Online Appendix:

Measuring Morality in Political Attitude Expression

Appendix A Moral Foundations Dictionary

Sources:
Graham et al. (2009), as well as http://www.moralfoundations.org/

Note:
Words with (*) indicate that the word stem rather than the exact word was matched in the open-ended survey responses.

Care:
safe*, peace*, compassion*, empath*, sympath*, care, caring, protect*, shield, shelter, amity, secur*, benefit*, defen*, guard*, preserve, 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:
fair, fairly, fairness, fair*, fairmind*, fairplay, equal*, justice, justness, justifi*, reciproc*, impartial*, egalitar*, rights, equity, evenness, equivalent, unbias*, tolerant, equable, balance*, homologous, unprejudice*, reasonable, constant, honest*, unfair*, unequal*, bias*, unjust*, injust*, bigot*, discriminat*, disproportion*, inequitable, prejud*, dishonest, unscrupulous, dissociate, preference, favoritism, segregat*, exclusion, exclud*

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

Authority:
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, 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

Sanctity:
piety, pious, purity, pure*, clean*, steril*, sacred*, chast*, holy, holiness, saint*, wholesome*, celiba*, abstention, virgin, virgins, virginity, virginal, austerity, integrity, modesty, abstinen*, abstemiousness, upright, limpid, unadulterated, maiden, virtuous, refined, intemperate, decen*, immaculate, innocent, pristine, humble, disgust*, deprav*, disease*, unclean*, contagio*, indecen*, sin, sinful*, sinner*, sins, sinned, sinning, slut*, whore, dirt*, impiety, impious, profan*, gross, repuls*, sick*, promiscu*, lewd*, adulter*, debauche*, defile*, tramp, prostitut*, unchaste, wanton, profligate, filth*, trashy, obscen*, lax, taint*, stain*, tarnish*, debase*, desecrat*, wicked*, blemish, exploitat*, pervert, wretched*

Appendix B Data, Variables, and Model Specification

The 2012 American National Election Study (ANES) contains two representative cross-sectional samples. One sample was conducted by computer assisted face-to-face interviews while the other sample is based on an internet panel group. Both samples are pooled in the analyses. While each consisted of a pre-election and a post-election wave, most items described below are drawn from the pre-election wave.[1]

Table B.1: Missing open-ended responses

	N	Percent
Spanish Interview	228	3.86
No Responses	422	7.14

Respondents were not included in the analysis if they failed to provide an answer to all open-ended items, or if the interview language was Spanish. Table B.1 provides an overview of the number of omitted cases. About 4% of the interviews were held in Spanish and about 7% of the respondents did not provide any open-ended response. Furthermore, Figure B.1 displays histograms of the length of the respondents' answers to all open-ended items. On average, the collection of all open-ended responses consists of about 75 words for each individual.

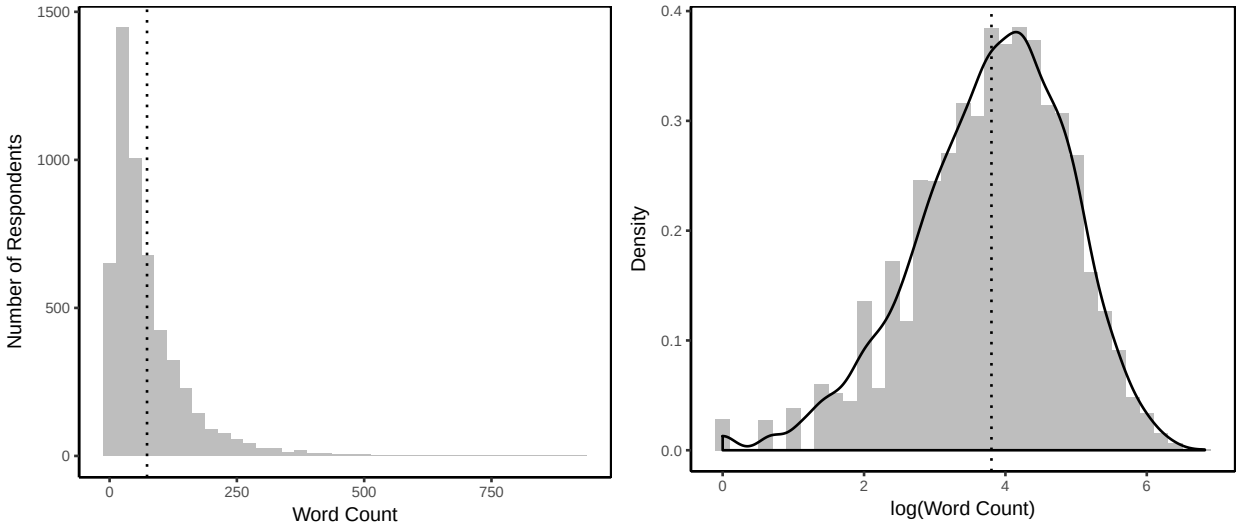

Figure B.1: Histograms displaying the distribution of individual response lengths in number of words for each respective item category. Dotted lines indicate the average response length.

The key independent variable used to predict the emphasis on each of the moral foundations, is *political ideology*. Respondents were asked to place themselves on a seven-point scale ranging from extremely liberal to extremely conservative, which was transformed into dichotomous indicators for respondents who identified as liberals, conservatives, or moderates. Additional control variables included in the analyses are *church attendance*, *education* (college degree), *age*, *sex*, *race* (African American), survey mode (online vs. offline), as well as the overall length of the individual responses in the open-ended questions (*measured as logged number of words*). Furthermore, the 2012 ANES included the *Wordsum* vocabulary test as a measure of literacy and verbal skill. It consists of a series of items asking respondents to choose a term that is closest to a target word. The Wordsum score consists of an additive index of correct responses in ten individual trials. The inclusion of the length of

[1]The open-ended items were included only in the pre-election wave. Accordingly, wherever possible, the set of explanatory variables was limited to the pre-election wave.

individual responses and the Wordsum score as control variables should account for potential confounding factors such as general effects of increased political literacy on the complexity of open-ended responses.

In order to examine the relevance and consequences of moral reasoning measured through open-ended responses, the MFT scores for each moral foundation are used as independent variables to predict political outcomes. The dependent variables considered here are *candidate* and *party evaluations* (measured as the respective feeling thermometer differentials), as well as *voting behavior* (measured as a dichotomous indicator of vote choice for the Democratic rather than the Republican Presidential candidate reported in the post-election wave). In addition to the controls discussed previously, these analyses include measures of *party identification*, which were recoded similarly to ideology.

The last set of analyses investigates whether the expression of moral considerations in political judgment is conditional on knowledge and exposure to political discourse. The factors that are expected to be related to references to moral foundations include *political knowledge*, which was measured as the sum of correct answers to factual knowledge questions. The analyses also investigate the effect of *political media exposure* and the frequency of *political discussions* with friends and family members. Here, the analyses do not only examine the influence on individual foundations, but also consider whether these factors influence *general* moral reasoning. This latter variable is measured as the sum of individual MFT scores across all dimensions (rescaled to unit variance after summation), which can be interpreted as a aggregate measure of how much respondents emphasize any moral consideration in their responses. Figure B.2 in the appendix provides histograms of all independent variables included in different stages of the analyses. With the exception of age, all independent variables that were treated as continuous were rescaled to range from 0 to 1.

