

Socially-Sorted Partisans Are More Affectively Polarized: Evidence from the United States and Elsewhere

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Abstract

Scholars are increasingly concerned about affective polarization among partisans in the United States and elsewhere. This concern has led to numerous studies attempting to explain this phenomenon and also searching for means to reduce it. However, while there is evidence that some partisans are more polarized than others, research on affective polarization rarely considers heterogeneity among partisans. Recent research by Mason suggests a source of heterogeneity: social sorting. Using US data from the American National Election Studies (ANES) and cross-national data from the Comparative Study of Electoral systems (CSES), I show that there is considerable heterogeneity in levels of affective polarization among partisans. I also show that partisans whose partisanship is rooted in social groups are more affectively polarized. These findings have major implications for our interpretation of the phenomenon of affective polarization and for attempts to reduce it.

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Since the publication of *The American Voter* (Campbell et al. 1960), scholars of political behavior have been keenly aware of the concept of party identification, which stabilizes vote choice and acts as a “perceptual screen” that orients citizens’ interactions with the political system. In recent years though, many scholars have argued that party identification is more than simply a perceptual screen but also a social identity (Green, Palmquist and Schickler 2002; Greene 2004; Huddy, Mason and Aarøe 2015). Drawing on Social Identity Theory (Huddy 2001; Tajfel 1970; Tajfel et al. 1979), these scholars argue that partisans are biased in favor of their party and against the other party (or parties). Extensive American and some comparative evidence shows that partisan identification leads partisans to strongly prefer their side to the other side, a phenomenon scholars call “affective polarization” (Gidron, Adams and Horne 2019; Iyengar, Sood and Lelkes 2012; Iyengar and Westwood 2015; Reiljan 2020).

Findings of increasing affective polarization have led to considerable fears that partisans are not only biased in their assessments of governments (Bartels 2002; Bullock and Lenz 2019; Enns, Kellstedt and McAvoy 2012) but also strongly dislike the other side. There are fears that affective polarization may lead partisans to consider decisions made by opposing parties illegitimate (Levitsky and Ziblatt 2018; Somer and McCoy 2018) and may trust them less (Hetherington and Rudolph 2015) and even contemplate violence against political opponents (Kalmoe and Mason 2019). There is evidence that partisan bias influences who partisans interact with in various social situations (Chen and Rohla 2018; Iyengar, Sood and Lelkes 2012; Huber and Malhotra 2017; Nicholson et al. 2016), their economic behaviors (Gerber and Huber 2010; Gift and Gift 2015; McConnell et al. 2018; Michelitch 2015; Panagopoulos et al. 2016), and their health behavior (Hersh and Goldenberg 2016; Krupenkin 2020; Lerman, Sadin and Trachtman 2017). More recently, there has been particular concern that partisanship may influence citizens’ behaviors in response to the current COVID-19 pandemic (Clinton et al. 2020; Druckman et al. 2020; Gadarian, Goodman and Pepinsky 2020; Makridis and Rothwell 2020).

It is clear that affective polarization is a reality all over the world (Gidron, Adams and Horne 2019; Reiljan 2020; Wagner 2020; Westwood et al. 2018). Scholars also increasingly understand why it exists (e.g. Bougher 2017; Levendusky 2013; Mason 2018; Orr and Huber 2020). Recent studies have also considered methods to reduce it (Ahler and Sood 2018; Levendusky 2018*a,b*). Other authors also argue that some of the most widely used measures of affective polarization overstate it (Druckman et al. 2019; Klar, Krupnikov and Ryan 2018).

In spite of this accumulation of knowledge about affective polarization, scholars still know little about heterogeneity in affective polarization. There is some evidence that some partisans are ambivalent and, therefore, less biased towards their party (Lavine, Johnston and Steenbergen 2012). Moreover, research by Mason (2018) shows that partisans whose non-partisan identities align with their partisan identities are more affectively polarized, suggesting one such source of heterogeneity.

I build on early arguments about partisanship being rooted in social groups (Campbell et al. 1960) and Mason's recent work showing that the alignment between partisan and non-political social identities increases affective polarization (Mason 2018). I argue that a key determinant of susceptibility to affective polarization is whether one's partisanship is rooted in social groups. When a partisan's social group memberships clearly push them in the direction of the same party, they should be more biased towards that party.

My argument is broader than Mason's argument about identity alignment though. Partisans with aligned identities should be more affectively polarized. However, identity alignment is not the only reason why an alignment between social groups and partisanship should lead to increased affective polarization.

