

Affective Polarization and the Destabilization of Core Political Values

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Appendix 1—Data Description for 2016-2020 ANES Panel

Target Population: The target population of the sample is non-institutional U.S. citizens aged 18 years or older (as of November 8th, 2016) living in the 50 US states or the District of Columbia.

Sample Size: 2,670 (includes only those who finished the 2020 ANES post-election survey wave).

Survey Field Dates: The 2016 pre-election wave was fielded between September 7, 2016 and November 7, 2016. The 2016 post-election wave was fielded between November 9, 2016 and January 8, 2017. The 2020 pre-election wave was fielded between August 18, 2020 and November 3, 2020. The 2020 post-election wave was fielded between November 8, 2020 and January 4, 2021.

Sample Recruitment: Data collection was performed by Westat, Inc. “2016 ANES respondents were invited by email where possible, with letters used if there was no email on file or after an initial non-response...All respondents who completed the post-election survey did so in the same mode used for the pre-election survey” (pg. 4). Respondents who completed the 2016 ANES were invited via email or mail to complete the 2020 ANES.

Interview Mode: Responses in the 2016 wave were collected via self-administered online surveys or in-person interviews. Responses in the 2020 wave were collected via self-administered online surveys. Interviews were conducted in either English or Spanish.

Response Rate and Panel Attrition: The response rate (AAPOR RR1) in the 2016 ANES pre-election wave was 50 percent for the face-to-face sample and 44 percent for the internet sample. Of those who completed the 2016 pre-election wave, 90 percent of the face-to-face sample and 84 percent of the internet sample completed the 2016 post-election wave. The reinterview rate for the 2020 pre-election wave was 77.9 percent. Of those who completed the 2020 pre-election wave, 94.0 percent completed the 2020 post-election wave. Overall panel retention was thus 73.2 percent.

Weights and Sample Design Effects: The 2016-2020 ANES Panel is a probability-based sample collected with a complex sampling design. To accurately represent the target population, the ANES recommends the use of weighting variable V200011b for the 2016-2020 sample that completed the post-election 2020 wave. The strata and cluster variables are V200011d and V200011c, respectively.

References

ANES 2016 Time Series Study Codebook: https://electionstudies.org/wp-content/uploads/2018/12/anes_timeseries_2016_userguidecodebook.pdf

ANES 2020 Time Series Study Codebook: https://electionstudies.org/wp-content/uploads/2022/02/anes_timeseries_2020_userguidecodebook_20220210.pdf

Appendix 2—Question Wording Bank

Affective Polarization – Ideological Groups:

1. (V162101, V202164): How would you rate Conservatives? [0-100]
2. (V162097, V202161): How would you rate Liberals? [0-100]

Affective Polarization – Party Ratings:

1. (V161095, V201156): How would you rate Democrats? [0-100]
2. (V161020, V201157): How would you rate Republicans? [0-100]

Affective Polarization – Presidential Candidates:

1. (V162078): How would you rate Hillary Clinton? [0-100]
2. (V162079): How would you rate Donald Trump? [0-100]
3. (V201151): How would you rate Joe Biden? [0-100]
4. (V201152): How would you rate Donald Trump? [0-100]

Age (V161267): Respondent age in years. [18 to 79, 80 years or older]

Education (V161270): What is the highest level of school you have completed or the highest degree you have received? [1 – Less than 1st grade, 2 – 1st, 2nd, 3rd or 4th grade, 3 – 5th or 6th grade, 4 – 7th or 8th grade, 5 – 9th grade, 6 – 10th grade, 7 – 11th grade, 8 – 12th grade no diploma, 9 – High school graduate- high school diploma or equivalent (for example: GED), 10 – Some college but no degree, 11 – Associate degree in college - occupational/vocational program, 12 – Associate degree in college – academic program, 13 – Bachelor’s degree (for example: BA, AB, BS), 14 – Master’s degree (for example: MA, MS, MENG, MED, MSW, MBA), 15 – Professional school degree (for example: MD, DDS, DVM, LLB, JD), 16 – Doctorate degree (for example: PHD, EDD)]

Egalitarianism:

1. (V162243, V202260): Our society should do whatever is necessary to make sure that everyone has an equal opportunity to succeed. [1 – Agree strongly, 2 – Agree somewhat, 3 – Neither agree nor disagree, 4 – Disagree somewhat, 5 – Disagree strongly]
2. (V162244, V202261): This country would be better off if we worried less about how equal people are. [1 – Agree strongly, 2 – Agree somewhat, 3 – Neither agree nor disagree, 4 – Disagree somewhat, 5 – Disagree strongly]
3. (V162245, V202262): It is not really that big a problem if some people have more of a chance in life than others. [1 – Agree strongly, 2 – Agree somewhat, 3 – Neither agree nor disagree, 4 – Disagree somewhat, 5 – Disagree strongly]
4. (V162246, V202263): If people were treated more equally in this country we would have many fewer problems. [1 – Agree strongly, 2 – Agree somewhat, 3 – Neither agree nor disagree, 4 – Disagree somewhat, 5 – Disagree strongly]

Gender (V161342): What is your gender? [1 – Male, 2 – Female, 3 – Other]

Ideology (V161126, V201200): We hear a lot of talk these days about liberals and conservatives. Here is a seven-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale, or haven't you heard much about this? [1 – Extremely liberal, 2 – Liberal, 3 – Slightly liberal, 4 – Moderate, middle of the road, 5 – Slightly conservative, 6 – Conservative, 7 – Extremely conservative, 99 – Haven't thought much about this]

Income (V161361x): What was [the total income in 2015 of all your family members living here / your total income in 2015]? [1 – Under \$5,000... 28 – \$250,000 or more]

Issue Attitudes:

1. Aid to Blacks (V161198): Where would you place yourself on this scale, or haven't you thought much about this? [1 – Government should help blacks, 2, 3, 4, 5, 6, 7 – Blacks should help themselves, 99 – Haven't thought much about it]
2. Defense Spending (V161181): Where would you place yourself on this scale, or haven't you thought much about this? [1 – Greatly decrease defense spending, 2, 3, 4, 5, 6, 7 – Greatly increase defense spending, 99 – Haven't thought much about it]
3. Government Health Insurance (V161184): Where would you place yourself on this scale, or haven't you thought much about this? [1 – Government insurance plan, 2, 3, 4, 5, 6, 7 – Private insurance plan, 99 – Haven't thought much about it]
4. Government Spending and Services (V161178): Where would you place yourself on this scale, or haven't you thought much about this? [1 – Government should provide many more services; increase spending a lot, 2, 3, 4, 5, 6, 7 – Government should provide many fewer services; reduce spending a lot, 99 – Haven't thought much about it]
5. Job/Income Guarantee (V161189): Where would you place yourself on this scale, or haven't you thought much about this? [1 – Government should see to jobs and standard of living, 2, 3, 4, 5, 6, 7 – Government should let each person get ahead on own, 99 – Haven't thought much about it]

Moral Traditionalism:

1. (V162207, V202264): The world is always changing and we should adjust our view of moral behavior to those changes. [1 – Agree strongly, 2 – Agree somewhat, 3 – Neither agree nor disagree, 4 – Disagree somewhat, 5 – Disagree strongly]
2. (V162210, V202265): This country would have many fewer problems if there were more emphasis on traditional family ties. [1 – Agree strongly, 2 – Agree somewhat, 3 – Neither agree nor disagree, 4 – Disagree somewhat, 5 – Disagree strongly]

Partisanship (V161158x, V201231x): Generally speaking, do you think of yourself as a Republican, a Democrat, an Independent, or what? Would you call yourself a strong Democrat/Republican or a

not very strong Democrat/Republican? Do you think of yourself as closer to the Republican Party or to the Democratic Party? [1 – Strong Democrat, 2 – Weak Democrat, 3 – Independent-Democrat, 4 – Independent-Independent, 5 – Independent-Republican, 6 – Weak Republican, 7 – Strong Republican]

Political Interest (V161004): Some people don't pay much attention to political campaigns. How about you? Would you say that you have been very much interested, somewhat interested or not much interested in the political campaigns so far this year? [0 – Not much interest, 1 – Somewhat interested, 2 – Very much interested.]

Race/Ethnicity (V161310x): Are you White; Black or African American; American Indian or Alaska Native; Asian; or Native Hawaiian or Other Pacific Islander? ... Are you of Hispanic, Latino, or Spanish origin? [1 – White, non-Hispanic, 2 – Black, non-Hispanic, 3 – Asian, native Hawaiian or other Pacific Islander, non-Hispanic, 4 – Native American or Alaska Native, non-Hispanic, 5 – Hispanic, 6 – Other non-Hispanic incl multiple races].

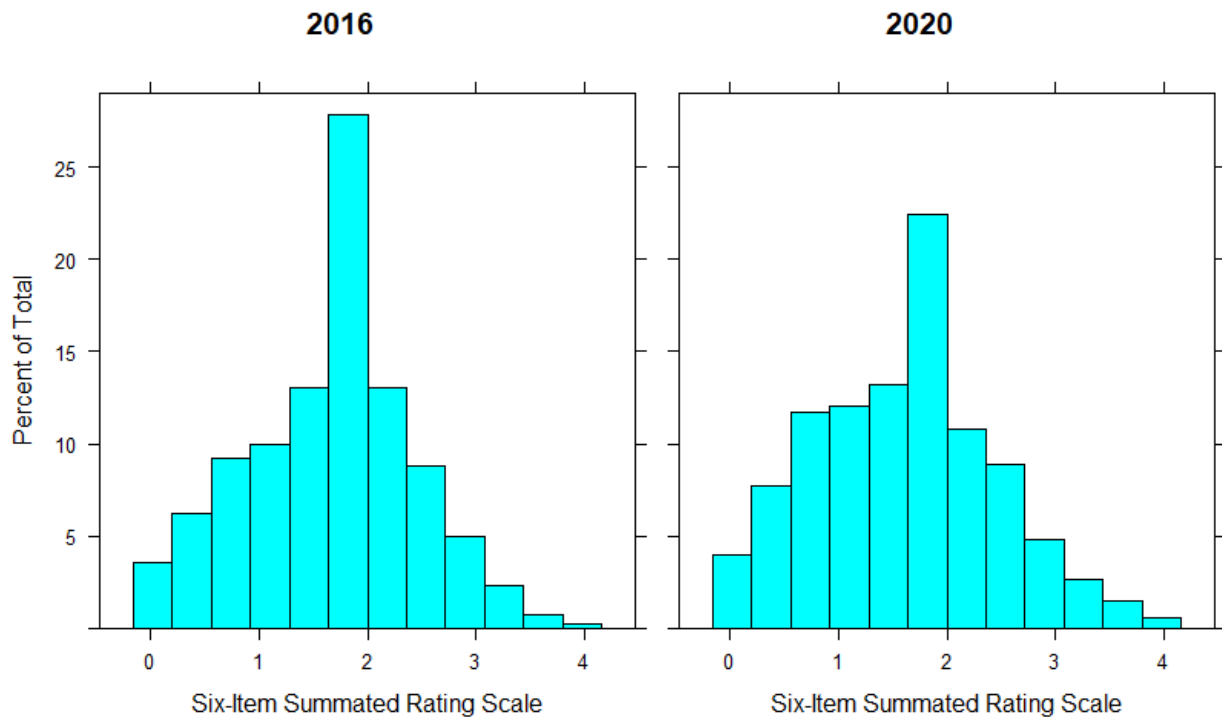
Religiosity (V161241): Now on another topic.... Do you consider religion to be an important part of your life, or not? [1 – Important, 2 – Not important]. (V161242: IF R SAYS THAT RELIGION IS IMPORTANT): Would you say your religion provides [some guidance in your day-to-day living, quite a bit of guidance, or a great deal of guidance / a great deal of guidance in your day-to-day living, quite a bit of guidance, or some guidance]? [1 – Some, 2 – Quite a bit, 3 – A great deal]

South (V163003): Census region. [1 – Northeast, 2 – Midwest, 3 – South, 4 – West]

Appendix 3—Item Analysis of the 2016-2020 ANES Panel Values Items

Consistent with Enders and Lupton (2021), I generate political values scales that are summated rating scales of Likert-type responses to six items designed by the ANES to estimate respondents' core values. I generate one values scale in 2016 and a second in 2020. These items include four egalitarianism items and two moral traditionalism items (see Appendix 2 for full question wordings). Each item is coded such that larger values correspond to more conservative values (i.e., low egalitarianism and high moral traditionalism). The value scales thus range from extremely liberal values to extremely conservative values. I provide the distributions for the 2016 and 2020 values scales in Figure 3A.

