

Supplementary Appendix for “Party Polarization and Mass Partisanship: A Comparative Perspective,” *Political Behavior*

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Comparative Study of Electoral Systems (CSES)

The CSES is a compilation of election studies conducted by independent country researchers that include a common survey module and follow a set of standards for data quality and comparability delineated by the CSES Planning Committee (see Howell and Jusko 2009). Three CSES modules have been fielded to date, covering elections in the periods 1996-2001, 2001-2006, and 2006-2011. These election studies are largely conducted in the weeks following a national election (on average, 49 days after the election), although some are designed as panels that also include a preelection wave. They survey a nationally representative sample of age-eligible citizens from each country. The studies largely consist of face-to-face interviews (71 percent), although some are conducted by telephone (15 percent), via mail (6 percent), or employ a mix of interview modes (9 percent). Response rates for the first CSES module averaged over 60 percent. Most studies include sampling and demographic weights, which I use in my analysis along with a weight to account for the different sample sizes across studies.

American National Election Study (ANES)

The ANES Time Series Studies have been conducted during years of national elections in the United States since 1948 by the University of Michigan's Institute for Social Research with funding from the National Science Foundation. In presidential election years, the study is typically conducted both before and after the election (that is, a pre-election survey and a post-election survey), while for congressional election years the study has typically been conducted only after the election (a post-election survey). Originally conducted face-to-face, more recent ANES studies typically combine telephone and face-to-face interviewing. The ANES Cumulative File contains all of the data from these studies on survey items that appeared in at least three studies.

Political Socialization Study (PSS)

The Political Socialization Study is a four-wave long-term panel study of high-school seniors from the class of 1965 in the United States. The sample consists of high school seniors randomly selected from a nationally representative probability sample consisting of 97 public and private high schools. The 1965 wave of the study consisted of face-to-face interviews of 1,669 high school seniors. Of these, 1,348 were reinterviewed in 1973, and 1,135 of these were reinterviewed again in 1982. Finally, 935 of these individuals were reinterviewed in 1997. The vast majority of the 1973 and 1982 reinterviews were conducted face-to-face but a shortened mail-back questionnaire was also used. Roughly half the 1997 reinterviews were conducted in person and half by telephone (eight individuals completed a mail-back questionnaire). The PSS also interviewed some respondents' parents in 1965, 1973, and 1982.

References

Howell, David A., and Karen Long Jusko. 2009. "Methodological Challenges: Research Opportunities and Questions for the Future." In *The Comparative Study of Electoral Systems*, ed. Hans-Dieter Klingemann. Oxford: Oxford University Press.

Table A1: Descriptive statistics

Variable	Mean	Std. Dev.	Min.	Max.	Observations
CSES					
Polarization (CSES respondents)	3.4	1.94	0.32	8.74	149,179
Polarization (CSES experts)	3.92	1.87	0.24	9.04	143,085
Party age (logged)	3.27	1.1	0.51	5.08	149,179
ENP	3.89	0.97	1.79	6.47	149,179
Social heterogeneity	0.46	0.33	0	1.29	149,179
Partisanship	0.47	0.5	0	1	140,228
Perceived polarization (distance)	2.92	1.39	0	10	124,047
Perceived polarization (difference)	0.41	0.49	0	1	50,836
Proximity	9.42	0.97	0	10	116,712
Extreme	1.87	1.65	0	5	121,919
Household income	2.97	1.38	1	5	126,156
Education	3.87	0.99	1	5	146,804
Union member	0.23	0.42	0	1	139,404
Age	45.65	17.23	18	106	148,702
Female	0.52	0.5	0	1	149,056
ANES, 1972-2008					
Polarization (DW-Nominate)	0.65	0.14	0.51	0.96	34,425
Partisanship	0.87	0.34	0	1	34,073
Perceived polarization (distance)	2.55	1.55	0	6	23,975
Perceived polarization (difference)	0.62	0.49	0	1	19,135
Proximity	5.10	0.86	0	6	20,717
Extreme	1.06	0.92	0	3	23,732
Household income	2.89	1.14	1	5	29,909
Education	3.77	1.63	1	6	34,118
Union member	0.2	0.4	0	1	34,192
Age	44.88	17.77	18	99	34,251
Female	0.56	0.5	0	1	34,425
PSS					
Partisanship	0.67	0.47	0	1	4,630
Perceived polarization	0.47	0.5	0	1	4,629
Political knowledge	2.33	1.48	0	5	5,087
Female	0.48	0.5	0	1	6,676