There are five reasons why socially-rooted partisans should be more biased. Two of these derive from Mason's argument about identity alignment. When identities align, It is easier for partisans to perceive differences between in-partisans and out-partisans. Moreover, they are more motivated to prefer their party to other parties (Roccas and Brewer 2002). Furthermore, when partisans are members of social groups that strongly support a given

party, they are more likely to be exposed to fellow group members who support the same party as well as to cues from group leaders supporting the same party (Brader, Tucker and Therriault 2014; DellaPosta, Shi and Macy 2015). Their group membership is also likely to induce similar policy preferences which may contribute to affective polarization (Bougher 2017; Orr and Huber 2020). Thus, partisans whose social group ties reinforce their partisanship should be more affectively polarized than those whose partisanship is not rooted in groups or who are exposed to multiple conflicting group influences.

In this paper, I use American data from the American National Election Studies (ANES) and cross-national data from the Comparative Study of Electoral Systems (CSES) to assess the relationship between social group membership and partisanship. To assess social sorting, I assess whether it is possible to correctly predict a partisan's party knowing their social group memberships. I then assess how much more affectively polarized socially-sorted partisans are than unsorted partisans. I show that socially-sorted partisans are considerably more affectively polarized than partisans whose attachments are not rooted in social groups.

These findings have important implications for democratic accountability and responsiveness (Achen and Bartels 2016) as well as for democratic stability (Levitsky and Ziblatt 2018; Iyengar, Sood and Lelkes 2012), social harmony, economic prosperity, and possibly health outcomes. While many partisans strongly prefer their side, others whose partisan attachments are either not rooted in social groups or whose partisan attachments are rooted in cross-cutting social groups are considerably less affectively polarized. Thus, when considering the effects of partisanship on political, economic, and health outcomes, scholars should consider that some partisans are more likely to act in ways that have deleterious consequences than others.

1 Partisanship as a Group-Based Identity

Scholars of partisanship have long argued that identification with a party is grounded in social groups (Campbell et al. 1960). Recent scholarship has gone further by leveraging Social Identity Theory (Tajfel 1970; Tajfel et al. 1979) to identify the causes and implications of partisanship. The implication of partisanship being a social identification is that partisans of a party are biased in favor of their party and their co-partisans and against the out-party (or out-parties) and out-partisans. This has implications for biases in both the political and non-political worlds.

Numerous studies have documented partisans' increasingly positive attitudes towards their party and its partisans compared to the other party (or parties) (for a review, see Iyengar et al. 2019). There is also evidence of partisans being biased in favor of their co-partisans at the expense of other parties' partisans (Iyengar, Sood and Lelkes 2012; Iyengar and Westwood 2015). While initially presented as an American phenomenon, it has become increasingly clear that affective polarization is as much of a reality in other democracies (Gidron, Adams and Horne 2019; Reiljan 2020; Westwood et al. 2018).

These findings have left some scholars concerned about the future of democracy and social harmony in societies that are riven by partisan divides (Levitsky and Ziblatt 2018). If citizens simply follow the lead of political elites on their side of the partisan divide, how can they hold governments accountable? Moreover, how can democracy function if partisans of one party consider the actions of elected officials from the other party illegitimate? How can society remain intact when partisans avoid social contact with the other side?

In spite of this extensive literature documenting the power of partisanship in the United States and to some extent elsewhere, it is still unclear what is driving it. Scholars have proposed a wide variety of potential explanations. The most obvious explanation in the American context is that increased polarization at the elite level (McCarty, Poole and Rosenthal 2006) has caused increased mass polarization (Rogowski and Sutherland 2016). While some scholars strongly support this perspective, others argue that affective polarization is largely

unrelated to ideology (Iyengar, Sood and Lelkes 2012; Mason 2018). Moreover, this explanation largely reflects developments among the parties in the United States and is unlikely to be broadly applicable in other countries (Gidron, Adams and Horne 2019; Reiljan 2020).

Other scholars have blamed the media. According to this view, broadband internet and partisan media have exposed citizens to imbalanced partisan content thus reinforcing their hostility towards the other side (Lelkes, Sood and Iyengar 2017; Levendusky 2013). There is also evidence that the effects of partisan media can be transmitted to people who are not directly exposed to them through discussions with peers (Druckman, Levendusky and McLain 2018). Social media can also increase polarization (Bail et al. 2018). Research has also shown that coverage of polarization among political elites by the media can make citizens more polarized (Levendusky and Malhotra 2016). Relatedly, campaigns have been shown to increase polarization (Iyengar, Sood and Lelkes 2012; Sood and Iyengar 2016).

Other explanations focus more on citizens and why they might be affectively polarized. One explanation that focuses on partisans is that affective polarization is caused by the alignment between policy preferences and party identification (Bougher 2017; Webster and Abramowitz 2017). However, some of the most influential studies on affective polarization show evidence of high and increasing affective polarization even among partisans who do not share their parties' positions (Iyengar, Sood and Lelkes 2012; Mason 2018).

