CROSS-COUNTRY TRENDS IN AFFECTIVE POLARIZATION

Levi Boxell, Matthew Gentzkow, and Jesse M. Shapiro*

Abstract—We measure trends in affective polarization in twelve OECD countries over the past four decades. According to our baseline estimates, the United States experienced the largest increase in polarization over this period. Five countries experienced a smaller increase in polarization. Six countries experienced a decrease in polarization. We relate trends in polarization to trends in potential explanatory factors.

I. Introduction

AFFECTIVE polarization refers to the extent to which citizens feel more negatively toward other political parties than toward their own (Iyengar et al., 2019). Affective polarization has risen substantially in the United States in recent decades (Iyengar et al., 2019). In 1978, according to our calculations, the average partisan rated in-party members 27.4 points higher than out-party members on a "feeling thermometer" ranging from 0 to 100. In 2020, the difference was 56.3, implying an increase of 1.08 standard deviations as measured in the 1978 distribution. Growing affective polarization may have important consequences, including reducing the efficacy of government (Hetherington & Rudolph, 2015),[1] increasing the homophily of social groups (Iyengar et al., 2012, 2019), and altering economic decisions (Gift & Gift, 2015; Iyengar et al., 2019).

Partly due to the difficulty of constructing harmonized data series on partisan affect, there is limited evidence on long-term trends in affective polarization in developed democracies other than the United States. Cross-country comparisons can help assess why affective polarization has risen in the United States. If affective polarization has risen in countries other than the United States, then examining commonalities may suggest promising explanations for the United States experience. If affective polarization has not risen elsewhere, then it may be fruitful to examine factors that help distinguish the United States from other developed democracies.

In this paper, we present the first cross-country evidence on trends in affective polarization since the 1980s, focusing on twelve OECD countries. In our baseline analysis, we find that the United States exhibited the largest increase in affective polarization over this period. In five other countries—Switzerland, France, Denmark, Canada, and New Zealand—polarization also rose, but to a lesser extent. In six other countries—Japan, Australia, Britain, Norway, Sweden, and (West) Germany—polarization fell.

To conduct our analysis, we constructed a new database from 149 different surveys, many of which we harmonized manually. These data permit a first look at cross-country trends in affective polarization since the 1980s, but they also have important limitations. The set of years with available survey data differs across countries. Question wording and response scales differ across countries and, in some cases, across survey years for a given country. We include information about question wording and scale in our plots, analyze the sensitivity of our findings to an alternative transformation of the response scale, and show direct evidence on the sensitivity of measured affective polarization to survey question wording and response scale. Because the number and nature of political parties differ across countries and within countries over time, even identically structured survey questions may take on different meanings in different contexts. We analyze the sensitivity of our findings to restricting attention to the top two parties in each country and focusing on periods in which this pair of parties is stable.

We also assemble data on trends in economic, media, demographic, and political factors that may be related to affective polarization. Trends in measures of inequality, openness to trade, the share getting news online, and the fraction foreign-born are either negatively or weakly associated with trends in affective polarization. Trends in the number of

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[1] See also Kimball et al. (2018). Commentators expressing related concerns include Obama (2010); Blankenhorn (2015); and Drutman (2017). A 2018 survey shows that more than 70% of foreign policy opinion leaders consider political polarization a "critical threat" facing the United States, ranking it above issues such as foreign nuclear programs (Smeltz et al., 2018).

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private 24-hour news channels, the nonwhite share, partisan sorting, and elite polarization are positively associated with trends in affective polarization. The association is strongest for the nonwhite share and elite polarization.

We are not aware of prior work that situates the rise in affective polarization in the United States alongside trends in as many as eleven other OECD countries over a roughly four-decade span, and studies the relationship between trends in polarization and trends in potential explanatory factors over that period. Much previous comparative work on affective polarization has been cross-sectional (e.g., Carlin & Love, 2018; Westwood et al., 2018; Martini & Torcal, 2019) or has relied on data from the Comparative Study of Electoral Systems (CSES) whose data begin in 1996 (e.g., Reiljan, 2020; Gidron et al., 2019a,b, 2020; Harteveld, 2021; Ward & Tavits, 2019; Wagner, 2021).[2] There is also previous comparative work studying dimensions of mass polarization, such as ideological polarization, that may have causes and consequences distinct from those of affective polarization (Iyengar et al., 2019). For example, Draca and Schwarz (2021) analyze data from the World and European Values Surveys from 1989 through 2010 and find that the United States experienced the largest increase in ideological polarization among the 17 countries considered.[3]

The remainder of the paper is organized as follows. Section II describes our data sources and measure of affective polarization. Section III presents our findings on trends in affective polarization. Section IV presents our findings on the relationship between trends in affective polarization and trends in potential explanatory factors. Section V concludes.