Table A2: Multilevel probit models relating party polarization and mass partisanship

	CSES (1)	CSES (2)	ANES (3)
Polarization (CSES respondents)	0.055** (0.007)		
Polarization (CSES experts)		0.056** (0.005)	
Polarization (DW-Nominate)			0.469** (0.162)
Party age (logged)	0.074** (0.008)	0.021* (0.009)	
ENP	-0.148** (0.011)	-0.101** (0.009)	
Social heterogeneity	-0.031 (0.087)	-0.063 (0.045)	
Proximity	0.077** (0.007)	0.077** (0.007)	0.151** (0.016)
Extreme	0.183** (0.008)	0.182** (0.008)	0.181** (0.026)
Household income	0.032** (0.006)	0.036** (0.007)	0.038* (0.018)
Education	0.049** (0.011)	0.045** (0.011)	0.061** (0.012)
Union member	0.081** (0.020)	0.078** (0.016)	0.023 (0.026)
Age	0.003 (0.002)	0.003 (0.002)	0.005 (0.007)
Age ²	0.000** (0.000)	0.000** (0.000)	0.000 (0.000)
Female	-0.067** (0.012)	-0.064** (0.012)	0.211** (0.027)
Constant	-1.425** (0.168)	-1.437** (0.137)	-0.593** (0.148)
Random effect	0.202** (0.009)	0.232** (0.011)	0.084** (0.026)
Observations	92,605	88,168	18,905
Surveys	88	84	17
Log-likelihood	-56507.5	-53685.2	-5522.0
BIC	113175	107530	11152
ePCP	0.51	0.51	0.92

Robust standard errors in parentheses

** $p < 0.01$, * $p < 0.05$

Table A3: Multilevel linear models relating party polarization and perceived polarization

	CSES (4)	CSES (5)	ANES (6)
Polarization (CSES respondents)	0.198** (0.005)		
Polarization (CSES experts)		0.125** (0.004)	
Polarization (DW-Nominate)			0.527* (0.211)
Party age (logged)	0.167** (0.010)	0.131** (0.008)	
ENP	-0.073** (0.013)	-0.077** (0.008)	
Social heterogeneity	0.031 (0.029)	-0.009 (0.030)	
Proximity	0.000 (0.026)	-0.000 (0.026)	-0.045 (0.044)
Extreme	0.242** (0.013)	0.243** (0.013)	0.227** (0.017)
Household income	0.025** (0.007)	0.028** (0.007)	0.048** (0.017)
Education	0.048** (0.011)	0.055** (0.013)	0.127** (0.014)
Union member	0.020 (0.013)	0.053** (0.015)	0.026 (0.033)
Age	0.008** (0.002)	0.007** (0.002)	0.003 (0.008)
Age ²	-0.000** (0.000)	-0.000* (0.000)	0.000 (0.000)
Female	0.060** (0.016)	0.053** (0.016)	0.036 (0.032)
Constant	0.960** (0.203)	1.433** (0.204)	1.191** (0.339)
Random effect	0.332** (0.011)	0.271** (0.006)	0.198** (0.015)
Observations	96,013	90,421	18,616
Surveys	89	84	17
Log-likelihood	-146759.8	-138450.8	-34580.8
BIC	293692	277073	69280

Robust standard errors in parentheses

** $p < 0.01$, * $p < 0.05$

Table A4: Multilevel probit models relating perceived polarization and partisanship