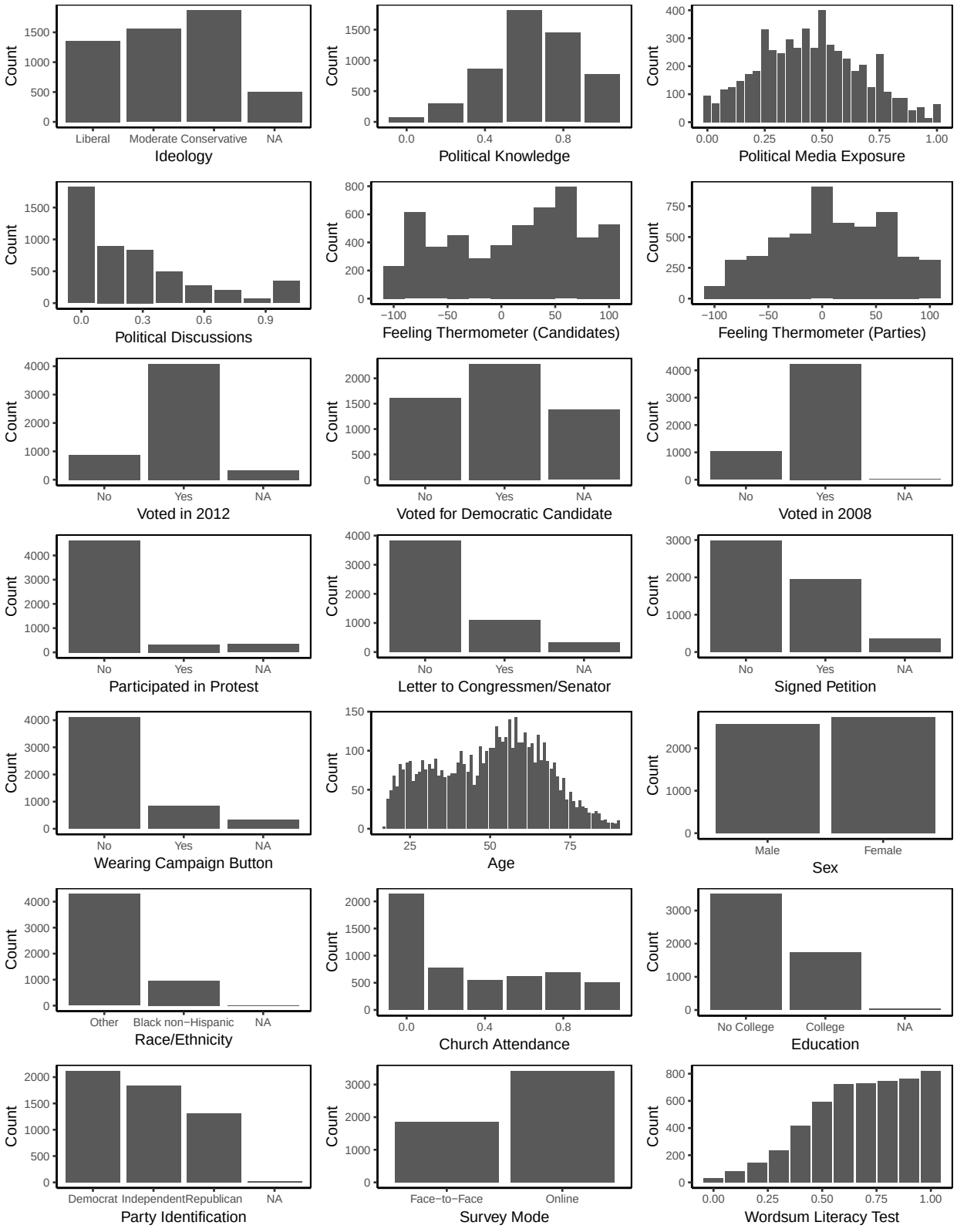

Figure B.2: Histograms for variables included in analyses.

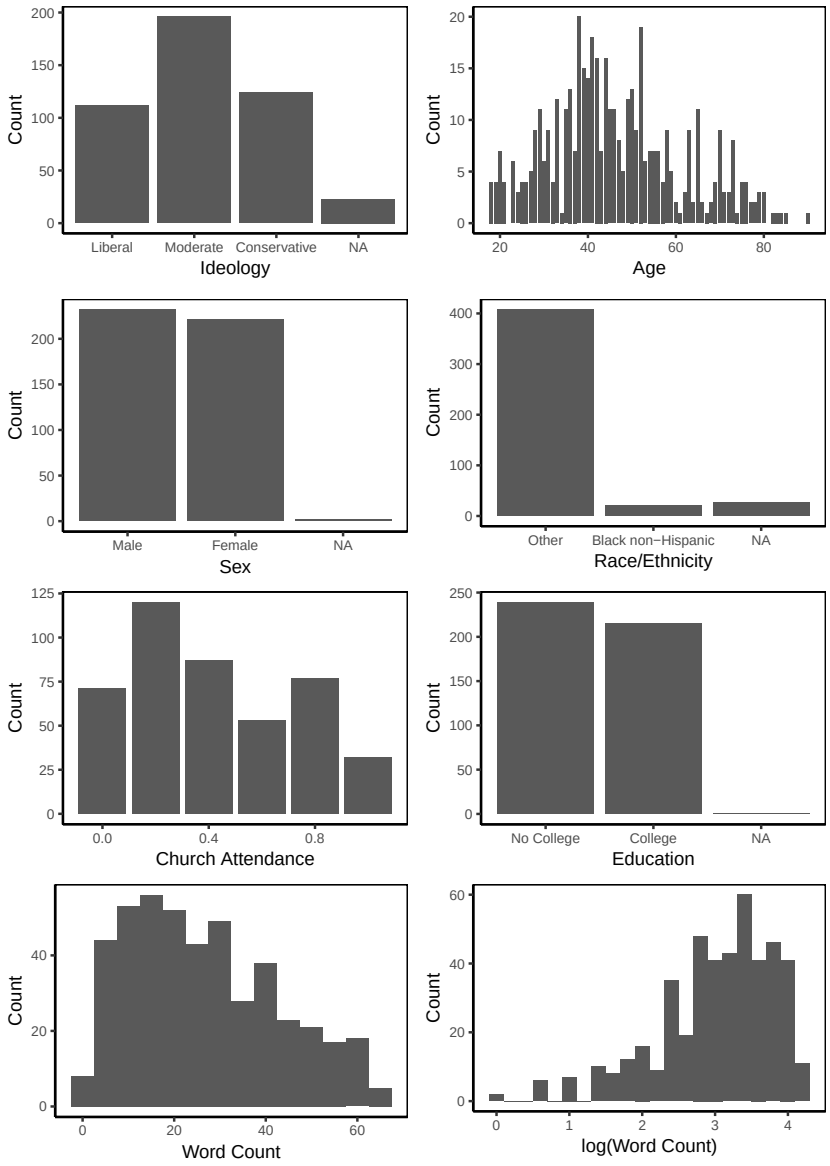

Figure B.3: Histograms for variables included in replication survey.

Appendix C Additional Descriptive Information

I Proportion of MFT responses

Figure C.1 presents a first descriptive overview of moral reasoning in open-ended responses. The figure displays the proportion of respondents who mentioned words that were included in the five different moral foundations dictionaries as well as their 95% confidence intervals.[2] Since responses for each individual represent their likes and dislikes across all eight open-ended items, each proportion indicates the percentage of individuals who mentioned a signal word belonging to the respective moral foundation in any of his or her open-ended responses evaluating the parties or candidates.

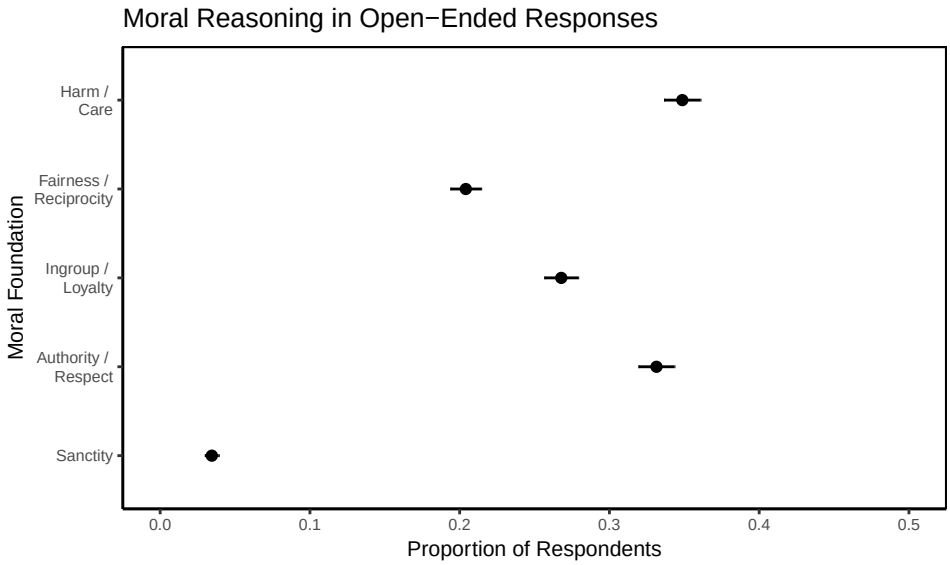

Figure C.1: Proportion of respondents mentioning each of the moral foundations in any of their open-ended responses, along with 95% confidence intervals. The first two foundations are often labeled individualizing foundations, which have been shown to be more prevalent among liberals, while the remaining ones are described as binding foundations, which are more prevalent among conservatives.