II. Data and Measure of Affective Polarization

Among members of the OECD as of 1973, there are ten, including the United States, for which we are aware of an election study with a partisan affect question prior to 1985. Our sample includes these ten countries, as well as Australia and New Zealand, which we believe make interesting comparisons to the United States. Appendix figure 10 and appendix table 2 provide information on data availability for all 1973 OECD members, including those we do not include in our sample. We extract a survey weight associated with each respondent. Appendices A.5 and A.6 detail the survey variables and data sources for each sample country and included survey year.

We extract each respondent's party identification, excluding "leaners" who only choose a party identification in response to a second prompt. We exclude "leaners" from our sample because not all surveys include a second prompt.[4] Appendix figure 1 depicts trends in the share of respondents identifying with a party and the share of affiliates who are affiliated with the top two parties, separately by country.

We extract a measure of each respondent's affect toward the parties in the respondent's country. Questions about affect vary across surveys, commonly asking respondents how they feel toward a given party, how much they like the party, or to what extent they sympathize with the party.[5] Numerical response scales also differ across surveys. We apply an affine transformation to the responses in each survey so that the minimum transformed response is 0 and the maximum transformed response is 100. We refer to the transformed response as the respondent's reported affect toward the given party.

To define affective polarization, fix a given survey and let $\mathscr{P}$ denote the set of parties toward which respondents are asked their affect. Let $\mathscr{N}$ denote the set of respondents with nonzero weight who both provide a valid party identification in $\mathscr{P}$ and report a valid affect toward their own party and at least one other party in $\mathscr{P}$.[6] For each respondent $i \in \mathscr{N}$, let $p(i) \in \mathscr{P}$ denote the party with which the respondent identifies and let $\mathscr{P}_i \subseteq \mathscr{P}$ denote the set of parties toward which the respondent reports a valid affect. Let $A_i^p \in [0, 100]$ denote the reported affect of respondent i toward party $p \in \mathscr{P}_i$. Finally, let $w_i \geqslant 0$ denote the survey weight of respondent $i \in \mathscr{N}$ and let $W\left(\mathscr{P}'\right) = \sum_{\{i \in \mathscr{N}: p(i) \in \mathscr{P}'\}} w_i$ denote the weighted number of respondents in any set of parties $\mathscr{P}' \subseteq \mathscr{P}$, with $W\left(\mathscr{P}\right)$ denoting the weighted number of respondents in $\mathscr{N}$.

We define the partisan affect π_i of respondent i as

$$\pi_i = \sum_{p' \in \mathscr{P}_i \setminus p(i)} \frac{W\left(p'\right)}{W\left(\mathscr{P}_i\right) - W\left(p\left(i\right)\right)} \left(A_i^{p(i)} - A_i^{p'}\right).$$

Partisan affect π_i reflects the extent to which respondent i expresses a more favorable attitude toward her own party than toward other parties.

We define affective polarization Π as the weighted average of respondents' partisan affect:

$$\Pi = \sum_{i \in \mathscr{N}} \frac{w_i}{W\left(\mathscr{P}\right)} \pi_i.$$

If there are two parties and all respondents state their affect toward both, then affective polarization Π is the difference between weighted mean own-party affect and weighted mean other-party affect, as in Iyengar et al. (2019).[7] In the

[2] Iyengar et al. (2012) compare how individuals in the United States and UK between 1960 and 2010 feel about their children marrying across party lines, and find larger increases in displeasure in the United States.

[3] Some other studies examine long-term trends in mass polarization in individual countries outside the United States, including Canada (Kevins & Soroka, 2018), Germany (Munzert & Bauer, 2013), Britain (Adams et al., 2012a,b), and the Netherlands (Adams et al., 2011), but do not report trends in affective polarization.

[4] Keith et al. (1992) discuss the interpretation of "leaners."

[5] Druckman and Levendusky (2019) study the interpretation of such questions.

[6] We iteratively define $\mathscr{P}$ and $\mathscr{N}$ after excluding parties with zero affiliates in $\mathscr{N}$ from $\mathscr{P}$.

[7] In this case,

$$\Pi = \sum_{i \in \mathscr{N}} \frac{w_i}{W\left(\mathscr{P}\right)} A_i^{p(i)} - \sum_{i \in \mathscr{N}} \frac{w_i}{W\left(\mathscr{P}\right)} A_i^{\mathscr{P} \setminus p(i)}.$$

multi-party case, our definition is similar to ones adopted by (Gidron et al., 2019b, 2020, equations 1 and 2); (Reiljan, 2020, equation 3); and (Harteveld, 2021, equation 1).[8]

We obtain data on various potential explanatory variables at the level of the country and year from a range of sources that are detailed in appendix A.7. We try to collect variables that can be measured reasonably well across different countries and years, and that have been linked in the literature to the rise in affective polarization. Though not exhaustive, we believe that the variables we collect reflect many of the important factors that meet these criteria.

III. Comparison of Trends in Affective Polarization

Figure 1 shows the time path of affective polarization in each of the twelve countries that we study. Plot markers indicate the response scaling in the original survey question. The depicted intervals constitute a uniform 95% confidence band for affective polarization, computed following Montiel Olea and Plagborg-Møller (2019).