	CSES (7)	CSES (8)	ANES (9)	ANES (10)
Perceived polarization (distance)	0.091** (0.009)		0.153** (0.014)	
Perceived polarization (difference)		0.353** (0.038)		0.519** (0.037)
Proximity	0.076** (0.008)	0.064** (0.010)	0.172** (0.018)	0.148** (0.029)
Extreme	0.161** (0.009)	0.185** (0.013)	0.180** (0.029)	0.213** (0.027)
Household income	0.031** (0.007)	0.034** (0.010)	0.030 (0.017)	0.039 (0.023)
Education	0.038** (0.013)	0.032 (0.017)	0.040** (0.013)	0.033* (0.015)
Union member	0.065** (0.024)	0.031 (0.029)	0.026 (0.027)	0.018 (0.049)
Age	0.003 (0.002)	-0.002 (0.004)	0.001 (0.006)	-0.010 (0.009)
Age ²	0.000** (0.000)	0.000** (0.000)	0.000 (0.000)	0.000 (0.000)
Female	-0.073** (0.012)	-0.055* (0.022)	0.217** (0.023)	0.226** (0.042)
Constant	-1.813** (0.106)	-1.140** (0.113)	-0.553** (0.158)	-0.149 (0.199)
Random effect	0.280** (0.044)	0.334** (0.018)	0.077** (0.024)	0.059* (0.024)
Observations	92,605	35,476	18,543	11,745
Surveys	88	35	17	14
Log-likelihood	-56224.85	-21022.61	-5263.98	-3072.51
BIC	112576	42160	10636	6248
ePCP	0.51	0.54	0.92	0.92

Robust standard errors in parentheses

** $p < 0.01$, * $p < 0.05$

Table A5: Structural equation models relating perceived polarization and voter partisanship

	PSS (11)
Partisanship	
Perceived polarization (lagged)	0.079** (0.019)
Partisanship (lagged)	0.307** (0.021)
Political knowledge	0.009 (0.007)
Female	0.087** (0.021)
Constant	0.253** (0.028)
Perceived polarization	
Perceived polarization (lagged)	0.284** (0.019)
Partisanship (lagged)	0.011 (0.019)
Political knowledge	0.057** (0.007)
Female	0.061** (0.019)
Constant	0.244** (0.028)
Observations	2,669
Respondents	1,178

Robust standard errors in parentheses

** $p < 0.01$, * $p < 0.05$

Table A6: Additional CSES models

Dependent variable:	(A1) Partisanship	(A2) Partisanship	(A3) Partisanship	(A4) Partisanship	(A5) Partisanship	(A6) Partisanship
Polarization (CSES respondents)	0.045** (0.006)		0.034** (0.004)			
Polarization (CSES experts)		0.027** (0.004)		0.040** (0.005)		
Polarization (Chapel Hill experts)					0.109** (0.007)	
Polarization (CMP)						0.399** (0.035)
Party age (logged)	0.054** (0.010)	-0.013 (0.012)	0.053** (0.007)	0.075** (0.008)	0.086** (0.014)	0.014 (0.009)
ENP	-0.133** (0.010)	-0.070** (0.010)	-0.089** (0.030)	-0.130** (0.011)	-0.185** (0.016)	-0.190** (0.011)
Social heterogeneity	-0.011 (0.028)	0.017 (0.036)	-0.129* (0.075)	-0.223** (0.032)	-0.296** (0.067)	-0.141** (0.026)
Proximity	0.077** (0.007)	0.074** (0.007)	0.079** (0.007)	0.080** (0.007)	0.097** (0.012)	0.081** (0.008)
Extreme	0.180** (0.009)	0.180** (0.009)	0.182** (0.009)	0.183** (0.009)	0.194** (0.011)	0.191** (0.010)
Household income	0.032** (0.007)	0.034** (0.007)	0.033** (0.008)	0.034** (0.007)	0.043** (0.010)	0.042** (0.008)
Education	0.054** (0.012)	0.041** (0.012)	0.047** (0.015)	0.042** (0.010)	0.060** (0.014)	0.058** (0.011)
Union member	0.087** (0.016)	0.082** (0.023)	0.059** (0.016)	0.065** (0.015)	0.089** (0.019)	0.090** (0.017)
Age	0.002 (0.003)	0.001 (0.003)	0.004 (0.002)	0.004 (0.003)	0.005 (0.004)	0.004 (0.003)
Age ²	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)
Female	-0.059** (0.013)	-0.058** (0.014)	-0.064** (0.012)	-0.064** (0.012)	-0.078** (0.015)	-0.068** (0.014)
Constant	-1.365** (0.146)	-1.369** (0.116)	-1.547** (0.178)	-1.420** (0.133)	-1.834** (0.149)	-1.153** (0.113)
Random effect	0.187** (0.011)	0.253** (0.015)	0.244** (0.011)	0.235** (0.010)	0.426** (0.029)	0.267** (0.010)
Observations	75,323	71,683	88,830	85,190	46,914	70,869
Surveys	71	68	83	80	44	66
Log-likelihood	-45875.31	-43566.13	-53748.66	-51409.07	-28910.68	-42927.62