The moral foundation most frequently mentioned is harm/care: About 42% of the respondents mentioned at least one word included in respective dictionary. The second most frequently mentioned moral foundation is authority with about 37%. The proportion of respondents emphasizing loyalty or fairness is slightly lower with about 29% and 23%, respectively. Sanctity, on the other hand, was almost never mentioned by any of the respondents. This finding is surprising, since other studies found the foundation to be an important predictor of divisive political attitudes (Koleva et al., 2012). This result suggests that the terms contained in the sanctity dictionary might be too uncommon in the context of politics and therefore not relevant for attitude expression. Due to the very rare mentioning of the sanctity dimension, the subsequent analyses will concentrate on the remaining four moral foundations.[3] Subsequent analyses focusing on the sanctity dimension in open-ended survey responses might necessitate a revision of the moral foundation dictionary.

[2]Note that the proportions are based on the subset of the sample that provided a response to at least one of the open-ended items, and for which the interview was held in English.

[3]Unfortunately, this issue cannot not be properly addressed by relying on weighting scheme employed here. The weights can correct for some distortions due to individual ubiquitous terms in the dictionaries, but it cannot compensate for the fact that the sanctity dictionary as a whole contains mostly words that are never mentioned by respondents.

Overall, Figure C.1 shows that a substantial proportion of individuals evokes moral considerations when describing their political attitudes even when they are not explicitly asked about morality. However, we are ultimately interested in ideological differences in the emphasis of moral foundations in open-ended responses. As such, we now turn to a more in-depth analysis of the MFT scores as measures of moral reasoning.

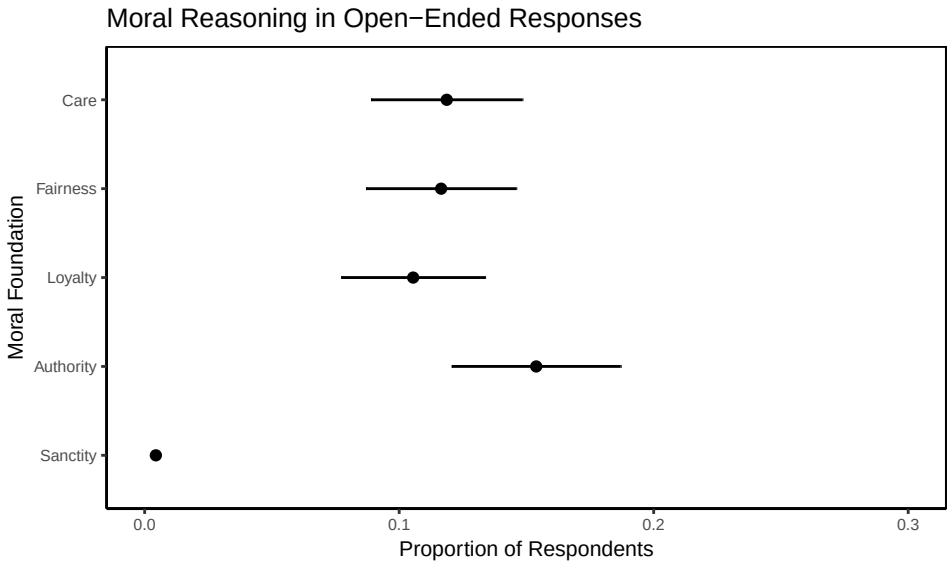

Figure C.2: Proportion of respondents mentioning each of the moral foundations in any of their open-ended responses, along with 95% confidence intervals in the replication dataset (RDD adult sample).

II Media content analyses

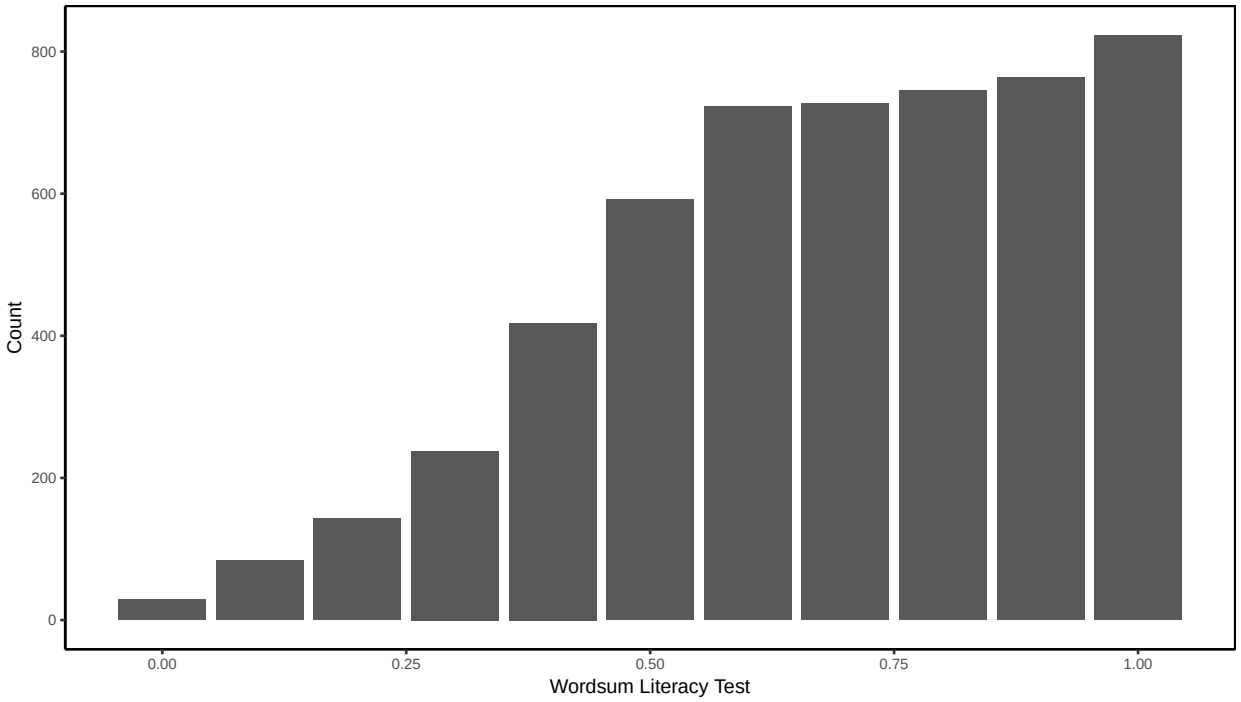

Figure C.3: MFT scores for media sources during 2012 U.S. Presidential campaign. Articles and scripts were selected if they mentioned either presidential candidate during the last month of the campaign (October). Contents were retrieved in full text from Lexis-Nexis (except for the Wall Street Journal, which only provided abstracts). Each media source was analyzed using the same procedure described for open-ended responses (weighted proportion of signal word occurrence for each foundation, c.f., equation [**??**]). Scores were median-centered and rescaled to unit variance. The figure also displays 95% confidence intervals, which are based on parametric bootstraps of the document feature matrix of the entire corpus (500 iterations).

Appendix D Additional Model Results and Robustness Checks

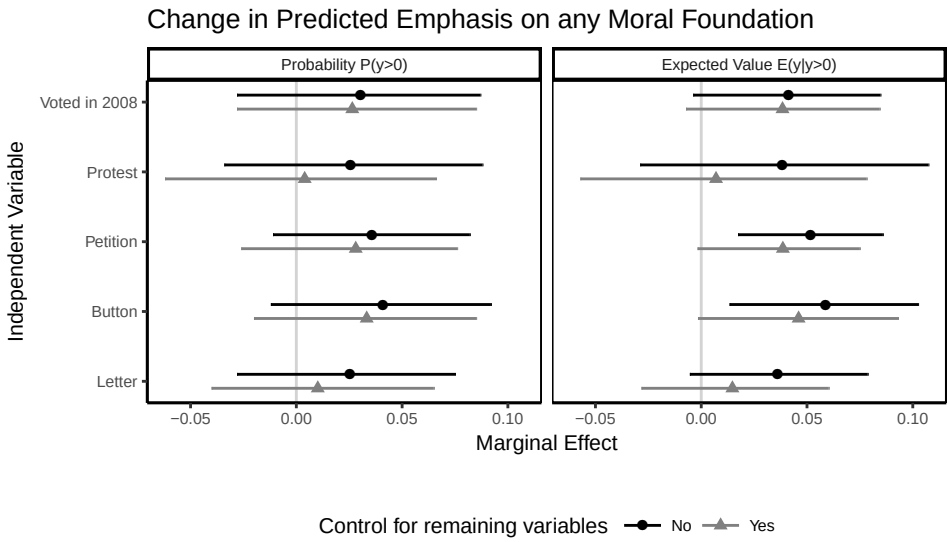

Figure D.1: Change in predicted overall reliance on moral foundations depending on previous turnout and non-conventional forms of participation (protest, petitions, campaign buttons, letter to congressmen/senator). The plot shows differences in predicted probabilities of mentioning any moral foundation (left panel) as well as in the summed MFT scores given that any foundation was mentioned (right panel), if a respondent engaged in the respective form of participation (vs. not) holding control variables constant at their respective means (along with 95% confidence intervals). Positive values indicate higher probability of mentioning, or stronger emphasis on moral foundations. Estimates are based on Tobit models and gray triangles indicate estimates while additionally controlling for the remaining variables presented in the figure. Full model results are displayed in the appendix, Table E.10.