Each plot depicts an estimated linear time trend and reports its slope. For no country does the uniform confidence band contain the linear fit, indicating that the linear fit should be taken only as a convenient summary of the average change, not as a complete description of the dynamics of the series.[9] Each plot also reports the 95% confidence interval for the slope of the linear trend, computed following Imbens and Kolesár (2016). Although these intervals and associated p-values are designed for small-sample settings (using an adjustment from Bell & McCaffrey, 2002), we nevertheless suggest interpreting statements of statistical significance regarding the linear trends with caution, especially for countries with relatively few survey years.

Consistent with the existing evidence (e.g., Iyengar et al., 2019), figure 1 shows that affective polarization grew rapidly in the United States over the sample period. The estimated linear trend is 5.6 points per decade (p-value < 0.001). For comparison, the standard deviation in partisan affect in the base period of 1978 was 26.7.

Five other countries—Switzerland, France, Denmark, Canada, and New Zealand—exhibit a smaller positive trend. The trend is statistically significant for Denmark. Switzerland's is the largest trend of the five, with a slope of 5.1 points per decade (p-value $= 0.090$). Panel A of table 1 shows that we can reject the (pairwise) equality of linear trends between the United States and each of the five other countries with a positive trend, except Switzerland.

The remaining six countries—Japan, Australia, Britain, Norway, Sweden, and Germany—exhibit a negative linear trend, which is statistically significant for Sweden and Germany. Germany exhibits the largest negative trend, equal to 3.7 points per decade (p-value < 0.001), which can be compared to a standard deviation in partisan affect in the base period of 1977 of 25.4. Panel A of table 1 shows that we can reject the (pairwise) equality of trends between the United States and each of the six countries with a negative linear trend.

Appendix figure 2 breaks down the trends in affective polarization into affect toward the respondent's own party and affect toward other parties. Consistent with an existing literature on negative partisanship (e.g., Abramowitz & Webster, 2018), affect towards other parties decreased at a rate of 6.2 points per decade (p-value < 0.001) in the United States, a more negative linear trend than in any other country in our sample.

Panel C of table 1 shows estimated linear trends separately for the periods before and after 2000. After 2000, all countries except Britain and Germany exhibit a positive linear trend, with the United States having the largest estimated trend among all sample countries. We can reject the (pairwise) equality of post-2000 linear trends between the United States and Australia, Norway, and Germany.

Figure 2 shows the time path of affective polarization when restricting attention to the two largest parties in each survey round and to a set of surveys with the same two largest parties. The estimated trend changes sign for Canada and Japan. In this specification Japan exhibits a large, positive linear trend, more positive than that for the United States, though estimated using only three surveys.

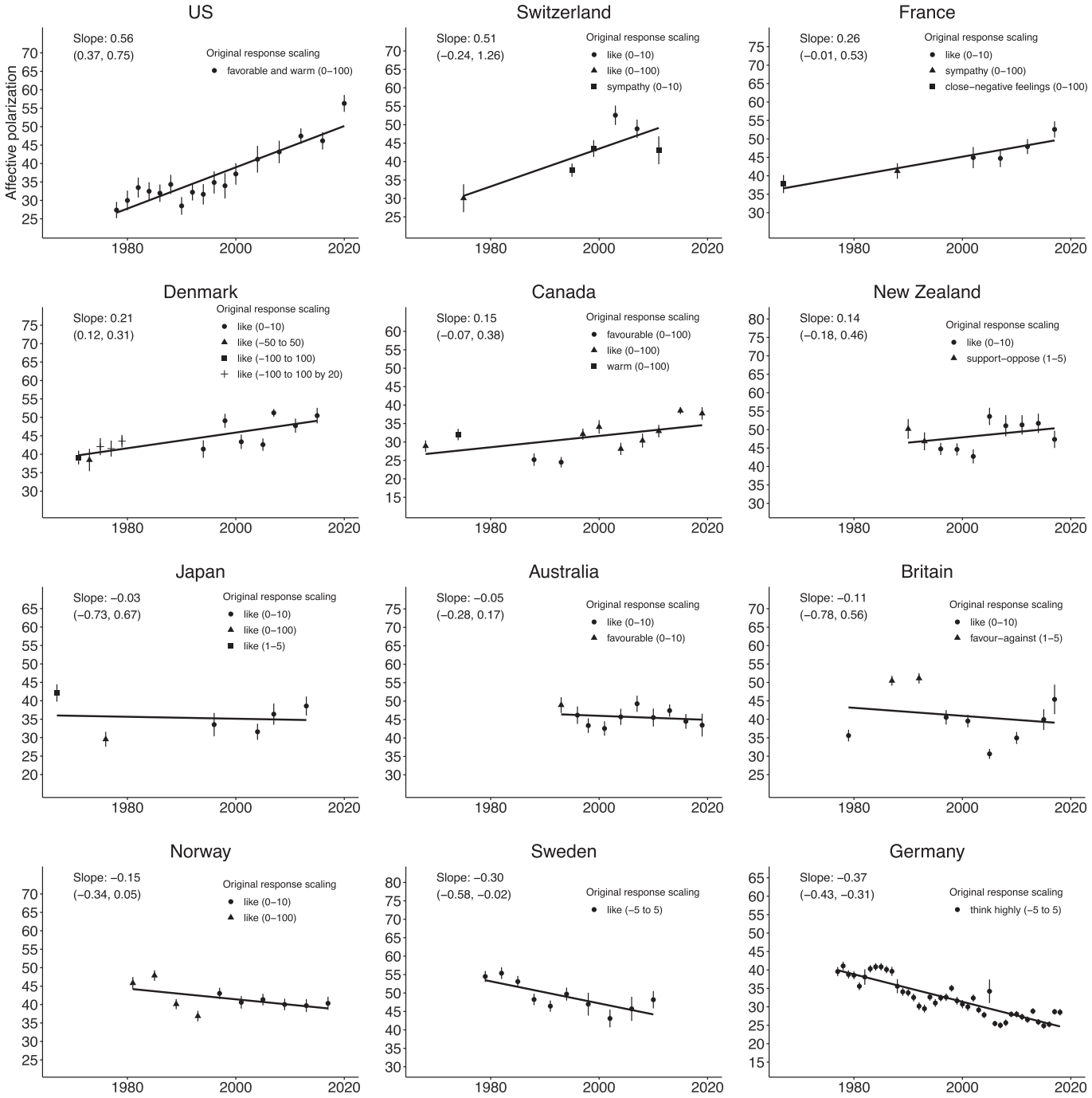
Our baseline sample excludes "leaners" who provide a party affiliation only when prompted a second time. Recall that we exclude this group from our main sample because not all surveys include a second prompt. For those countries where it is feasible, appendix figure 3 shows the time path of affective polarization when including "leaners." In this exercise, the United States remains the country with the largest linear trend. Appendix figure 4 shows the time path of affective polarization when assigning party affiliation based on the party toward which the respondent reports the most positive affect. In this exercise, the United States and Switzerland are tied (at reporting precision) for the largest linear trend.

