissent\*, subver\*, disrespect\*, disobe\*, sediti\*, agitat\*, insubordinat\*, illegal\*, lawless\*, insurgent, mutinous, defy\*, dissident, unfaithful, alienate, defector, heretic\*, nonconformist, oppose, protest, refuse, denounce, remonstrate, riot\*, obstruct, betray\*, treason\*, traitor\*, treacher\*, disloyal\*, apostasy,

apostate, deserted, deserter\*, deserting

**Purity / Sanctity – Virtue:** piety, pious, purity, pure\*, clean\*, steril\*, sacred\*, chast\*, holy, holiness, saint\*, wholesome\*, celiba\*, abstention, virgin, virgins, virginity, virginal, austerity, integrity, modesty, abstinence\*, abstemiousness, upright, limpid, unadulterated, maiden, virtuous, refined, decent\*, immaculate, innocent, pristine, church\*, preserve

**Purity / Sanctity – Vice:** disgust\*, deprav\*, disease\*, unclean\*, contagio\*, indecent\*, sin, sinful\*, sinner\*, sins, sinned, sinning, slut\*, whore, dirt\*, impiety, impious, profan\*, gross, repuls\*, sick\*, promiscu\*, lewd\*, adulter\*, debauch\*, defile\*, tramp, prostitut\*, unchaste, intemperate, wanton, profligate, filth\*, trashy, obscen\*, lax, taint\*, stain\*, tarnish\*, debase\*, desecrat\*, wicked\*, blemish, exploitat\*, pervert, wretched\*, ruin\*, exploit, exploits, exploited, exploiting, apostasy, apostate, heretic\*

## H Most Common Moral Words from MFD

### H.1 American Presidency Project Dataset

Table 30: Most Frequent MFD Words – All Candidates

Word	Moral Category	Rel. Freq. (%)
(1)	(2)	(3)
nation*	Ingroup Virtue	0.415
leader*	Authority Virtue	0.299
care	Harm Virtue	0.246
unite*	Ingroup Virtue	0.207
secur*	Harm Virtue	0.192
families	Ingroup Virtue	0.170
fight*	Harm Vice	0.154
war	Harm Vice	0.147
communit*	Ingroup Virtue	0.134
together	Ingroup Virtue	0.114
family	Ingroup Virtue	0.113
law	Authority Virtue	0.110

*Notes.* This table reports the 12 most common MFD words and word stems used by all candidates across the 2008-2016 elections in documents collected for the text analysis. Column (2) reports the moral values associated with the MFD keywords and column (3) reports the average relative frequency the candidates used the keywords across the documents. Only non-stop words in a text are considered when calculating relative frequencies. See Appendix G for a list of all MFD keywords.

## H.2 U.S. Congress Dataset

Table 31: Most Frequent MFD Words – All Years

Word	Moral Category	Rel. Freq. (%)
(1)	(2)	(3)
nation*	Ingroup Virtue	0.373
unite*	Ingroup Virtue	0.280
law	Authority Virtue	0.200
order*	Authority Virtue	0.174
war	Harm Vice	0.148
secur*	Harm Virtue	0.120
leader*	Authority Virtue	0.115
protect*	Harm Virtue	0.113
defen*	Harm Virtue	0.109
foreign*	Ingroup Vice	0.100
care	Harm Virtue	0.095
benefit*	Harm Virtue	0.095
member	Ingroup Virtue	0.092
communit*	Ingroup Virtue	0.078
authorit*	Authority Virtue	0.077

*Notes.* This table reports the 15 most common MFD words and word stems used by all congresspeople across all years in the data. Column (2) reports the moral values associated with the MFD keywords and column (3) reports the average relative frequency the congresspeople used the keywords. Only non-stop words are considered when calculating relative frequencies. See Appendix G for a list of all MFD keywords.