Robustness Check

To this point, the analyses assume that the dictionary-based approach for open-ended responses captures the theoretical concept of interest—*moral* reasoning. Yet, the terms in the dictionary may be recovering other (i.e., non-moral) differences in word choice between liberals and conservatives when discussing their attitudes towards parties and candidates in the 2012 U.S. Presidential election. For example, a prominent issue in the election was the Affordable Care Act, which might increase the likelihood of Democrats mentioning the term "care" and thereby increasing the emphasis on the care foundation irrespective of underlying moral considerations. In that case, observed differences between liberals and conservatives would be an artifact of the context in which the survey took place.

To address this concern, I replicated the analysis from Figure **??** using data collected in a different context (e.g., non-election year). The survey was conducted via telephone with 594 adults aged 18 or older between early January, 2001 and July, 2003. The telephone numbers were a random-digit-dial (RDD) sample drawn from residents within a 25 mile radius of a large northeastern state university. The open-ended items asked respondents to describe liberals and conservatives as *social groups* as well as their respective *beliefs* in general. The coding and analyses are equivalent to those for Figure **??**, although the survey did not contain the Wordsum scores included in the main analyses.

Figure D.3 shows patterns that are consistent with previous results. Liberals are more likely to emphasize the foundations of care and fairness. The result for the loyalty dimension, however, do not reach conventional levels of statistical significance. Additional analyses reveal that the ideological differences in moral reasoning are mostly due to the fact that respondents who identify as liberals emphasize the foundations of care and fairness more strongly than conservatives when describing their ingroup (i.e., other liberals and their beliefs), while conservatives emphasize the loyalty foundation more strongly than liberals when describing their ingroup (results available upon request). The fact that the same basic ideological pattern can be recovered in a survey that was conducted in a different political context (non-election period, Republican administration), employed a different survey mode (phone interview), and relied on a different set of open-ended survey questions (asking about liberals and conservatives and their respective beliefs), provides additional evidence that the MFT dictionary recovers basic moral considerations in political attitude expression.

A related concern might be the question whether the content analysis of media sources using the dictionary is able to capture overall levels of moralization in news reporting. Luckily, a study reported in Feinberg and Willer (2013) included manual coding a selection of newspaper articles on environmental issues to capture whether they use rhetoric grounded in each of the moral domains. Their coding therefore focuses on the same foundations without utilizing the dictionary. I computed a general moralization variable by summing the scores used in Feinberg and Willer (2013) and compared them to the MFT scores based on the procedures outlined above.[4]

Figure D.4 presents the correlation of general moralization in each article based on the manual coding in Feinberg and Willer (2013) compared to the dictionary method used in the analyses presented here. While the correlation is far from being perfect, the weighted dictionary method clearly captures some of the same variance as manual assessments of the emphasis on moral foundations.

I Sample Response

Table D.1 additionally provides a sample of average-length responses that scored high on each of the moral foundations to illustrate how responses were processed.

Table D.1: Sample of open-ended responses in the 2012 American National Election Study. Responses were selected if their length was within 10 words of average responses (~ 75 words) and if they scored high on one of the moral foundations (see first column). The second and third column display the item category and the raw response. The last column displays the processed response highlighting all signal words for the respective foundation.

Foundation	**Variable**	Raw Response	Processed Response
Care	Obama (like)	supports ending war, supports affordable health care for all, supports the preservation of medicare and social security, looking into energy conservation to preserve our planet for future generations, initiatives to promote education and job growth and much more.	supports ending *war* supports affordable health *care* for all supports the preservation of medicare and social *secur* looking into energy conservation to *preserve* our planet for future generations initiatives to promote education and job growth and much more imposing a fine if
	Obama (dislike)	imposing a fine if someone does not get a health care plan	someone does not get a health *care* plan he supports a strong military
	Romney (like)	he supports a strong military	anti same sex marriage anti women s choice for abortion not supportive of
	Romney (dislike)	anti same sex marriage, anti women's choice for abortion, not supportive of health care reform act, not sensitive to the needs of the very poor and immigrants	health *care* reform act not sensitive to the needs of the very poor and immigra

[4] I am indebted to the authors for providing the data.

Continued on next page

Table D.1 – continued from previous page

Foundation	Variable	Raw	Processed
	Dems (like)	-1 Inapplicable	
	Dems (dislike)	-1 Inapplicable	
	Reps (like)	-1 Inapplicable	
	Reps (dislike)	-1 Inapplicable	
Fairness	Obama (like)	people rights, economy, taxes for working people, understanding of international problems	people *rights* economy taxes for working people understanding of international problems abortion *rights* women *rights* tax breaks for the rich military hawk rude and condescending to president obama economy women s *rights* gay *rights* health care tax plan for working class international strategy sometimes they do not fight hard enough against the republicans racist elitist trying to enrich the rich even more by hurt working people international relations health care women *rights* gay *rights*
	Obama (dislike)	-1 Inapplicable	
	Romney (like)	-1 Inapplicable	
	Romney (dislike)	abortion rights, women rights, tax breaks for the rich, military hawk, rude and condescending to President Obama	
	Dems (like)	economy, women's rights, gay rights, health care, tax plan for working class, international strategy.	
	Dems (dislike)	sometimes they do not fight hard enough against the republicans.	
	Reps (like)	-1 Inapplicable	
	Reps (dislike)	racist, elitist, trying to enrich the rich even more by hurting working people, international relations, health care, women rights, gay rights	
Loyalty	Obama (like)		he dozen t do enough about keeping us safe from our *foreign enem* he s too iffy about isle too favorable about homosexuality abortion like his close *family* ties good ideas about keeping us safe from *foreign* countries strong on israel they support same sex marriage they won t bend i like the people that are their leader i vie nevier been disappointed in their positions on most things
	Obama (dislike)	He doesn't do enough about keeping us safe from our foreign enemies; he's too iffy about Isael; too favorable about homosexuallity, abortion.	
	Romney (like)	Like his close family ties; good ideas about keeping us safe from foreign countries; strong on Israel;	
	Romney (dislike)		
	Dems (like)		
	Dems (dislike)	They support same sex marriage; they won't bend	
	Reps (like)	I like the people that are their leaders; I've never been disappointed in their positions on most things.	
	Reps (dislike)		

Continued on next page

Table D.1 – continued from previous page

Foundation	Variable	Raw	Processed
Authority	Obama (like)	competent, intelligent, but not strong in protecting US border, seriously dealing with illegal immigrant not rewarding for breaking the law. also, health care bill have me a little concern	competent intelligent but not strong in protect us border seriously dealing with *illegal* immigra not rewarding for breaking the *law* also health care bill have me a little concern lack of strong laws dealing with *illegal* aliens and us borders strong and firm dealing with foreign countries ie middle east china mexico the health care not too comfortable with what i am hearing about it
	Obama (dislike)	lack of strong laws dealing with illegal aliens and US borders, strong and firm dealing with foreign countries ie middle east, china, mexico; the health care–not too comfortable with what I am hearing about it.	
	Romney (like)	-1 Inapplicable	
	Romney (dislike)	-1 Inapplicable	
	Dems (like)	-1 Inapplicable	
	Dems (dislike)	-1 Inapplicable	
	Reps (like)	-1 Inapplicable	
	Reps (dislike)	-1 Inapplicable	

II MFT and Feeling Thermometers

As a first step, we examine the relationship of moral reasoning and attitudes towards political parties and candidates. Figure D.6 presents OLS estimates where feeling thermometer differentials between the Republican and the Democratic party (left panel) and between both Presidential candidates (right panel) are regressed on MFT scores for all moral foundations (including the control variables discussed above). Positive values indicate more favorable evaluations for the Democratic candidate or party and negative values indicate more favorable evaluations of the Republican candidate or party. The patterns are largely consistent with the previous results on ideological differences. Individuals who emphasize considerations related to care and fairness evaluate the Democratic party/candidate on average about 3 points higher than the Republican party/candidate (on a 100 point scale). On the other hand, if individuals emphasized the loyalty dimension, they reported stronger preferences for the Republican party/candidate. Most of these effects are robust after controlling for individual party identification. Thus, in both analyses in Figure D.6, we observe sizable and significant effects for the influence of moral reasoning. Interestingly, mentioning terms that belong to the authority dimension appears to increase favorability towards the democratic party and candidate, which contradicts MFT. However, the effect disappears once party identification is controlled for.