Our baseline estimates of affective polarization also depend on an affine transformation of responses into a common scale. Appendix figure 5 shows the time path of affective polarization when we coarsen reported affect to a five-point scale so that surveys do not differ in the fineness of the affect scale. In this specification, the linear trend is more positive for Switzerland than for the United States. Appendix figure 6 compares the time path of affective polarization in the United States measured from the survey question we use in our main analysis with the time path of affective polarization measured from an alternative survey question with a different response scale asked in a subset of survey years. The estimated trends differ by 1.2 points per decade (SE $= 0.7$),

[8] See also Wagner (2021, section 4.1).

[9] Some countries appear to exhibit cyclicality in affective polarization. In some of these countries (e.g., Britain), the surveys we rely on coincide with elections, suggesting that election years themselves are not the source of the apparent cyclicality.

FIGURE 1.—TRENDS IN AFFECTIVE POLARIZATION BY COUNTRY



The plot shows our estimates of affective polarization Π as defined in section II. In each plot, one point represents one survey. The line displays a fitted bivariate linear regression line with affective polarization as the dependent variable and survey year as the independent variable. Each plot reports the estimated slope (change per year) and the corresponding 95% confidence interval computed following Imbens and Kolesár (2016). The error bars display a 95% uniform confidence band for affective polarization in the given country, constructed following the plug-in sup-t method described in Montiel Olea and Plagborg-Møller (2019), under the assumption that estimates are independent across surveys. These calculations use 1000 simulation draws and estimate the standard error of affective polarization in a given survey as $\sqrt{\sum_{i \in \mathcal{N}} \left(\frac{w_i}{W(\mathcal{P})}\right)^2 (\pi_i - \Pi)^2}$.

which can be compared to a baseline trend of 6.4 points per decade. Appendix figure 7 compares measured affective polarization between our data sources and those in the CSES.

Panel B of table 1 reports the estimated trends and confidence intervals for the sensitivity analyses in appendix figures 3–5.