Table 32: Most Frequent MFD Words – 1955 - 1965

Word	Moral Category	Rel. Freq. (%)
(1)	(2)	(3)
nation*	Ingroup Virtue	0.434
unite*	Ingroup Virtue	0.331
law	Authority Virtue	0.184
foreign*	Ingroup Vice	0.161
order*	Authority Virtue	0.157
defen*	Harm Virtue	0.130
leader*	Authority Virtue	0.120
communis*	Ingroup Virtue	0.107
rights	Fairness Virtue	0.101
member	Ingroup Virtue	0.100
secur*	Harm Virtue	0.098
war	Harm Vice	0.098
benefit*	Harm Virtue	0.090
authorit*	Authority Virtue	0.085
position	Authority Virtue	0.083

*Notes.* This table reports the 15 most common MFD words and word stems used by all congresspeople between 1955 and 1965. Column (2) reports the moral values associated with the MFD keywords and column (3) reports the average relative frequency the congresspeople used the keywords. Only non-stop words are considered when calculating relative frequencies. See Appendix G for a list of all MFD keywords.

Table 33: Most Frequent MFD Words – 1995 - 2005

Word	Moral Category	Rel. Freq. (%)
(1)	(2)	(3)
nation*	Ingroup Virtue	0.404
unite*	Ingroup Virtue	0.218
secur*	Harm Virtue	0.209
law	Authority Virtue	0.171
care	Harm Virtue	0.168
protect*	Harm Virtue	0.164
leader*	Authority Virtue	0.162
communit*	Ingroup Virtue	0.134
benefit*	Harm Virtue	0.127
order*	Authority Virtue	0.124
defen*	Harm Virtue	0.121
balance*	Fairness Virtue	0.120
families	Ingroup Virtue	0.108
war	Harm Vice	0.102
safe*	Harm Virtue	0.099

*Notes.* This table reports the 15 most common MFD words and word stems used by all congresspeople between 1995 and 2005. Column (2) reports the moral values associated with the MFD keywords and column (3) reports the average relative frequency the congresspeople used the keywords. Only non-stop words are considered when calculating relative frequencies. See Appendix G for a list of all MFD keywords.

Table 34: Most Frequent MFD Words – After 2010

Word	Moral Category	Rel. Freq. (%)
(1)	(2)	(3)
nation*	Ingroup Virtue	0.389
care	Harm Virtue	0.237
unite*	Ingroup Virtue	0.214
law	Authority Virtue	0.212
secur*	Harm Virtue	0.190
leader*	Authority Virtue	0.187
protect*	Harm Virtue	0.178
communit*	Ingroup Virtue	0.161
balance*	Fairness Virtue	0.139
order*	Authority Virtue	0.129
families	Ingroup Virtue	0.128
defen*	Harm Virtue	0.109
safe*	Harm Virtue	0.107
member	Ingroup Virtue	0.099
benefit*	Harm Virtue	0.099

*Notes.* This table reports the 15 most common MFD words and word stems used by all congresspeople after 2010. Column (2) reports the moral values associated with the MFD keywords and column (3) reports the average relative frequency the congresspeople used the keywords. Only non-stop words are considered when calculating relative frequencies. See Appendix G for a list of all MFD keywords.



### H.3 Changes in Word Use in U.S. Congress Over Time

Below, I present a list of the words with the largest increase or decrease in usage between the 5-year period around 1950 and the 5-year period around 2010. The change in frequency is computed as

$$\Delta = 10,000 * \left[ \frac{\text{Frequency in 2010}}{\# \text{ non-stop words in 2010}} - \frac{\text{Frequency in 1950}}{\# \text{ non-stop words in 1950}} \right]$$

I list words with  $|\Delta| \geq 1$ .