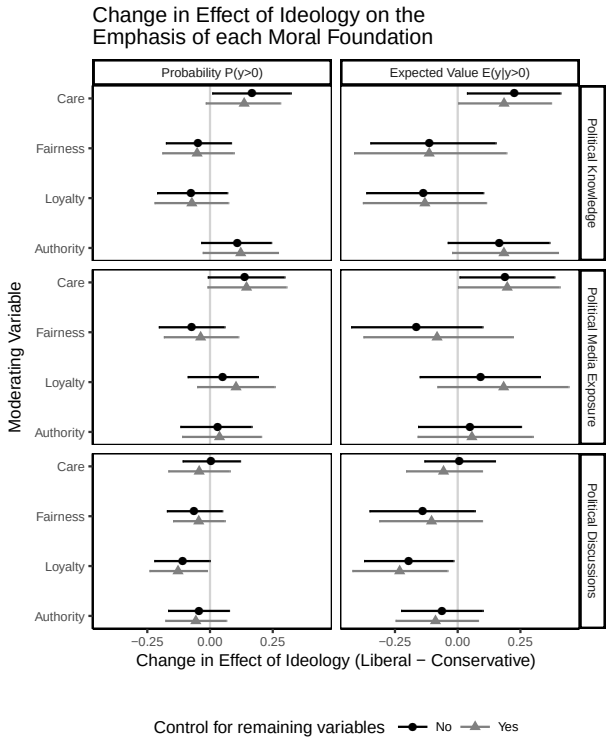

Figure D.2: Change in effect of ideology on emphasis of each moral foundation moderated by political knowledge, media exposure, and frequency of political discussions (difference-in-difference). The plot shows how the difference between liberals and conservatives in predicted probabilities to mention each moral foundation, as well as the respective MFT scores, change if each of the independent variables is increased from its minimum to its maximum value holding control variables constant at their respective means (along with 95% confidence intervals). Positive values indicate that liberals are more likely to mention a specific moral foundation if they score high on the moderating variable (knowledge, exposure, discussions, previous turnout, protest behavior), and vice versa. Estimates are based on individual Tobit models for each foundation and gray triangles indicate estimates while controlling for all remaining variables displayed in the figure. Full model results are displayed in Tables E.5, E.6, E.7, and E.11.

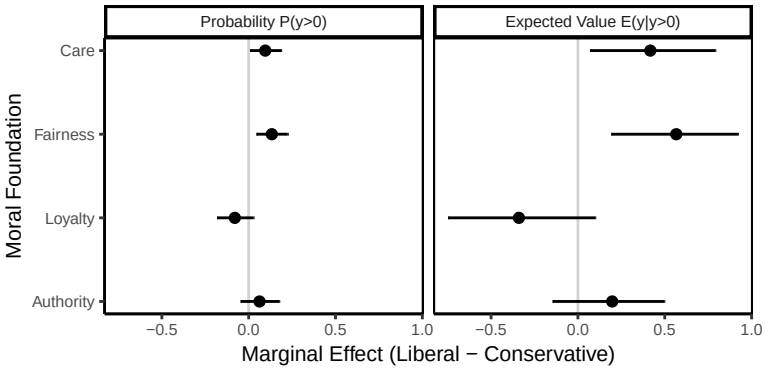

Figure D.3: Replication of main model (c.f., Figure **??**) using RDD adult sample. Figure displays difference between liberals and conservatives in the probability of mentioning each moral foundation (left panel), and in the MFT score given that the foundation was mentioned (right panel), holding control variables at their respective means (along with 95% confidence intervals). Control variables include church attendance, education, age, sex, race, and response length. Full model results are displayed in the appendix.

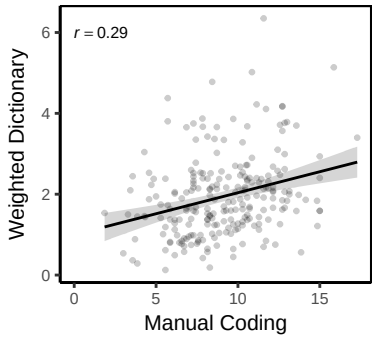

Figure D.4: Validity check based on the data from Feinberg and Willer (2013).

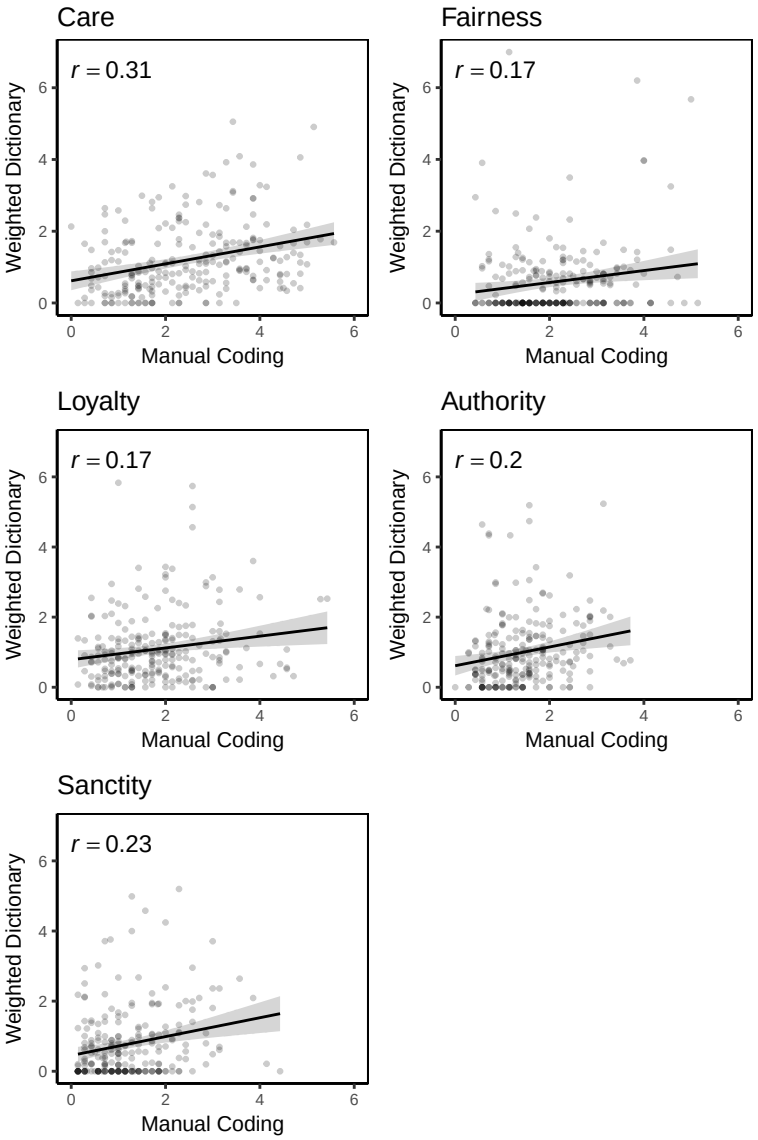

Figure D.5: Validity check for individual foundations based on the data from Feinberg and Willer (2013).