IV. Comparison of Trends in Potential Explanatory Factors

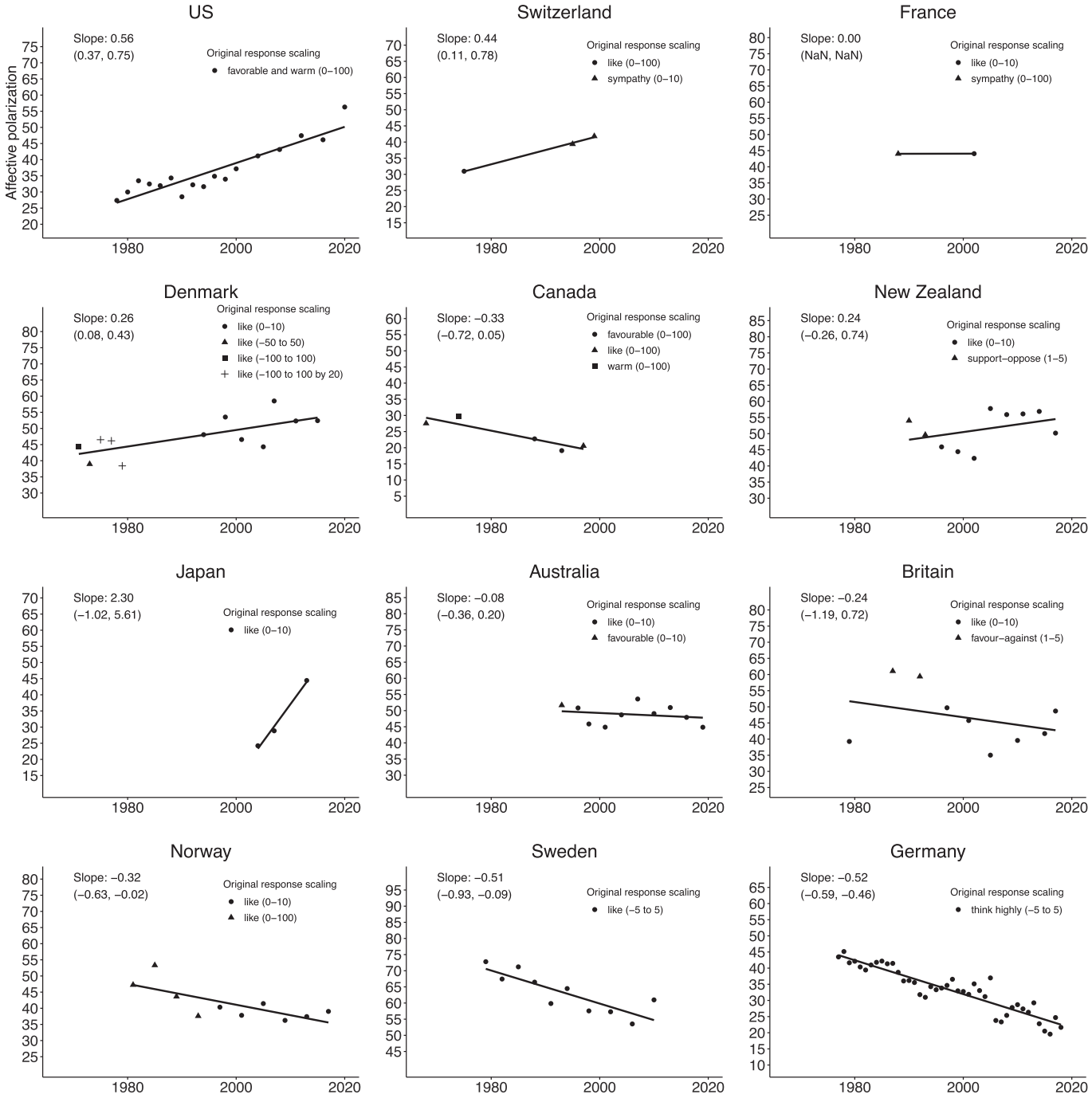
Figure 3 presents evidence on trends in potential explanatory factors. Each panel corresponds to a different group of variables. Each plot within a panel corresponds to a different variable. Each plot is a scatterplot where the *y*-axis is the