Note: Models A1 and A2 limit the sample to those country-years in which the parties listed in the survey received at least 90% of total vote share. Models A3 and A4 limit the sample to those studies of lower-house elections. Model A5 uses a measure of polarization based on expert surveys from Chapel Hill. Model A6 uses a measure of polarization based on party manifestos.

Robust standard errors in parentheses; ** $p < 0.05$, * $p < 0.1$

Table A7: Additional ANES models

	(A7)	(A8)	(A9)	(A10)	(A11)
Dependent variable:	Partisanship	Partisanship	Partisanship	Perceived Polarization	Partisanship
Polarization (DW-Nominate)	0.171* (0.102)			1.231** (0.084)	
Perceived polarization (distance)		0.130** (0.007)			0.169** (0.012)
Perceived polarization (difference)			0.493** (0.027)		
Proximity	0.143** (0.010)	0.157** (0.011)	0.132** (0.015)	-0.123** (0.025)	0.206** (0.022)
Extreme	0.233** (0.020)	0.212** (0.020)	0.230** (0.020)	0.260** (0.018)	0.228** (0.027)
Household income	0.003 (0.012)	-0.002 (0.012)	0.002 (0.015)	0.077** (0.010)	0.052** (0.019)
Education	0.007 (0.007)	-0.009 (0.007)	-0.008 (0.011)	0.154** (0.013)	0.029 (0.017)
Union member	0.021 (0.018)	0.021 (0.018)	0.013 (0.022)	0.061 (0.038)	0.083** (0.042)
Age	0.012** (0.004)	0.010** (0.003)	0.005 (0.005)	-0.011* (0.006)	-0.012 (0.008)
Age ²	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000** (0.000)	0.000** (0.000)
Female	0.189** (0.023)	0.188** (0.024)	0.194** (0.035)	0.008 (0.035)	0.169** (0.026)
Constant				1.465** (0.122)	-0.437* (0.260)
Random effect	0.051** (0.011)	0.039** (0.011)	0.052** (0.013)	0.129** (0.021)	0.066** (0.026)
Observations	18,905	18,543	11,745	12,336	12,292
Surveys	17	17	14	11	11
Log-likelihood	-24621.43	-23861.08	-14662.72	-21904.37	-2986.58

Note: Models A7-A9 use an ordinal measure of partisanship. Models A10-A11 limit the sample to surveys beginning in 1984.

Robust standard errors in parentheses; ** $p < 0.05$, * $p < 0.1$

Table A8: Additional PSS model

(A12)	
Partisanship	
Perceived polarization (lagged)	0.085** (0.018)
Partisanship (lagged)	0.392** (0.019)
Political knowledge	0.031 (0.019)
Female	0.031** (0.020)
Constant	0.932** (0.065)
Perceived polarization	
Perceived polarization (lagged)	0.277** (0.019)
Partisanship (lagged)	0.050** (0.019)
Political knowledge	0.155** (0.019)
Female	0.056** (0.019)
Constant	0.457** (0.059)
Observations	2,630
Respondents	1,176

Note: Model A12 uses an ordinal measure of partisanship.

Robust standard errors in parentheses; ** $p < 0.05$, * $p < 0.1$