#### ***universalist words***

care +22.3  
balance\* +9.7  
protect\* +8.5  
safe\* +7.0  
secur\* +5.2  
benefit\* +3.8  
violen\* +2.5  
rights +2.0  
abuse +1.8  
hurt +1.6  
justice +1.5  
harm\* +1.4  
killed +1.1

war -13.5  
defen\* -6.3  
justif\* -1.9  
fair -1.4  
reasonable -1.2  
sympath\* -1.1

#### ***Communal words***

communit\* +11.8  
families +10.9  
leader +8.8  
family +5.8

together +5.3  
honor +4.5  
terroris\* +4.2  
rank +2.8  
class +2.6  
homeland\* +1.8  
serve +1.7  
individual\* +1.3  
father +1.1

unite -19.4  
communis\* -13.2  
foreign -6.7  
order -6.5  
position -5.1  
submi\* -4.9  
respect -4.7  
control -4.3  
permit -3.8  
joint -3.8  
law -2.4  
member -2.1  
duty -1.8  
loyal\* -1.3  
duti\* -1.2

# I Description of Main Variables

## I.1 Supply Side Analysis

**Background on U.S. Congress Analyses.** The data can be accessed online at [https://data.stanford.edu/congress\\_text](https://data.stanford.edu/congress_text). In this paper, I use the processed speech text, date of speech, and the linked congressperson characteristics (i.e., speaker name, gender, congressional chamber, congressional state/district, and party affiliation). When both the bound edition and the daily edition are available for a congressional session, I follow Gentzkow et al. (2019) and use the bound edition in the main analysis. Gentzkow et al. (2019) show that results for these sessions are robust to which edition they use. See Amer (1993) and Gentzkow et al. (2019) for further discussion. To prepare the speech text for analysis, I take similar steps as described in Gentzkow et al. (2019). Specifically, for each speech, I (i) separate the text into individual words using all non-alphanumeric characters as delimiters; and (ii) delete all stop words – i.e., frequent words that convey very little content; and (iii) convert the words to lowercase. For congresspersons who delivered more than one speech on a given day, I collapsed the word counts to the day-level.

**Relative frequency of universalist versus communal moral terminology.** See Section 4 in the main text.

**Flesch reading ease score.** A commonly used measure to assess the readability of a document. The formula for the Flesch reading ease score (Flesch, 1948) of a document is

$$\text{FRES} = 206.835 - 1.015 \left( \frac{\text{total words}}{\text{total sentences}} \right) - 84.6 \left( \frac{\text{total syllables}}{\text{total words}} \right).$$

Therefore, a higher score means that a document is easier to read.

**Document type.** Whether a document was classified as a campaign speech, official statement, debate, or fundraising speech by the APP.

## I.2 Demand Side Analysis

### I.2.1 *Research Now* Survey

**Relative importance of universalist versus communal moral values.** Constructed from MFQ moral foundations as: care / harm + fairness / reciprocity minus in-group / loyalty minus authority / respect.

**Difference in propensity to vote for Trump and average Republican.** First, generate a binary variable for Trump, Romney, and McCain each. Variable assumes a value of 0 if people voted for another candidate and 100 if voted for the respective candidate. Then compute the difference between the Trump variable and the average of the other two variables.

**Difference in propensity to vote for Trump and Romney / McCain.** Generate same binary variables as described above. Compute difference between Trump and Romney / McCain.

**Difference in propensity to vote for Trump and average Republican (including non-voters).** First, generate a three-step variable for Trump, Romney, and McCain each. Variable assumes a value of 0 if people voted for another candidate, 50 if they did not vote at all, and 100 if voted for the respective candidate. Then compute the difference between the Trump variable and the average of the other two variables.

**Difference in turnout between 2016 and earlier elections.** For each election year, generate a binary indicator that equals 100 if the respondents voted and 0 otherwise. Then compute the difference between 2016 and the average of 2008 and 2012.

**Evaluation of Trump: Loyalty vs. economy.** Based on responses to the following survey question: "Please use the scale below to indicate which factor is more relevant for your evaluation of President Trump.

-5 means that A is much more important than B. 5 means that B is much more important than A. 0 means that A and B are equally important, or equally unimportant. You can use the intermediate values to state your opinion in a nuanced way.

A: Mr. Trump's economic and social policies, such as his impact on the unemployment rate. B: The extent to which Mr. Trump shows loyalty to his supporters and does not betray my community."