TABLE 1.—TRENDS IN AFFECTIVE POLARIZATION

	United States	Switzerland	France	Denmark	Canada	New Zealand	Japan	Australia	Britain	Norway	Sweden	Germany
	Panel A: Baseline											
Baseline	0.56 [17]	0.51 [6]	0.26 [6]	0.21 [12]	0.15 [11]	0.14 [10]	−0.03 [6]	−0.05 [10]	−0.11 [9]	−0.15 [10]	−0.30 [10]	−0.37 [42]
	(0.37, 0.75)	(−0.24, 1.26)	(−0.01, 0.53)	(0.12, 0.31)	(−0.07, 0.38)	(−0.18, 0.46)	(−0.73, 0.67)	(−0.28, 0.17)	(−0.78, 0.56)	(−0.34, 0.05)	(−0.58, −0.02)	(−0.43, −0.31)
Test of eq. w/ US	1.000	0.783	0.032	0.002	0.005	0.023	0.029	0.001	0.028	0.000	0.000	0.000
Test of eq. w/ zero	0.000	0.090	0.055	0.001	0.126	0.291	0.896	0.541	0.665	0.111	0.041	0.000
	Panel B: Sensitivity analysis											
Top two parties	0.56 [17]	0.44 [3]	0.00 [2]	0.26 [12]	−0.33 [5]	0.24 [10]	2.30 [3]	−0.08 [10]	−0.24 [9]	−0.32 [10]	−0.51 [10]	−0.52 [42]
	(0.37, 0.75)	(0.11, 0.78)	(—, —)	(0.08, 0.43)	(−0.72, 0.05)	(−0.26, 0.74)	(−1.02, 5.61)	(−0.36, 0.20)	(−1.19, 0.72)	(−0.63, −0.02)	(−0.93, −0.09)	(−0.59, −0.46)
Including leaners	0.51 [17]	0.38 [5]	0.44 [4]	0.15 [12]	0.00 [8]	0.13 [9]	−0.11 [6]	— [—]	−0.10 [9]	— [—]	−0.37 [10]	— [—]
	(0.28, 0.73)	(−1.42, 2.18)	(−0.79, 1.67)	(0.05, 0.26)	(−0.20, 0.20)	(−0.13, 0.38)	(−0.80, 0.57)	(—, —)	(−0.75, 0.55)	(—, —)	(−0.62, −0.12)	(—, —)
Favorite party	0.47 [17]	0.47 [6]	0.26 [6]	0.18 [12]	0.12 [11]	0.17 [10]	−0.12 [6]	−0.15 [10]	−0.04 [9]	−0.11 [10]	−0.28 [10]	−0.17 [42]
	(0.25, 0.69)	(−0.16, 1.10)	(0.02, 0.50)	(0.08, 0.27)	(−0.09, 0.33)	(−0.07, 0.40)	(−0.88, 0.63)	(−0.35, 0.05)	(−0.57, 0.49)	(−0.28, 0.05)	(−0.55, −0.01)	(−0.22, −0.12)
Coarsening	0.53 [17]	0.57 [6]	0.34 [6]	0.20 [12]	0.13 [11]	0.19 [10]	−0.01 [6]	−0.06 [10]	−0.11 [9]	−0.19 [10]	−0.29 [10]	−0.39 [42]
	(0.35, 0.72)	(−0.24, 1.37)	(−0.03, 0.71)	(0.09, 0.32)	(−0.14, 0.39)	(−0.12, 0.49)	(−0.76, 0.74)	(−0.28, 0.16)	(−0.77, 0.55)	(−0.38, 0.01)	(−0.55, −0.03)	(−0.46, −0.32)
	Panel C: Time periods											
Pre-2000	0.28 [12]	0.68 [3]	0.15 [2]	0.17 [7]	−0.01 [6]	−0.27 [4]	−0.23 [3]	−0.47 [3]	−0.20 [4]	−0.30 [5]	−0.53 [7]	−0.46 [24]
	(0.10, 0.45)	(−1.26, 2.62)	(−0.10, 0.40)	(−0.06, 0.40)	(−0.39, 0.36)	(−1.61, 1.08)	(−1.03, 0.57)	(−1.86, 0.91)	(−2.75, 2.35)	(−0.67, 0.07)	(−0.80, −0.26)	(−0.57, −0.35)
Post-2000	0.93 [5]	0.04 [3]	0.51 [4]	0.34 [5]	0.47 [5]	0.34 [6]	0.66 [3]	0.05 [7]	−0.01 [5]	0.04 [5]	0.34 [3]	−0.24 [18]
	(0.52, 1.33)	(−2.39, 2.47)	(−0.02, 1.04)	(−0.29, 0.96)	(−0.05, 1.00)	(−0.45, 1.14)	(−1.04, 2.35)	(−0.35, 0.46)	(−1.16, 1.15)	(−0.34, 0.41)	(−0.42, 1.11)	(−0.39, −0.09)
Test of eq. w/ US (post)	1.000	0.253	0.107	0.056	0.090	0.106	0.482	0.003	0.061	0.003	0.101	0.000
Test of eq. w/ zero (post)	0.003	0.950	0.055	0.180	0.065	0.287	0.183	0.731	0.989	0.776	0.219	0.003
Test of eq. (pre vs post)	0.011	0.495	0.159	0.577	0.132	0.385	0.200	0.350	0.850	0.181	0.045	0.051
	Panel D: Standard deviation											
First survey year	1978	1975	1967	1971	1968	1990	1967	1993	1979	1981	1979	1977
Weighted S.D. of π_i	26.66	23.04	26.19	17.49	24.82	31.95	28.77	32.62	23.12	19.07	21.19	25.39

The table reports the estimated slope of a fitted bivariate linear regression line with affective polarization Π (as defined in section II) as the dependent variable and survey year as the independent variable. Adjacent to the slope, the table reports the number of survey years in brackets. Below the estimated slope, the table reports a 95% confidence interval for the slope. "Baseline" reports estimates from our main specification as in figure 1. "Top two parties" reports estimates after restricting the universe of parties $\mathscr{P}$ to the two parties p with the largest weighted number of respondents $W(p)$ identifying with that party and restricting to surveys in which the set of top two parties coincides with the modal set across all years for the given country as in figure 2. "Including leaners" reports estimates after including respondents who only choose a party identification in response to a second survey prompt and restricting to countries that have such a survey in at least two years as in appendix figure 3. "Favorite party" reports estimates after assuming each respondent i is affiliated to the party p toward which the respondent expresses the most positive affect A_i^p, breaking ties at random, as in appendix figure 4. "Coarsening" reports estimates after coarsening reported affect A_i^p to a five-point scale by rounding to the nearest multiple of 25 as in appendix figure 5. "Pre-2000" and "Post-2000" are the respective estimated linear trends when we impose a linear spline with a knot at 2000. The last two rows of panel A report the p-values from tests of whether the slope for a given country is equal to the slope in the United States and zero, respectively. The penultimate two rows of panel C report the p-values from tests of whether the post-2000 slope for a given country is equal to the post-2000 slope in the United States and zero, respectively, and the last row of panel C reports the p-value from a test of whether the pre-2000 and post-2000 slopes are the same in a given country. Confidence intervals and p-values are computed following Imbens and Kolesár (2016). Panel D reports the weighted standard deviation of partisan affect π_i in the first survey year for each respective country.