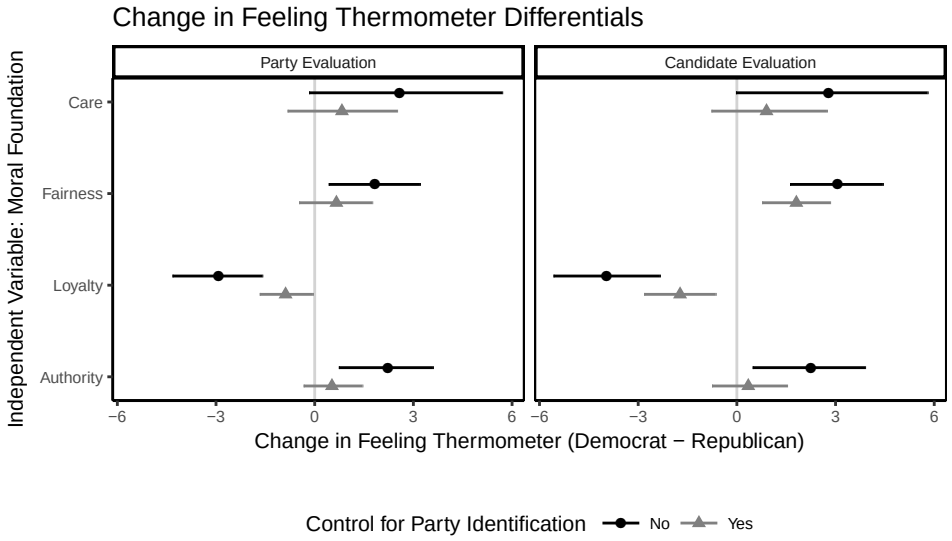

Figure D.6: Change in predicted feeling thermometer differential when MFT score is increased from its minimum (no overlap between dictionary and response) by one standard deviation, holding control variables constant at their respective means (along with 95% confidence intervals). Positive values indicate that respondents who emphasized the respective foundation evaluated the Democratic candidate/party more favorably than the Republican candidate/party, and vice versa. Estimates are based on a single OLS model (using robust standard errors) including MFT scores for each foundation and gray triangles indicate estimates while additionally controlling for party identification. The sanctity dimension was omitted due to its low general prevalence in individual attitude expressions. Additional control variables include church attendance, education, age, sex, race, survey mode, response length, and the Wordsum vocabulary score. Full model results are displayed in the appendix, Table E.2.

Appendix E Tables of Model Estimates

Ideological Differences in Moral Reasoning

Table E.1: Tobit models predicting MFT score for each foundation based on ideology. Positive coefficients indicate stronger emphasis on the respective foundation. Standard errors in parentheses. Estimates are used for Figure **??** in the main text.

Variable	Harm	Fairness	Ingroup	Authority
Ideology (Conservative)	-0.308	-0.697	0.367	-0.133
	(0.08)	(0.143)	(0.116)	(0.091)
Ideology (Moderate)	-0.135	-0.512	0.099	-0.060
	(0.081)	(0.146)	(0.121)	(0.093)
Church Attendance	-0.063	0.110	0.247	-0.123
	(0.092)	(0.167)	(0.132)	(0.105)
Education (College Degree)	-0.093	0.236	0.308	0.106
	(0.07)	(0.125)	(0.099)	(0.079)
Age	0.002	0.001	-0.007	0.003
	(0.002)	(0.004)	(0.003)	(0.002)
Sex (Female)	0.134	0.078	-0.244	-0.094
	(0.063)	(0.114)	(0.091)	(0.072)
Race (African American)	0.045	-0.125	-0.216	0.339
	(0.091)	(0.166)	(0.135)	(0.101)
Word Count (log)	0.363	0.527	0.773	0.584
	(0.033)	(0.061)	(0.051)	(0.039)
Wordsum Score	0.561	0.660	0.603	0.325
	(0.166)	(0.302)	(0.242)	(0.188)
Survey Mode (Online)	-0.039	0.205	0.149	0.301
	(0.076)	(0.138)	(0.11)	(0.087)
Intercept	-2.503	-4.742	-4.860	-3.619
	(0.193)	(0.363)	(0.297)	(0.227)
log(Sigma)	0.553	1.025	0.869	0.685
	(0.021)	(0.027)	(0.023)	(0.02)
N	4684	4684	4684	4684
Log-Likelihood	-4923	-3961	-4568	-5045

Table E.2: OLS models predicting feeling thermometer differentials based on MFT score for each foundation. Positive coefficients indicate more favorable evaluation of Democratic candidate/party than the Republican candidate/party, and vice versa. Standard errors in parentheses. Estimates are used for Figure D.6 in the main text.

Variable	Party (1)	Party (2)	Cand. (1)	Cand. (2)
Harm	2.566	0.787	2.802	0.908
	(0.715)	(0.5)	(0.855)	(0.642)
Fairness	1.827	0.690	3.089	1.791
	(0.623)	(0.435)	(0.747)	(0.56)
Ingroup	-2.923	-0.903	-4.013	-1.768
	(0.646)	(0.452)	(0.777)	(0.583)
Authority	2.225	0.506	2.226	0.349
	(0.669)	(0.467)	(0.795)	(0.596)
PID (Democrat)		44.601		47.206
		(1.074)		(1.375)
PID (Republican)		-44.706		-52.273
		(1.189)		(1.527)
Church Attendance	-27.655	-11.449	-35.880	-17.638
	(1.82)	(1.296)	(2.18)	(1.666)
Education (College Degree)	0.311	1.311	1.361	2.525
	(1.464)	(1.023)	(1.756)	(1.317)
Age	-0.109	-0.119	-0.307	-0.316
	(0.039)	(0.028)	(0.047)	(0.035)
Sex (Female)	7.474	2.938	9.279	4.383
	(1.279)	(0.897)	(1.532)	(1.152)
Race (African American)	52.930	20.982	63.101	28.209
	(1.739)	(1.294)	(2.08)	(1.659)
Word Count (log)	2.309	1.090	1.759	0.336
	(0.636)	(0.445)	(0.762)	(0.571)
Wordsum Score	-0.864	2.579	0.552	4.125
	(3.297)	(2.309)	(3.955)	(2.971)
Survey Mode (Online)	-5.830	-1.986	-8.685	-4.467
	(1.511)	(1.06)	(1.808)	(1.362)
Intercept	8.237	4.706	21.495	19.257
	(3.346)	(2.385)	(4.002)	(3.056)
N	5135	5123	5151	5140
R-squared (adj.)	0.211	0.616	0.224	0.565

Table E.3: Logit models predicting democratic vote choice based on MFT score for each foundation. Positive coefficients indicate higher likelihood to vote for the Democratic candidate than the Republican candidate. Standard errors in parentheses. Estimates are used for Figure **??** in the main text.

Variable	(1)	(2)
Harm	0.263	0.242
	(0.064)	(0.091)
Fairness	0.198	0.170
	(0.055)	(0.07)
Ingroup	-0.176	-0.072
	(0.042)	(0.05)
Authority	0.071	0.013
	(0.041)	(0.056)
PID (Democrat)		2.570
		(0.133)
PID (Republican)		-2.636
		(0.15)
Church Attendance	-1.637	-1.390
	(0.112)	(0.155)
Education (College Degree)	0.175	0.374
	(0.084)	(0.117)
Age	-0.009	-0.016
	(0.002)	(0.003)
Sex (Female)	0.259	0.131
	(0.077)	(0.105)
Race (African American)	4.239	3.261
	(0.262)	(0.286)
Word Count (log)	0.108	0.049
	(0.039)	(0.053)
Wordsum Score	-0.038	0.070
	(0.206)	(0.282)
Survey Mode (Online)	-0.361	-0.382
	(0.094)	(0.128)
Intercept	0.537	0.855
	(0.217)	(0.294)
N	3827	3819
Log-Likelihood	-2023	-1192

Table E.4: Tobit models predicting overall reliance on moral foundations (sum of MFT scores) based on political knowledge, media exposure, and frequency of political discussions. Positive coefficients indicate stronger emphasis on any foundation. Standard errors in parentheses. Estimates are used for Figure **??** in the main text.

Variable	(1)	(2)	(3)	(4)
Political Knowledge	0.240			0.212
	(0.1)			(0.104)
Political Media Exposure		0.364		0.272
		(0.09)		(0.096)
Political Discussions			0.252	0.192
			(0.069)	(0.071)
Church Attendance	-0.023	-0.025	-0.009	-0.012
	(0.053)	(0.053)	(0.055)	(0.055)
Education (College Degree)	0.076	0.074	0.089	0.064
	(0.043)	(0.043)	(0.044)	(0.045)
Age	0.000	-0.001	0.000	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Sex (Female)	0.008	0.007	0.008	0.030
	(0.038)	(0.038)	(0.039)	(0.04)
Race (African American)	0.114	0.094	0.087	0.094
	(0.051)	(0.051)	(0.053)	(0.053)
Word Count (log)	0.114	0.112	0.105	0.097
	(0.019)	(0.019)	(0.02)	(0.02)
Wordsum Score	0.292	0.359	0.335	0.276
	(0.102)	(0.097)	(0.102)	(0.106)
Survey Mode (Online)	0.053	0.053	0.105	0.069
	(0.045)	(0.044)	(0.046)	(0.047)
Intercept	-0.512	-0.495	-0.477	-0.562
	(0.101)	(0.099)	(0.103)	(0.107)
log(Sigma)	0.223	0.222	0.226	0.225
	(0.014)	(0.014)	(0.014)	(0.014)
N	5173	5164	4834	4827
Log-Likelihood	-7109	-7094	-6663	-6649

Table E.5: Tobit models predicting MFT score for each foundation based on political knowledge (mean-centered) and ideology. Positive coefficients indicate stronger emphasis on the respective foundation. Standard errors in parentheses. Estimates are used for Figure **??** in the main text.