**Δ [Local–global] Support taxation.** Based on responses to the following survey question: "Imagine that there will be a new tax levered that amounts to 5% on all income. Please assume that 100% of the money collected for this tax will be directly spent on increasing the quality of schooling for children. Please imagine that this new tax will be implemented no matter what. However, imagine that you have a say in HOW it gets implemented because there are two options.

Please use the scale below to express your opinion. -5 means that you like A much more than B. 5 means that you like B much more than A. 0 means that A and B are

equally attractive to you, or equally unattractive. You can use the intermediate values to state your opinion in a nuanced way.

Option A: The taxes are collected by the local community and the money goes to the local schools in your school district. Option B: The taxes are collected by the federal government and the money is distributed equally to all schools in the country.”

**Δ [Local–global] Donations.** Based on responses to the following survey question: “Over the past 12 months, how much money have you donated to each of the following entities:

1. Local schools, local libraries, and city-sponsored functions
2. Local communities (e.g., firefighters, local church) and local cultural groups (e.g., art museums)
3. Non-profit organizations that work towards a better life for people in America in general (e.g., Feeding America)
4. Non-profit organizations that work towards a better life for people around the world (e.g., United Way Worldwide)”

Then, generate variable of interest as  $q1. + q2. - q3. - q4.$

**Δ [Local–global] Volunteering.** Based on responses to the following survey question: “Over the past month, how many hours have you volunteered for each of the following entities:

1. Local schools, local libraries, and city-sponsored functions
2. Local communities (e.g., firefighters, local church) and local cultural groups (e.g., art museums)
3. Non-profit organizations that work towards a better life for people in America in general (e.g., Feeding America)
4. Non-profit organizations that work towards a better life for people around the world (e.g., United Way Worldwide)”

Then, generate variable of interest as  $q1. + q2. - q3. - q4..$

**Money allocation task.** Based on responses to the following survey question: “Imagine that you had \$99 at your disposal that you have to split between United Way Worldwide (a non-profit organization that focuses on improving education, income and health around the world) and the local firefighters in your town. How would you allocate the money between these two? For both options, 100% of your donation will support the cause and not go towards administrative costs.

1. Amount to United Way Worldwide:
2. Amount to local firefighters:”

**Altruism.** This is an experimentally validated survey measure of altruism that is constructed as in [Falk et al. \(2018\)](#). Respondents were asked the following two survey questions:

- Imagine the following situation: Today you unexpectedly received \$1,000. How much of this amount would you donate to a good cause?
- On a scale from 0 to 10, how willing are you to give to good causes without expecting anything in return?

The altruism summary index is computed as average of the z-score of responses to these two questions.

**Political liberalism.** This variable is constructed from 13 survey questions that are taken from the 2016 pre-election survey wave of the Cooperative Congressional Election Study. These questions elicit respondents’ attitudes on four categories: gun control, environment policies, crime policies, and budget priorities.

1. On the issue of gun regulation, do you support or oppose each of the following proposals?
  - Background checks for all sales, including at gun shows and over the Internet
  - Prohibit state and local governments from publishing the names and addresses of all gun owners
  - Ban assault rifles
  - Make it easier for people to obtain concealed-carry permit
2. Do you support or oppose each of the following proposals?

- Give the Environmental Protection Agency power to regulate carbon dioxide emissions
- Raise required fuel efficiency for the average automobile from 25 mpg to 35 mpg
- Require a minimum amount of renewable fuels (wind, solar, and hydroelectric) in the generation of electricity even if electricity prices increase somewhat
- Strengthen enforcement of the Clean Air Act and Clean Water Act even if it costs US jobs

3. Do you support or oppose each of the following proposals?

- Eliminate mandatory minimum sentences for non-violent drug offenders
- Require police officers to wear body cameras that record all of their activities while on duty
- Increase the number of police on the street by 10 percent, even if it means fewer funds for other public services
- Increase prison sentences for felons who have already committed two or more serious or violent crimes

4. The federal budget deficit is approximately \$1 trillion this year. If the Congress were to balance the budget it would have to consider cutting defense spending, cutting domestic spending (such as Medicare and Social Security), or raising taxes to cover the deficit. Please rank the options below from what you would most prefer that Congress do to what you would least prefer they do (1 means most preferred, 3 least preferred).