FIGURE 2.—TRENDS IN AFFECTIVE POLARIZATION BY COUNTRY – TOP TWO PARTIES

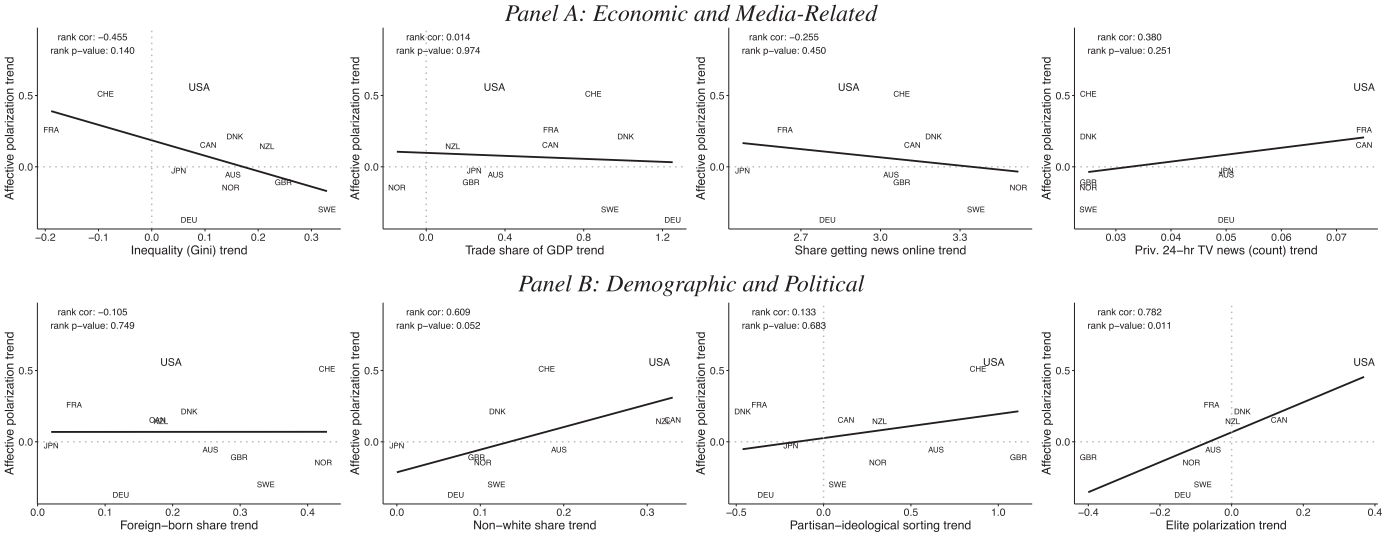


The plot shows our estimates of affective polarization Π as defined in section II. In each survey, we restrict the universe of parties $\mathscr{P}$ to the two parties p with the largest weighted number of respondents $W(p)$ identifying with that party. We plot only those surveys in which the set of top two parties coincides with the modal set across all survey years for the given country. In each plot, one point represents one survey. The line displays a fitted bivariate linear regression line with affective polarization as the dependent variable and survey year as the independent variable. Each plot reports the estimated slope (change per year) and the corresponding 95% confidence interval computed following Imbens and Kolesár (2016).

estimated linear trend in affective polarization, the x-axis is the estimated linear trend in the explanatory variable, and an observation is a country. Each plot also reports the Spearman rank correlation between the two trends and the p-value from a permutation test of the statistical significance of the rank correlation. The line of best fit is also plotted. Appendix figure 8 plots the individual series for each of the explanatory variables that we consider.

With only twelve countries in our sample, it is difficult to draw firm conclusions about the association between trends in affective polarization and trends in explanatory factors, especially because trends in explanatory variables are

FIGURE 3.—TRENDS IN POTENTIAL EXPLANATORY VARIABLES



Each plot is a scatterplot. The y-axis variable is the estimated linear trend in affective polarization reported in figure 1. The x-axis variable is the estimated linear trend in the explanatory variable reported in appendix figure 8, subject to the sample restrictions detailed there. The rank correlation is the Spearman rank correlation between the y-axis and x-axis variables. The rank p-value is for a test of the hypothesis that the rank of the linear slope of affective polarization is independent of the rank of the linear slope of the explanatory variable. The test statistic is the Spearman rank correlation and the p-value is computed via permutation, except in the case of exact ties in the ranks when we use the AS89 approximation (Best & Roberts, 1975). The solid line is the line of best least-squares fit to the scatterplot. See appendix figure 8 for plots of the available data for each country and explanatory variable and appendix A.7 for additional details on data sources and construction.

correlated across countries. Moreover, our analysis necessarily includes only a subset of the potentially important factors. Appendix table 1 reports the pairwise Spearman rank correlation across the linear trends in the explanatory variables used in figure 3, and appendix figure 9 presents scatterplots for additional potential explanatory variables.