Figure 3A: Distributions of Value Scales in 2016-2020 ANES Panel Study



Per Likert (1932), the assumption underlying this scaling approach is that the item response functions are all monotonically non-decreasing. To assess this assumption, I estimate item response functions for each item in Figures 3B-3G. I plot responses for each item against a scale of the five remaining items that reflect an estimate of the latent values dimension with linear fit lines (red) and nonparametric smoothers (black). The non-decreasing monotonicity assumption holds in each case. Thus, the ANES values items can be averaged to create single value orientation scales.

References

- Enders, Adam M., and Robert N. Lupton. 2021. "Value Extremity Contributes to Affective Polarization in the US." *Political Science Research and Methods* 9(4): 857–66.
- Likert, Rensis. 1932. "A Technique for the Measurement of Attitudes." *Archives of Psychology* 140: 5–55.

Figure 3B: Item Analysis of the “Equal Opportunity” Value Item

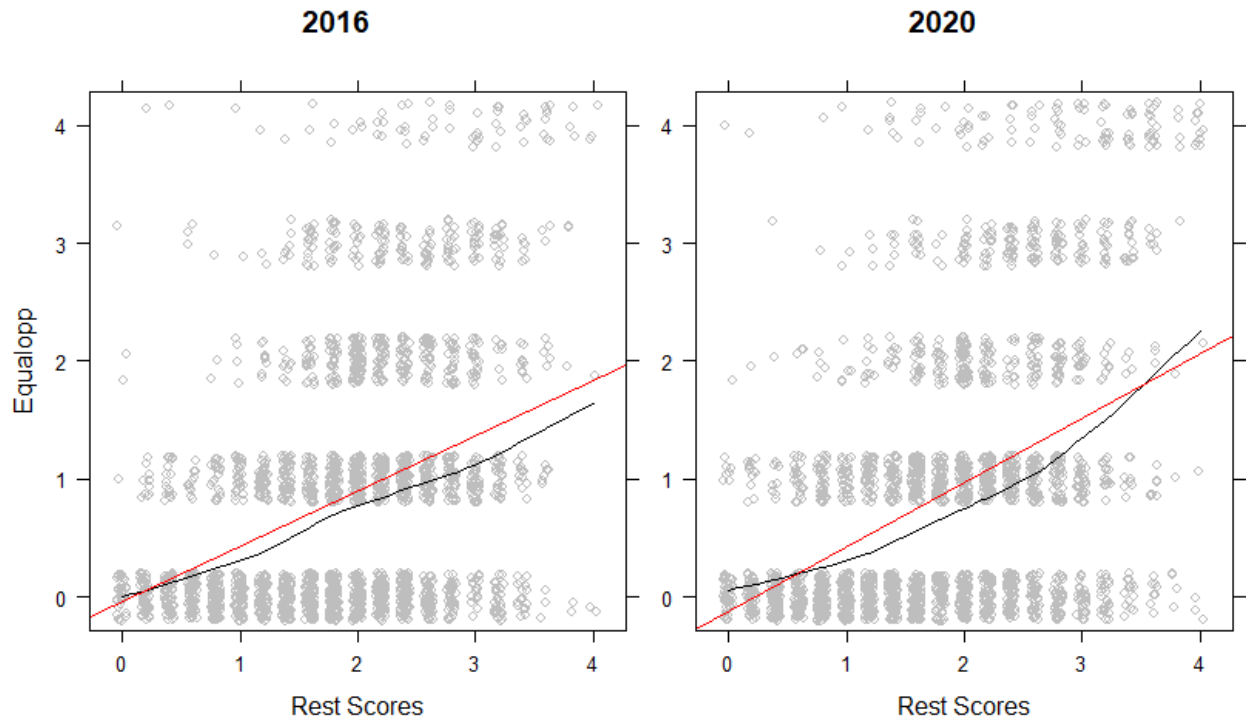


Figure 3C: Item Analysis of the “Less Equal” Value Item

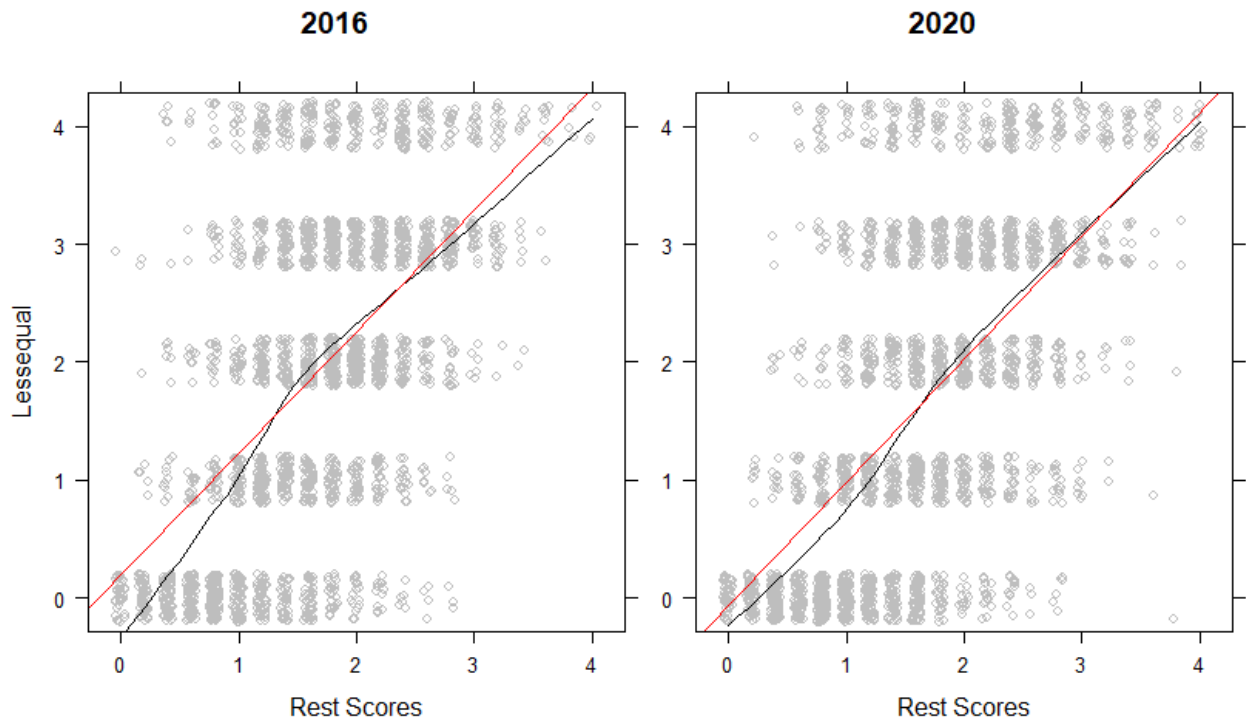


Figure 3D: Item Analysis of the "Unequal Chance" Value Item

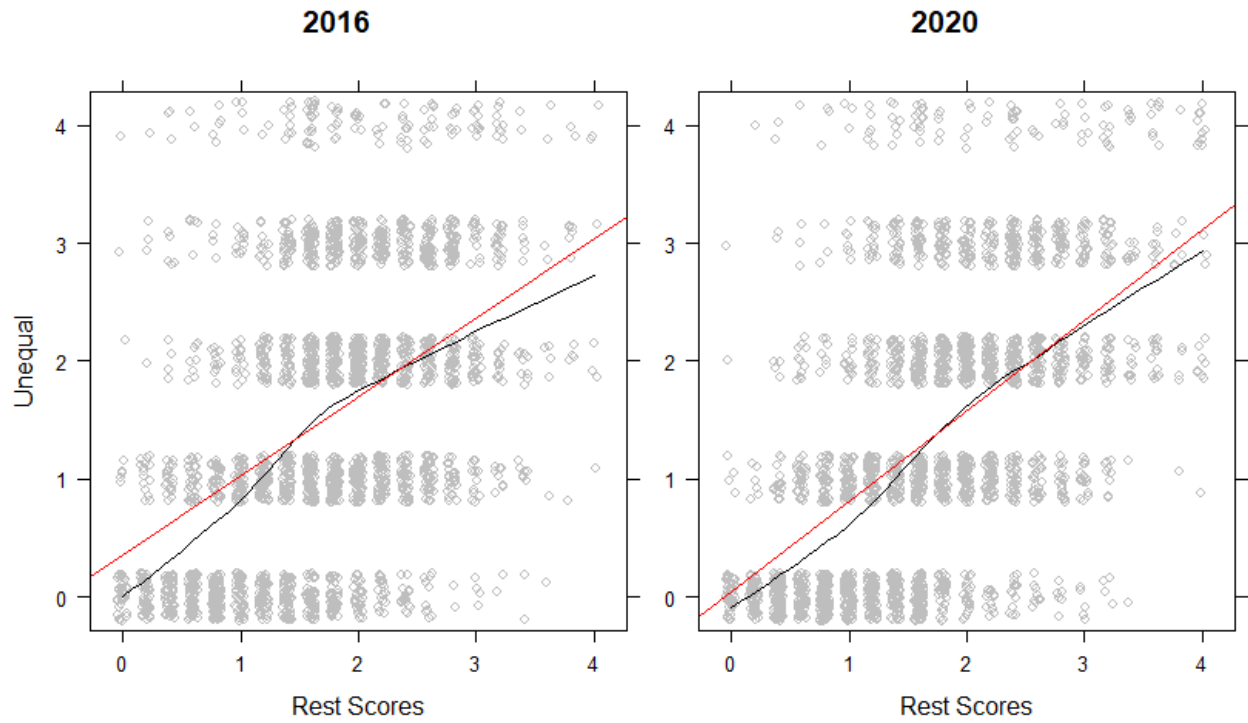


Figure 3E: Item Analysis of the "Fewer Problems" Value Item

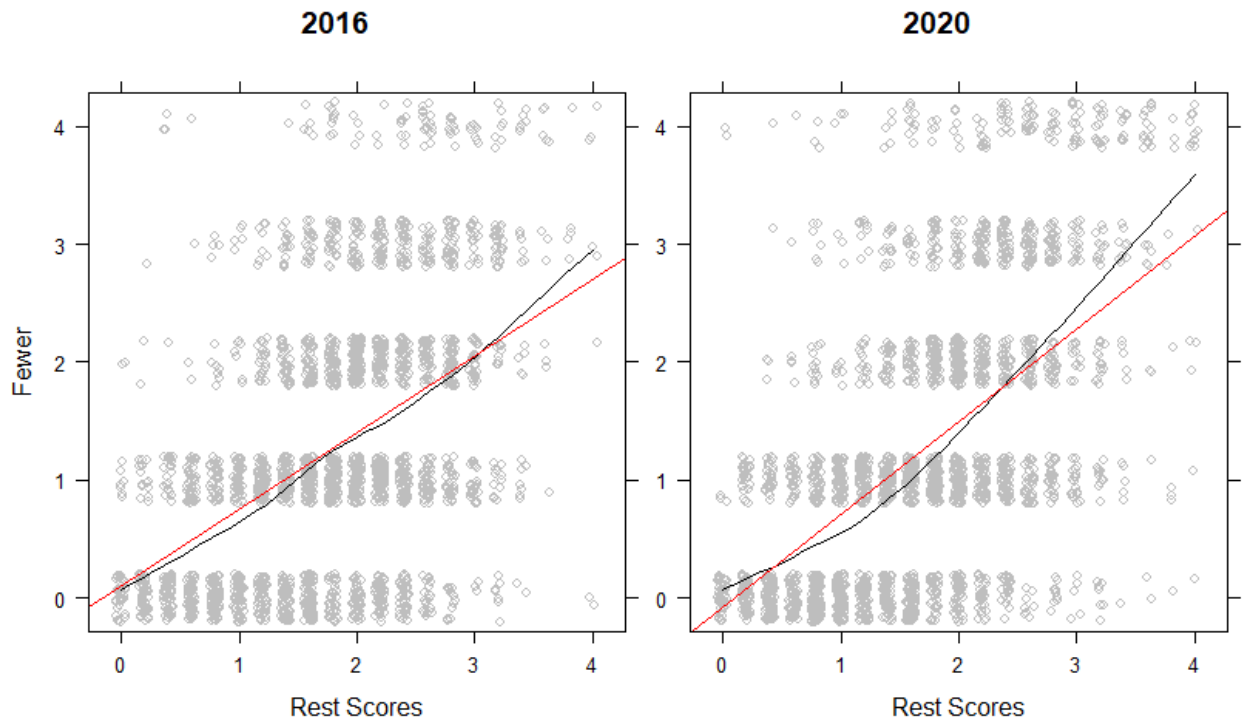


Figure 3F: Item Analysis of the “Changing Norms” Value Item
2016 2020

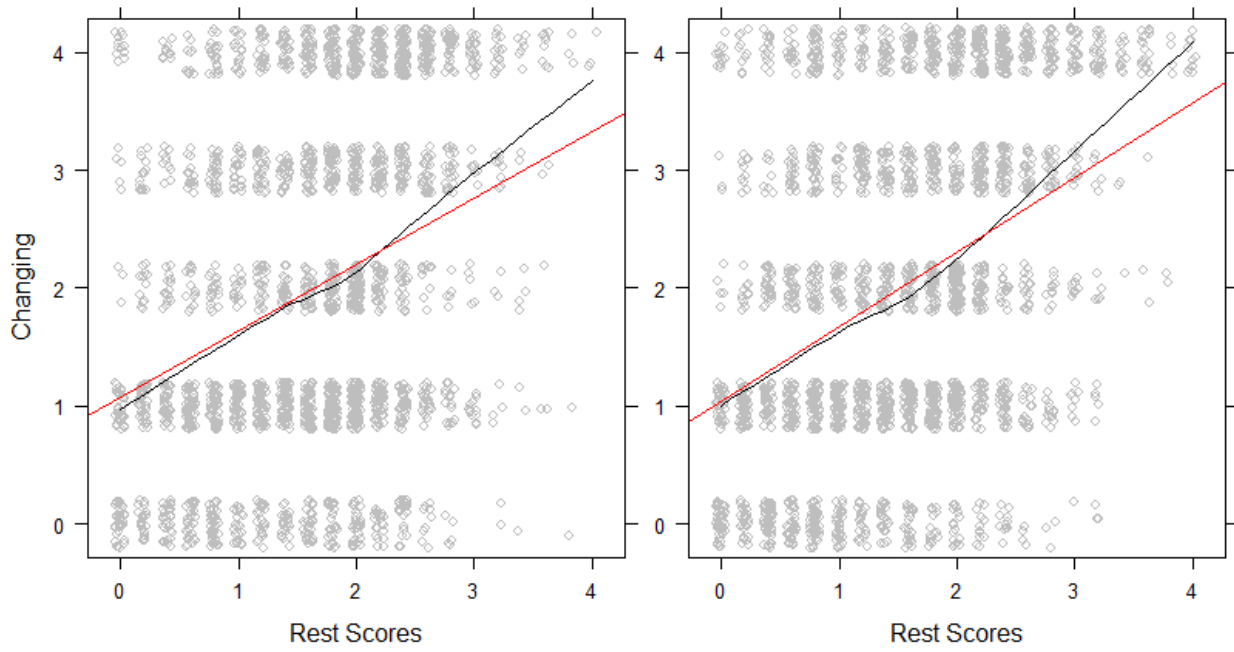
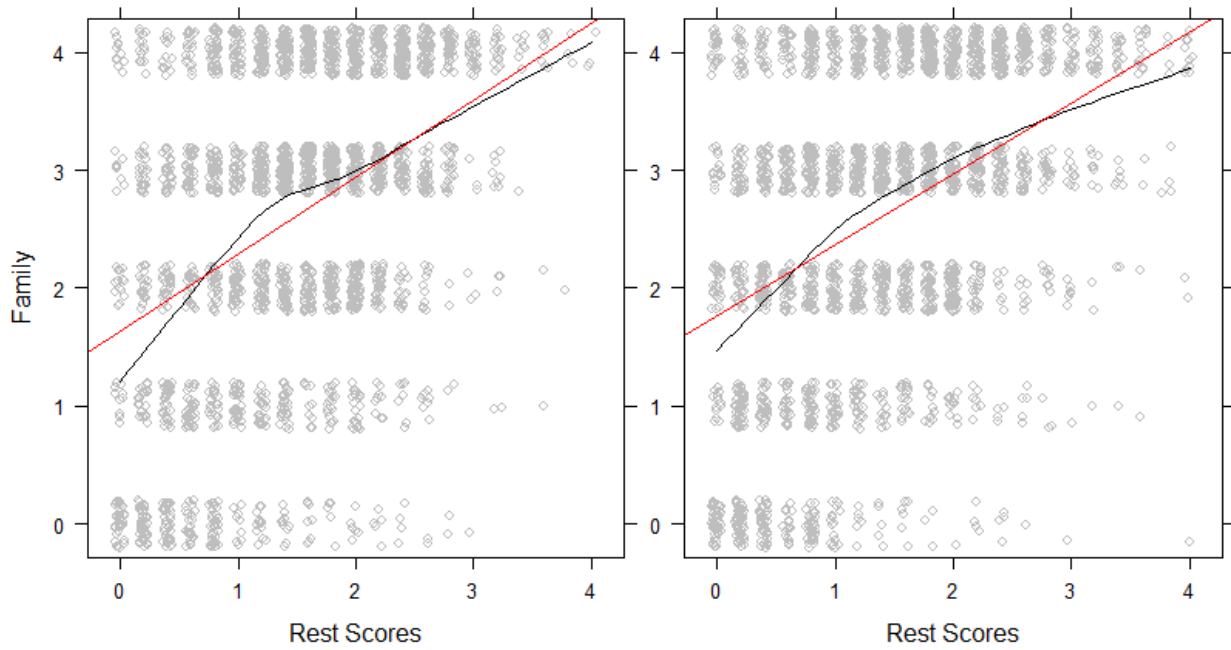