- Cut Defense Spending
- Cut Domestic Spending
- Raise Taxes

For each of these questions, I code “support” as 1, “oppose” as 0 and “Prefer not to answer” as 0.5.<sup>2</sup> For each of the broad categories, I then construct a summary statistic by computing the first principal component of all items in the respective category. I then compute a summary statistic of political conservatism as first principal component of these four category-specific principal components.

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<sup>2</sup>I have verified that almost identical results hold when I drop observations with “Prefer not to answer.”

**Income bracket.** Ten-step variable: <10k, 10k-15k, 15k-25k, 25k-35k, 35k-50k, 50k-75k, 75k-100k, 100k-150k, 150k-200k, >200k.

**Educational attainment.** Six-step variable: incomplete high school, high school diploma, some college but no degree, Associate's degree, Bachelor's degree, graduate or professional degree.

**Race.** White, African-American, Hispanic, Asian, American Indian, Other.

**City size.** 10-step variable: > 1 million, 200k-1m, 50k-200k, 20k-50k and close to metro, 20k-50k and not close to metro, 3k-20k and close to metro, 3k-30k and not close to metro, 500-3k and close to metro, 500-3k and not close to metro, <500.

**Population density.** Computed as average of the z-scores of the city size variable reported above as well as ZIP code level log population density.

**Religiosity.** 11-step variable: "On a scale from 0 (not at all) to 10 (very much), how religious are you?"

**Religious denomination.** Catholic, Protestant, Other Christian, Muslim, Jewish, Hindu, Buddhist, Agnostic, Atheist, Other.

**Overall strength of moral concerns.** Sum of harm / care, fairness / reciprocity, in-group / loyalty, and authority / respect.

**General trust.** 3-step variable: "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?"

1. Most people can be trusted
2. Don't know
3. Can't be too careful"

**Personal job prospects.** "On a scale from 0 (very bad) to 5 (very good), what do you think your personal job prospects look like?"



**Occupation fixed effects.** Business owner; clerical or office worker; construction or mining; fishing, farming and forestry; manager, executive or public official; manufacturing; professional worker: lawyer, doctor etc.; sales worker; service worker; transportation: driver etc.; other.

### I.2.2 County-Level Analysis

**Relative importance of universalist versus communal moral values.** Constructed from the MFQ dataset from [www.yourmorals.org](http://www.yourmorals.org). First, compute an individual-level index as described in the main text. Second, aggregate to the county level by weighting respondents by  $1/n$ , where  $n$  is the number of counties that intersects with the respondent's ZIP code. Third, exclude all counties with less than five respondents. Fourth, apply the shrinkage procedure described in the main text.

**Vote shares in presidential elections and primaries.** Source: Dave Leip's Atlas of US Presidential Elections, see <http://uselectionatlas.org/>.

**Turnout.** Computed as total number of votes divided by the population aged 18+ in a given county. Population aged 18+ is linearly interpolated from the American Community Surveys Data, which provides population estimates for 15+ and 20+.

**Unemployment rate, median household income.** Source: American Community Surveys, average 2011–2015.

**Geographic covariates.** Computed as average within 2010 county boundaries.

**Population density.** Source: American Community Surveys, average 2011–2015.

**Fraction religious.** Share of religious adherents. Source: [Chetty and Hendren \(2016\)](#).

**Racism index.** This index is based on Google Trends data that are first computed at the level of 204 Designated Market Areas (DMAs) and then assigned to each county within a DMA. The index reflects how often people in a given DMA google “nigger” relative to overall search volume. Source: [Stephens-Davidowitz \(2014\)](#).

**Fraction high school graduate or less.** Fraction of the population who are at most high school graduates, but never attended some college. Taken from American Community Surveys, average 2011–2015.

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