Variable	Harm	Fairness	Ingroup	Authority
Political Knowledge	0.695	0.006	0.025	0.906
	(0.269)	(0.469)	(0.399)	(0.31)
Ideology (Conservative)	-0.255	-0.742	0.325	-0.093
	(0.083)	(0.151)	(0.121)	(0.095)
Knowledge * Conservative	-0.811	0.542	0.527	-0.612
	(0.348)	(0.625)	(0.502)	(0.398)
Ideology (Moderate)	-0.107	-0.512	0.088	-0.016
	(0.082)	(0.147)	(0.122)	(0.094)
Knowledge * Moderate	-0.366	-0.387	0.287	-1.065
	(0.36)	(0.645)	(0.539)	(0.413)
Church Attendance	-0.055	0.106	0.246	-0.120
	(0.092)	(0.167)	(0.132)	(0.105)
Education (College Degree)	-0.114	0.228	0.288	0.074
	(0.071)	(0.126)	(0.1)	(0.08)
Age	0.001	0.000	-0.008	0.002
	(0.002)	(0.004)	(0.003)	(0.002)
Sex (Female)	0.148	0.085	-0.220	-0.075
	(0.064)	(0.116)	(0.093)	(0.073)
Race (African American)	0.064	-0.124	-0.201	0.361
	(0.091)	(0.167)	(0.136)	(0.102)
Word Count (log)	0.353	0.526	0.766	0.573
	(0.033)	(0.061)	(0.051)	(0.039)
Wordsum Score	0.474	0.648	0.523	0.231
	(0.172)	(0.313)	(0.251)	(0.195)
Survey Mode (Online)	-0.059	0.196	0.130	0.273
	(0.076)	(0.139)	(0.111)	(0.088)
Intercept	-2.406	-4.710	-4.736	-3.516
	(0.203)	(0.38)	(0.31)	(0.237)
log(Sigma)	0.552	1.024	0.868	0.683
	(0.021)	(0.027)	(0.023)	(0.02)
N	4684	4684	4684	4684
Log-Likelihood	-4919	-3960	-4567	-5040

Table E.6: Tobit models predicting MFT score for each foundation based on political media exposure (mean-centered) and ideology. Positive coefficients indicate stronger emphasis on the respective foundation. Standard errors in parentheses. Estimates are used for Figure **??** in the main text.

Variable	Harm	Fairness	Ingroup	Authority
Political Media Exposure	0.557	0.113	0.678	0.773
	(0.262)	(0.46)	(0.394)	(0.302)
Ideology (Conservative)	-0.281	-0.731	0.379	-0.123
	(0.081)	(0.146)	(0.117)	(0.093)
Media * Conservative	-0.651	0.811	-0.385	-0.177
	(0.341)	(0.606)	(0.491)	(0.388)
Ideology (Moderate)	-0.122	-0.508	0.121	-0.034
	(0.081)	(0.146)	(0.122)	(0.093)
Media * Moderate	-0.383	0.041	-0.507	-0.691
	(0.35)	(0.629)	(0.525)	(0.402)
Church Attendance	-0.066	0.113	0.249	-0.124
	(0.092)	(0.167)	(0.132)	(0.105)
Education (College Degree)	-0.108	0.226	0.293	0.079
	(0.07)	(0.126)	(0.1)	(0.079)
Age	0.001	-0.001	-0.009	0.000
	(0.002)	(0.004)	(0.003)	(0.002)
Sex (Female)	0.139	0.102	-0.231	-0.069
	(0.063)	(0.115)	(0.092)	(0.072)
Race (African American)	0.032	-0.122	-0.217	0.322
	(0.091)	(0.167)	(0.135)	(0.102)
Word Count (log)	0.359	0.520	0.765	0.576
	(0.033)	(0.061)	(0.051)	(0.039)
Wordsum Score	0.563	0.650	0.623	0.322
	(0.166)	(0.302)	(0.242)	(0.188)
Survey Mode (Online)	-0.049	0.189	0.132	0.284
	(0.076)	(0.139)	(0.11)	(0.088)
Intercept	-2.445	-4.616	-4.762	-3.480
	(0.199)	(0.371)	(0.305)	(0.232)
log(Sigma)	0.553	1.025	0.868	0.684
	(0.021)	(0.027)	(0.023)	(0.02)
N	4678	4678	4678	4678
Log-Likelihood	-4916	-3955	-4561	-5034

Table E.7: Tobit models predicting MFT score for each foundation based on political discussion frequency (mean-centered) and ideology. Positive coefficients indicate stronger emphasis on the respective foundation. Standard errors in parentheses. Estimates are used for Figure **??** in the main text.

Variable	Harm	Fairness	Ingroup	Authority
Political Discussion	0.175	0.181	0.176	0.225
	(0.193)	(0.341)	(0.283)	(0.216)
Ideology (Conservative)	-0.350	-0.727	0.277	-0.119
	(0.085)	(0.153)	(0.121)	(0.094)
Discussion * Conservative	0.001	0.686	0.718	0.238
	(0.254)	(0.45)	(0.357)	(0.28)
Ideology (Moderate)	-0.157	-0.498	0.088	-0.090
	(0.084)	(0.153)	(0.124)	(0.095)
Discussion * Moderate	-0.371	0.730	0.578	-0.548
	(0.287)	(0.507)	(0.41)	(0.322)
Church Attendance	-0.010	0.126	0.264	-0.149
	(0.096)	(0.174)	(0.135)	(0.106)
Education (College Degree)	-0.116	0.223	0.309	0.121
	(0.073)	(0.13)	(0.101)	(0.08)
Age	0.001	0.000	-0.007	0.003
	(0.002)	(0.004)	(0.003)	(0.002)
Sex (Female)	0.124	0.126	-0.238	-0.068
	(0.066)	(0.119)	(0.093)	(0.073)
Race (African American)	0.011	-0.136	-0.227	0.339
	(0.094)	(0.174)	(0.138)	(0.103)
Word Count (log)	0.362	0.474	0.728	0.556
	(0.035)	(0.064)	(0.052)	(0.04)
Wordsum Score	0.551	0.697	0.553	0.343
	(0.173)	(0.317)	(0.249)	(0.192)
Survey Mode (Online)	-0.033	0.250	0.219	0.283
	(0.079)	(0.145)	(0.113)	(0.089)
Intercept	-2.463	-4.601	-4.664	-3.522
	(0.204)	(0.383)	(0.308)	(0.234)
log(Sigma)	0.558	1.033	0.857	0.666
	(0.021)	(0.028)	(0.023)	(0.021)
N	4377	4377	4377	4377
Log-Likelihood	-4635	-3727	-4272	-4727

Table E.8: Tobit models predicting MFT score for each foundation based on moral content of individual media environments. Positive coefficients indicate stronger emphasis on the respective foundation. Standard errors in parentheses. Estimates are used for Figure **??** in the main text.