Figure 3G: Item Analysis of the “Traditional Family” Value Item
2016 2020



Appendix 4—Full Cross-Lagged Panel Model Results

Table 4A—Cross-Lagged Panel Model Results (Ideological Group Ratings)

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Ideology Ratings) (2020)
Value Extremity	0.362 (0.033)	0.021 (0.029)
Affective Polarization	0.095 (0.032)	0.407 (0.029)
Sorting	0.170 (0.031)	0.158 (0.027)
Issue Extremity	0.012 (0.021)	0.105 (0.021)
Political Interest	0.039 (0.027)	0.057 (0.024)
Education	0.002 (0.024)	0.055 (0.025)
Age	-0.011 (0.023)	0.001 (0.021)
Income	0.017 (0.023)	0.016 (0.018)
Religiosity	0.042 (0.024)	0.041 (0.022)
Female	0.049 (0.020)	0.039 (0.022)
White	0.020 (0.027)	0.040 (0.026)
Black	0.037 (0.025)	-0.045 (0.029)
South	-0.026 (0.025)	0.019 (0.021)
Constant	0.152 (0.112)	-0.157 (0.130)
N	2,670	2,670

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Data are weighted and standard errors are adjusted for the complex sampling design. Key results bolded. Affective polarization measured with ideological group ratings. Source: 2016-2020 ANES Panel.

Table 4B—Cross-Lagged Panel Model Results (Party Ratings)

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Party Ratings) (2020)
Value Extremity	0.353 (0.032)	0.094 (0.029)
Affective Polarization	0.115 (0.028)	0.369 (0.031)
Sorting	0.115 (0.028)	0.094 (0.033)
Issue Extremity	0.176 (0.030)	0.048 (0.026)
Political Interest	0.029 (0.025)	-0.002 (0.025)
Education	0.006 (0.024)	0.044 (0.025)
Age	-0.013 (0.022)	0.099 (0.027)
Income	0.023 (0.022)	-0.024 (0.023)
Religiosity	0.042 (0.024)	0.055 (0.024)
Female	0.046 (0.020)	0.016 (0.024)
White	0.028 (0.028)	0.078 (0.034)
Black	0.018 (0.024)	0.027 (0.031)
South	-0.027 (0.024)	0.026 (0.025)
Constant	0.130 (0.115)	0.214 (0.169)
N	2,670	2,670

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Data are weighted and standard errors are adjusted for the complex sampling design. Key results bolded. Affective polarization measured with party ratings. Source: 2016-2020 ANES Panel.

Table 4C—Cross-Lagged Panel Model Results (Candidate Ratings)

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Candidate Ratings) (2020)
Value Extremity	0.341 (0.033)	0.046 (0.027)
Affective Polarization	0.156 (0.024)	0.391 (0.029)
Sorting	0.184 (0.029)	0.087 (0.031)
Issue Extremity	0.002 (0.022)	0.014 (0.026)
Political Interest	0.018 (0.025)	0.027 (0.028)
Education	0.000 (0.024)	0.013 (0.025)
Age	-0.015 (0.022)	0.102 (0.027)
Income	0.027 (0.023)	-0.002 (0.027)
Religiosity	0.035 (0.023)	0.027 (0.024)
Female	0.032 (0.020)	-0.020 (0.022)
White	0.022 (0.028)	0.031 (0.031)
Black	0.032 (0.023)	0.107 (0.037)
South	-0.025 (0.024)	-0.016 (0.021)
Constant	0.101 (0.111)	0.811 (0.170)
N	2,670	2,670

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Data are weighted and standard errors are adjusted for the complex sampling design. Key results bolded. Affective polarization measured with presidential candidate ratings. Source: 2016-2020 ANES Panel.

Appendix 5—Robustness Check for Enders and Lupton (2021): Weighting

Table 5A—Cross-Lagged Panel Model Results (Ideological Group Ratings) by Weighting

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Ideology Ratings) (1996)
<i>UNWEIGHTED</i>		
Value Extremity	0.197 (0.047)	0.086 (0.043)
Affective Polarization	0.078 (0.048)	0.472 (0.040)
Constant	0.360 (0.348)	0.368 (0.325)
<i>WEIGHTED</i>		
Value Extremity	0.159 (0.058)	0.135 (0.050)
Affective Polarization	0.052 (0.054)	0.458 (0.050)
Constant	0.258 (0.343)	0.397 (0.326)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with ideological group ratings. Source: 1992-1996 ANES Panel.

Table 5B—Cross-Lagged Panel Model Results (Party Ratings) by Weighting

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Party Ratings) (1996)
<i>UNWEIGHTED</i>		
Value Extremity	0.184 (0.048)	0.118 (0.044)
Affective Polarization	0.063 (0.044)	0.332 (0.038)
Constant	0.370 (0.348)	0.040 (0.327)
<i>WEIGHTED</i>		
Value Extremity	0.148 (0.059)	0.148 (0.046)
Affective Polarization	0.065 (0.052)	0.338 (0.045)
Constant	0.259 (0.341)	-0.015 (0.368)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with party ratings. Source: 1992-1996 ANES Panel.

Table 5C—Cross-Lagged Panel Model Results (Candidate Ratings) by Weighting

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Candidate Ratings) (1996)
<i>UNWEIGHTED</i>		
Value Extremity	0.193 (0.047)	0.050 (0.046)
Affective Polarization	0.030 (0.043)	0.289 (0.040)
Constant	0.388 (0.348)	0.561 (0.338)
<i>WEIGHTED</i>		
Value Extremity	0.155 (0.058)	0.080 (0.052)
Affective Polarization	0.017 (0.048)	0.258 (0.052)
Constant	0.274 (0.344)	0.355 (0.371)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with presidential candidate ratings. Source: 1992-1996 ANES Panel.