Panel A of figure 3 considers economic and media-related variables. A number of authors (e.g., Payne, 2017; Pearlstein, 2018) have linked polarization in the United States to growing inequality and other related economic changes. Similarly, a number of authors (e.g., Lelkes et al., 2017; Sunstein, 2017; Settle, 2018) have linked polarization in the United States to the rise of digital media, and others (e.g., Duca & Saving, 2017; Martin & Yurukoglu, 2017) have linked the growth in polarization to the rise of partisan cable news networks in the United States.[10] None of the plots in panel A of figure 3 exhibits a statistically significant rank correlation between the linear trend in the explanatory variable and the linear trend in affective polarization.

Panel B of figure 3 considers demographic and political variables. Many authors (e.g., Mason, 2016, 2018; Valentino & Zhirkov, 2018; Abramowitz, 2018; Mason & Wronski, 2018; Westwood & Peterson, 2020) have suggested connections between affective polarization and racial and other social divisions.[11] The linear trend in the share foreign-born has a negative and statistically insignificant rank correlation with the linear trend in affective polarization. The linear trend in the nonwhite share of the population has a positive rank correlation with the linear trend in affective polarization, with an associated p-value of 0.052.

There is also evidence of growing partisan-ideological sorting in the United States in recent decades (e.g., Fiorina & Abrams, 2008; Levendusky, 2009; Fiorina, 2016, 2017), and this may have influenced the growth in affective polarization (e.g., Webster & Abramowitz, 2017; Lelkes, 2018; Orr & Huber, 2020).[12] The linear trend in partisan-ideological sorting has a positive and statistically insignificant rank correlation with the linear trend in affective polarization.

Elite polarization increased in the United States over the period we study (e.g., McCarty et al., 2006) and changes in elite polarization may influence affective polarization (e.g., Banda & Cluverius, 2018).[13] The linear trend in elite polarization has a positive and statistically significant rank correlation with the linear trend in affective polarization (p-value $= 0.011$).

V. Conclusion

The main contribution of our paper is to situate the rapid rise in affective polarization in the United States over the

[10] But see also, for example, Arceneaux and Johnson (2013).

[11] See also Craig et al. (2018); Bertrand and Kamenica (2018); and Desmet and Wacziarg (2021).

[12] See Fiorina (2017, chapter 8) for a discussion of cross-country differences in sorting, and see Kevins and Soroka (2018) and Adams et al. (2012a) for studies on partisan sorting in Canada and Britain respectively.

[13] See also Rehm and Reilly (2010). Elite polarization may of course be influenced by affective polarization as well as the reverse. Within the United States, some aspects of the growth in elite polarization, such as the realignment of the parties in the South following the civil rights era, seem to originate at least in part in the strategic choices of political elites rather than the shifting views of voters themselves (Fiorina & Abrams, 2008, p. 581; Levendusky, 2009, 2010; Lupu, 2015; Banda & Cluverius, 2018). Regarding the Southern realignment, see Black and Black (2002); Valentino and Sears (2005); and Kuziemko and Washington (2018).

preceding four decades in an international context. According to our baseline estimates, the United States experienced the most rapid growth in affective polarization over this period among the twelve OECD countries we consider, with five other countries experiencing smaller increases in polarization, and six experiencing declines in polarization.

A secondary contribution of our paper is to examine the relationship between trends in affective polarization and trends in a set of potential explanatory variables. In some cases (e.g., the nonwhite share of the population and elite polarization), there is evidence of a positive association between the trend in the explanatory variable and the trend in affective polarization; in other cases (e.g., inequality, the trade share of GDP, and internet penetration), there is not.

Our analysis has important limitations. Differences in survey format, political systems, and other factors make cross-country comparisons of affective polarization challenging. Well-known limitations of cross-country data (e.g., Mankiw, 1995) make it difficult to reach firm conclusions about the causal role of different explanatory factors. Furthermore, though we have attempted to measure variables that capture many of the most prominent explanations for the rise in affective polarization in the United States, we have not measured all of them. For example, an existing literature relates mass polarization to the extent to which a person's political party is aligned with other aspects of the person's identity, such as their race or religion (Mason, 2016, 2018; Mason & Wronski, 2018). Measuring this type of social sorting in a comparable way across countries, and relating trends in social sorting to the long-term trends in affective polarization that we have documented here, seems an interesting direction for future work.[14]

[14]Harteveld (2021) studies the relationship between affective polarization and measures of social sorting in a panel of countries drawn from the CSES.

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