Variable	Harm	Fairness	Ingroup	Authority
Media MFT score (harm)	0.030			
	(0.016)			
Media MFT score (fairness)		0.051		
		(0.024)		
Media MFT score (ingroup)			0.001	
			(0.029)	
Media MFT score (authority)				0.001
				(0.017)
Church Attendance	-0.128	-0.029	0.357	-0.115
	(0.078)	(0.152)	(0.124)	(0.097)
Education (College Degree)	-0.063	0.239	0.345	0.110
	(0.063)	(0.122)	(0.099)	(0.079)
Age	-0.002	0.002	-0.004	0.001
	(0.002)	(0.003)	(0.003)	(0.002)
Sex (Female)	0.196	0.153	-0.308	-0.092
	(0.055)	(0.109)	(0.088)	(0.069)
Race (African American)	0.161	-0.020	-0.272	0.383
	(0.073)	(0.15)	(0.123)	(0.092)
Word Count (log)	0.304	0.560	0.798	0.588
	(0.028)	(0.058)	(0.049)	(0.037)
Wordsum Score	0.519	0.679	0.452	0.255
	(0.143)	(0.288)	(0.233)	(0.181)
Survey Mode (Online)	-0.117	0.322	0.248	0.268
	(0.064)	(0.128)	(0.104)	(0.081)
Intercept	-2.025	-5.414	-4.945	-3.535
	(0.152)	(0.331)	(0.269)	(0.201)
log(Sigma)	0.481	1.011	0.879	0.691
	(0.019)	(0.026)	(0.022)	(0.019)
N	5173	5173	5173	5173
Log-Likelihood	-5650	-4222	-4936	-5581

Examining Alternative Explanations

Table E.9: Tobit models predicting MFT score for each foundation based on ideology (telephone survey replication). Positive coefficients indicate stronger emphasis on the respective foundation. Standard errors in parentheses. Estimates are used for Figure D.3 in the main text.

Variable	Harm	Fairness	Ingroup	Authority
Ideology (Conservative)	-2.451	-3.497	1.786	-0.993
	(1.102)	(1.196)	(1.123)	(0.808)
Ideology (Moderate)	-1.374	-1.917	-1.394	-1.030
	(0.876)	(0.859)	(1.096)	(0.687)
Church Attendance	-0.918	1.363	1.015	1.455
	(1.282)	(1.25)	(1.375)	(0.977)
Education (College Degree)	0.810	0.482	1.197	1.100
	(0.787)	(0.762)	(0.885)	(0.606)
Age	-0.002	0.044	-0.031	-0.058
	(0.026)	(0.025)	(0.029)	(0.022)
Sex (Female)	-0.777	-0.097	-0.706	-0.400
	(0.774)	(0.753)	(0.853)	(0.587)
Race (African American)	0.591	1.563	-0.038	0.385
	(1.731)	(1.598)	(2.107)	(1.305)
Word Count (log)	2.517	0.269	1.562	0.728
	(0.671)	(0.481)	(0.645)	(0.399)
Intercept	-11.759	-7.623	-10.262	-3.802
	(2.794)	(2.249)	(2.803)	(1.652)
log(Sigma)	1.507	1.433	1.595	1.325
	(0.121)	(0.139)	(0.127)	(0.108)
N	395	395	395	395
Log-Likelihood	-224	-192	-219	-266

Additional Models and Robustness Checks in Appendix

Table E.10: Tobit models predicting overall reliance on moral foundations (sum of MFT scores) based on political participation. Positive coefficients indicate stronger emphasis on any foundation. Standard errors in parentheses. Estimates are used for Figure D.1 in the appendix.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Voted in 2008	0.095					0.094
	(0.053)					(0.055)
Protest		0.089				0.015
		(0.077)				(0.081)
Petition			0.120			0.089
			(0.042)			(0.045)
Button				0.135		0.106
				(0.052)		(0.053)
Letter					0.084	0.032
					(0.049)	(0.052)
Church Attendance	-0.035	-0.001	-0.002	-0.010	-0.006	-0.026
	(0.054)	(0.055)	(0.055)	(0.055)	(0.055)	(0.056)
Education (College Degree)	0.080	0.095	0.088	0.101	0.089	0.079
	(0.043)	(0.044)	(0.045)	(0.044)	(0.045)	(0.045)
Age	0.000	0.001	0.001	0.001	0.001	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Sex (Female)	-0.006	0.003	0.002	0.002	0.006	0.006
	(0.037)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)
Race (African American)	0.096	0.092	0.095	0.073	0.097	0.075
	(0.051)	(0.053)	(0.053)	(0.053)	(0.053)	(0.054)
Word Count (log)	0.117	0.120	0.112	0.118	0.116	0.106
	(0.019)	(0.019)	(0.02)	(0.019)	(0.02)	(0.02)
Wordsum Score	0.345	0.358	0.322	0.359	0.349	0.309
	(0.098)	(0.102)	(0.103)	(0.102)	(0.102)	(0.103)
Survey Mode (Online)	0.064	0.087	0.077	0.080	0.077	0.064
	(0.045)	(0.046)	(0.046)	(0.046)	(0.046)	(0.047)
Intercept	-0.469	-0.506	-0.484	-0.497	-0.481	-0.490
	(0.099)	(0.103)	(0.103)	(0.103)	(0.104)	(0.105)
log(Sigma)	0.222	0.228	0.228	0.227	0.227	0.226
	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)
N	5157	4846	4833	4849	4847	4816
Log-Likelihood	-7085	-6684	-6663	-6684	-6684	-6632

References

Feinberg, Matthew, and Robb Willer. 2013. "The moral roots of environmental attitudes." *Psychological Science* 24 (1): 56–62.

Graham, Jesse, Jonathan Haidt, and Brian A. Nosek. 2009. "Liberals and Conservatives Rely on Different Sets of Moral Foundations." *Journal of Personality and Social Psychology* 96 (5): 1029–1046.

Koleva, Spassena P., Jesse Graham, Ravi Iyer, Peter H. Ditto, and Jonathan Haidt. 2012. "Tracing the Threads: How Five Moral Concerns (Especially Purity) Help Explain Culture War Attitudes." *Journal of Research in Personality* 46 (2): 184–194.

Table E.11: Tobit models predicting MFT score for each foundation based on political knowledge, media exposure, and discussion frequency (all mean-centered) as well as ideology. Positive coefficients indicate stronger emphasis on the respective foundation. Standard errors in parentheses. Estimates are used for Figure D.2 in the appendix.

Variable	Harm	Fairness	Ingroup	Authority
Political Knowledge	0.670	-0.188	-0.096	0.790
	(0.28)	(0.492)	(0.407)	(0.315)
Political Media Exposure	0.465	-0.033	0.599	0.586
	(0.284)	(0.502)	(0.418)	(0.32)
Political Discussion	0.049	0.200	0.059	0.080
	(0.202)	(0.356)	(0.295)	(0.226)
Ideology (Conservative)	-0.291	-0.774	0.260	-0.066
	(0.088)	(0.16)	(0.125)	(0.098)
Knowledge * Conservative	-0.659	0.524	0.518	-0.688
	(0.372)	(0.671)	(0.525)	(0.413)
Media * Conservative	-0.720	0.429	-0.774	-0.173
	(0.378)	(0.675)	(0.534)	(0.418)
Discussion * Conservative	0.204	0.541	0.853	0.301
	(0.267)	(0.474)	(0.375)	(0.295)
Ideology (Moderate)	-0.129	-0.495	0.075	-0.038
	(0.085)	(0.154)	(0.126)	(0.096)
Knowledge * Moderate	-0.370	-0.367	0.782	-0.947
	(0.379)	(0.685)	(0.561)	(0.425)
Media * Moderate	-0.183	0.016	-0.589	-0.352
	(0.38)	(0.69)	(0.562)	(0.427)
Discussion * Moderate	-0.300	0.737	0.660	-0.418
	(0.298)	(0.526)	(0.426)	(0.334)
Church Attendance	-0.009	0.123	0.255	-0.146
	(0.096)	(0.174)	(0.135)	(0.106)
Education (College Degree)	-0.151	0.227	0.288	0.077
	(0.074)	(0.132)	(0.103)	(0.081)
Age	0.000	-0.001	-0.008	0.001
	(0.002)	(0.004)	(0.003)	(0.002)
Sex (Female)	0.141	0.128	-0.211	-0.039
	(0.067)	(0.122)	(0.095)	(0.074)
Race (African American)	0.024	-0.137	-0.211	0.348
	(0.095)	(0.175)	(0.139)	(0.103)
Word Count (log)	0.349	0.478	0.719	0.546
	(0.035)	(0.065)	(0.053)	(0.04)
Wordsum Score	0.465	0.738	0.479	0.287
	(0.18)	(0.33)	(0.258)	(0.199)
Survey Mode (Online)	-0.066	0.247	0.184	0.244
	(0.081)	(0.148)	(0.115)	(0.091)
Intercept	-2.311	-4.623	-4.499	-3.361
	(0.216)	(0.406)	(0.324)	(0.247)
log(Sigma)	0.556	1.033	0.855	0.664
	(0.021)	(0.028)	(0.023)	(0.021)
N	4372	4372	4372	4372
Log-Likelihood	-4624	-3723	-4267	-4714