Appendix 6—Robustness Check for Enders and Lupton (2021): Six-Item Value Scale

Table 6A—Cross-Lagged Panel Model Results (Ideological Group Ratings) by Value Scale

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Ideology Ratings) (1996)
<i>TEN-ITEM VALUE SCALE</i>		
Value Extremity	0.197 (0.047)	0.086 (0.043)
Affective Polarization	0.078 (0.048)	0.472 (0.040)
Constant	0.360 (0.348)	0.368 (0.325)
<i>SIX-ITEM VALUE SCALE</i>		
Value Extremity	0.209 (0.045)	0.091 (0.041)
Affective Polarization	0.081 (0.048)	0.474 (0.040)
Constant	0.372 (0.348)	0.372 (0.325)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with ideological group ratings. Source: 1992-1996 ANES Panel.

Table 6B—Cross-Lagged Panel Model Results (Party Ratings) by Value Scale

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Party Ratings) (1996)
<i>TEN-ITEM VALUE SCALE</i>		
Value Extremity	0.184 (0.048)	0.118 (0.044)
Affective Polarization	0.063 (0.044)	0.332 (0.038)
Constant	0.370 (0.348)	0.040 (0.327)
<i>SIX-ITEM VALUE SCALE</i>		
Value Extremity	0.199 (0.046)	0.117 (0.043)
Affective Polarization	0.063 (0.044)	0.333 (0.038)
Constant	0.382 (0.348)	0.033 (0.327)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with party ratings. Source: 1992-1996 ANES Panel.

Table 6C—Cross-Lagged Panel Model Results (Candidate Ratings) by Value Scale

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Candidate Ratings) (1996)
<i>TEN-ITEM VALUE SCALE</i>		
Value Extremity	0.193 (0.047)	0.050 (0.046)
Affective Polarization	0.030 (0.043)	0.289 (0.040)
Constant	0.388 (0.348)	0.561 (0.338)
<i>SIX-ITEM VALUE SCALE</i>		
Value Extremity	0.207 (0.045)	0.061 (0.045)
Affective Polarization	0.040 (0.043)	0.290 (0.040)
Constant	0.400 (0.348)	0.561 (0.338)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with presidential candidate ratings. Source: 1992-1996 ANES Panel.

Appendix 7—Robustness Check: Reweighting 2016-2020 ANES to 1992-1996 ANES

Table 7A—Cross-Lagged Panel Model Results (Ideological Group Ratings) by Weighting

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Ideology Ratings) (2020)
	<i>2016 ANES Weight</i>	
Value Extremity	0.362 (0.033)	0.021 (0.029)
Affective Polarization	0.095 (0.032)	0.407 (0.029)
Constant	0.152 (0.112)	-0.157 (0.130)
N	2,670	2,670
	<i>1992 ANES Weight (Entropy Balanced)</i>	
Value Extremity	0.324 (0.040)	0.036 (0.034)
Affective Polarization	0.128 (0.037)	0.404 (0.038)
Constant	0.192 (0.147)	0.049 (0.134)
N	2,522	2,522

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with ideological group ratings. Sample is weighted to 1992 by entropy balancing third moments of sorting, issue extremity, political interest, education, age, income, religiosity, gender, race/ethnicity, and southern residency to the 1992 wave of the 1992-1996 ANES Panel. Source: 2016-2020 ANES Panel.

Table 7B—Cross-Lagged Panel Model Results (Party Ratings) by Weighting

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Party Ratings) (2020)
<i>2016 ANES Weight</i>		
Value Extremity	0.353 (0.032)	0.094 (0.029)
Affective Polarization	0.115 (0.028)	0.369 (0.031)
Constant	0.130 (0.115)	0.214 (0.169)
N	2,670	2,670
<i>1992 ANES Weight (Entropy Balanced)</i>		
Value Extremity	0.317 (0.041)	0.023 (0.044)
Affective Polarization	0.146 (0.032)	0.403 (0.034)
Constant	0.128 (0.151)	0.369 (0.186)
N	2,522	2,522

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with party ratings. Sample is weighted to 1992 by entropy balancing third moments of sorting, issue extremity, political interest, education, age, income, religiosity, gender, race/ethnicity, and southern residency to the 1992 wave of the 1992-1996 ANES Panel. Source: 2016-2020 ANES Panel.

Table 7C—Cross-Lagged Panel Model Results (Candidate Ratings) by Weighting

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Candidate Ratings) (2020)
<i>2016 ANES Weight</i>		
Value Extremity	0.341 (0.033)	0.046 (0.027)
Affective Polarization	0.156 (0.024)	0.391 (0.029)
Constant	0.101 (0.111)	0.811 (0.170)
N	2,670	2,670
<i>1992 ANES Weight (Entropy Balanced)</i>		
Value Extremity	0.314 (0.038)	-0.021 (0.032)
Affective Polarization	0.186 (0.027)	0.446 (0.030)
Constant	0.106 (0.0139)	0.913 (0.196)
N	2,522	2,522

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with presidential candidate ratings. Sample is weighted to 1992 by entropy balancing third moments of sorting, issue extremity, political interest, education, age, income, religiosity, gender, race/ethnicity, and southern residency to the 1992 wave of the 1992-1996 ANES Panel. Source: 2016-2020 ANES Panel.

Appendix 8—Robustness Check: Dropping Issue Extremity and Sorting Controls

As noted by Enders and Lupton (2021), issue extremity and partisan-ideological sorting may be partly downstream from value extremity. If this was the case, controlling for these variables could introduce attenuation bias when estimating the associations between value extremity and affective polarization. However, if these variables primarily *confound* the associations between value extremity and affective polarization, their exclusion risks biasing the estimates in favor of Enders and Lupton’s (2021) hypotheses. To the extent that issue extremity and sorting are upstream *and* downstream of value extremity, we are left without an easy decision about whether to include these variables in the models. Enders and Lupton (2021) only report panel analyses that control for issue extremity and partisan-ideological sorting (i.e., the more conservative model). Thus, I conduct my replication with these controls in the main text. In this section, I reproduce their analysis of the 1992-1996 ANES and my analysis of the 2016-2020 ANES without controls for issue extremity or sorting (i.e., a less conservative model) to determine whether our findings are robust to the exclusion of these controls.

In the 1992-1996 ANES panel, dropping controls for issue extremity and sorting increases the strength of the associations between both lagged value extremity and affective polarization and lagged affective polarization and value extremity, respectively. The effects of lagged value extremity are significant in all three cases, while the effects of lagged affective polarization are significant in two of three cases. The relationship between value extremity and affective polarization still generally seems to run from the former to latter between 1992 and 1996 since the coefficients for lagged value extremity are larger in two of three cases. (See Tables 8A-8C for full results).

In the 2016-2020 ANES panel, dropping controls for issue extremity and sorting similarly increases the strength of the associations between lagged value extremity and affective polarization and lagged affective polarization and value extremity, respectively. All three estimates of lagged value extremity and all three estimates of lagged affective polarization are significant, though the estimates for lagged affective polarization on value extremity remain larger than vice versa in all three cases (in line with the original findings). The relationship between value extremity and affective polarization still generally seems to run from the latter to former between 2016 and 2020 since the coefficients for lagged value extremity are larger in two of three cases. (See Tables 8D-8F for full results).

Overall, while additional significant results emerge in terms of associations between lagged affective polarization and value extremity between 1992 and 1996, and associations between lagged value extremity and affective polarization between 2016 and 2020, the relative magnitudes of these coefficients are consistent when dropping issue extremity and partisan-ideological sorting as controls in the CLPMs: value extremity has the larger association with changes in affective polarization in the 1990s, while affective polarization has the larger association with changes in value extremity between 2016 and 2020. There is evidence of bidirectional associations in both periods using a less conservative model, though this could merely reflect confounding due to omitted variable bias when dropping issue extremity and sorting as controls.

Table 8A—Cross-Lagged Panel Model Results (Ideological Group Ratings) by Controls

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Ideology Ratings) (1996)
<i>FULL MODEL</i>		
Value Extremity	0.197 (0.047)	0.086 (0.043)
Affective Polarization	0.078 (0.048)	0.472 (0.040)
Constant	0.360 (0.348)	0.368 (0.325)
<i>NO ISSUE/SORTING CONTROLS</i>		
Value Extremity	0.243 (0.040)	0.116 (0.038)
Affective Polarization	0.121 (0.043)	0.498 (0.035)
Constant	0.371 (0.340)	0.393 (0.317)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with ideological group ratings. Source: 1992-1996 ANES Panel.

Table 8B—Cross-Lagged Panel Model Results (Party Ratings) by Controls

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Party Ratings) (1996)
<i>FULL MODEL</i>		
Value Extremity	0.184 (0.048)	0.118 (0.044)
Affective Polarization	0.063 (0.044)	0.332 (0.038)
Constant	0.370 (0.348)	0.040 (0.327)
<i>NO ISSUE/SORTING CONTROLS</i>		
Value Extremity	0.245 (0.041)	0.182 (0.039)
Affective Polarization	0.089 (0.043)	0.370 (0.037)
Constant	0.377 (0.341)	0.195 (0.324)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with party ratings. Source: 1992-1996 ANES Panel.

Table 8C—Cross-Lagged Panel Model Results (Candidate Ratings) by Controls

Lagged Variables (1992)	Value Extremity (1996)	Affective Polarization (Candidate Ratings) (1996)
<i>FULL MODEL</i>		
Value Extremity	0.193 (0.047)	0.050 (0.046)
Affective Polarization	0.030 (0.043)	0.289 (0.040)
Constant	0.388 (0.348)	0.561 (0.338)
<i>NO ISSUE/SORTING CONTROLS</i>		
Value Extremity	0.260 (0.040)	0.114 (0.040)
Affective Polarization	0.053 (0.042)	0.321 (0.039)
Constant	0.428 (0.341)	0.739 (0.334)
N	597	597

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with presidential candidate ratings. Source: 1992-1996 ANES Panel.

Table 8D—Cross-Lagged Panel Model Results (Ideological Group Ratings) by Controls

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Ideology Ratings) (2020)
<i>FULL MODEL</i>		
Value Extremity	0.362 (0.033)	0.021 (0.029)
Affective Polarization	0.095 (0.032)	0.407 (0.029)
Constant	0.152 (0.112)	-0.157 (0.130)
<i>NO ISSUE/SORTING CONTROLS</i>		
Value Extremity	0.439 (0.028)	0.098 (0.025)
Affective Polarization	0.154 (0.029)	0.479 (0.027)
Constant	0.091 (0.109)	-0.005 (0.131)
N	2,670	2,670

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with ideological group ratings. Source: 2016-2020 ANES Panel.

Table 8E—Cross-Lagged Panel Model Results (Party Ratings) by Controls

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Party Ratings) (2020)
<i>FULL MODEL</i>		
Value Extremity	0.353 (0.032)	0.094 (0.029)
Affective Polarization	0.115 (0.028)	0.369 (0.031)
Constant	0.130 (0.115)	0.214 (0.169)
<i>NO ISSUE/SORTING CONTROLS</i>		
Value Extremity	0.437 (0.025)	0.142 (0.024)
Affective Polarization	0.162 (0.025)	0.402 (0.028)
Constant	0.044 (0.113)	0.261 (0.151)
N	2,670	2,670

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with party ratings. Source: 2016-2020 ANES Panel.

Table 8F—Cross-Lagged Panel Model Results (Candidate Ratings) by Controls

Lagged Variables (2016)	Value Extremity (2020)	Affective Polarization (Candidate Ratings) (2020)
<i>FULL MODEL</i>		
Value Extremity	0.341 (0.033)	0.046 (0.027)
Affective Polarization	0.156 (0.024)	0.391 (0.029)
Constant	0.101 (0.111)	0.811 (0.170)
<i>NO ISSUE/SORTING CONTROLS</i>		
Value Extremity	0.436 (0.025)	0.092 (0.022)
Affective Polarization	0.184 (0.025)	0.406 (0.029)
Constant	-0.004 (0.105)	0.790 (0.153)
N	2,670	2,670

Note: Table entries are cross-lagged panel model coefficients with standard errors in parentheses. Control variables omitted. Affective polarization measured with presidential candidate ratings. Source: 2016-2020 ANES Panel.