Mason and her colleagues reject the argument that polarization is related to an increased correspondence between policy preferences and partisanship (Mason 2018; Mason and Wronski 2018). According to this perspective, citizens are more affectively polarized when they have non-partisan identities, including ideological and non-political identities, that align with their party identification. Work in Social Identity Theory (SIT) shows that conflicting identities reduces people's commitments to their identities (Roccas and Brewer 2002). According to this SIT perspective, aligned identities provide both the cognitive and motivational basis for affective polarization as it makes clear the connections between groups and provides partisans with the motivation to prefer their group to the other side. Supporting

this perspective, Mason (2016, 2018) and Mason and Wronski (2018) find that partisans who share social identities that are associated with their parties are more affectively polarization.

A related line of research by Robison and Moskowitz (2019) finds that attitudes towards the groups that make up parties' coalitions influence affective polarization. Partisans with warmer attitudes towards the groups aligned with their party and more negative attitudes towards the groups aligned with the other party are more affectively polarized.

While a number of studies in recent years have suggested that affective polarization is overestimated (Ahler and Sood 2018; Druckman et al. 2019; Klar, Krupnikov and Ryan 2018) and that there may be ways to reduce its effects (Ahler and Sood 2018; Levendusky 2018*a,b*), there has been very little recognition of heterogeneity in affective polarization among partisans. Scholars frequently compare partisans with different values of their explanatory variable of interest (Bougher 2017; Mason 2018). However, rarely do scholars acknowledge that some partisans are more biased than others. The study by Lavine, Johnston and Steenbergen (2012), showing that many partisans are ambivalent and as a result less biased, is one of the rare exceptions.

I argue that the literature on social sorting points suggests a major source of that heterogeneity. If the sorting of social and ideological groups into parties increases affective polarization (Mason 2018), it also means that partisans who are not sorted should be less affectively polarized. This is particularly the case with respect to social groups because, while both ideology (Druckman, Peterson and Slothuus 2013; Lenz 2012; Levendusky 2009) and social identifications (Egan 2019) are influenced by parties, there are limits to how much social group membership can be influenced by parties. It is much more difficult to change one's gender, one's income or education, for example, than to switch one's ideological identification. Thus, some partisans are necessarily going to be more socially sorted than others due to their particular combinations of social group memberships.

I focus on a broader conception of social sorting than used in Mason (2018). Mason focuses on alignment between social and partisan identities. I focus on the alignment between

one or more social groups and partisanship. The difference is that social group alignment can affect affective polarization in many more ways than identity alignment. If partisans identify social groups that support their party, they should be more affectively polarized because that alignment clarifies who is part of each group and gives partisans more motivation to prefer their side (Roccas and Brewer 2002).

However, there are reasons other than identity alignment that social-rooted partisans should be more affectively polarized (Brader, Tucker and Therriault 2014; DellaPosta, Shi and Macy 2015). Social group membership influences people's social networks so being part of a social group that is aligned with one's party means that one's social contacts should reinforce one's partisanship. There is evidence that partisans are more biased in homogeneous social settings (Klar 2014). Conversely, heterogeneous environments increase ambivalence (Mutz 2002a) and people's understanding of the other side (Mutz 2002b). Moreover, being part of a social group determines the social elites who influence one's political views.

Another reason socially-sorted partisans may be more affectively polarized is that they may be more likely to share policy preferences and partisans who share their party's policy preferences are more affectively polarized (Bougher 2017; Orr and Huber 2020).

When partisans are members of social groups that are not aligned with their party, they are either cross-pressured or simply members of unaligned social groups. Being cross-pressured means they are part of social groups that are aligned with another party. Early studies argued that cross-pressures, whereby partisans who are members of social groups that support a different party, lead partisans to have a weaker attachment to their party and engage less with the political system (Campbell et al. 1960; Lazarsfeld, Berelson and Gaudet 1948). Other unsorted partisans may be members of groups that simply are not associated with support for a particular party. If that is the case, they lack the identity, social contact, group elite, and policy bases for developing strong affective polarization.

Ever since the pioneering research by Sherif (1956), scholars have known that people tend to act as members of groups even when the basis for group formation is weak. Social Identity

Theory studies repeatedly showed that people can act as members of groups formed around arbitrary considerations (Tajfel 1970; Tajfel et al. 1979). It is thus important to consider a wide variety of demographic variables as possible bases for group behavior.

Social sorting may have caused an increase in affective polarization in the United States, as argued by Mason (2018). However, my argument is not that socially-social partisanship leads to affective polarization (although I do consider that a possibility). Instead I argue that partisans are heterogeneous in their attitudes towards parties. In particular, socially-sorted partisans are more biased in favor of their party. In other words, if people who are socially similar to a given partisan of a party are more supportive of that party, that partisan should be more affectively polarized.

2 Methods and Data

I assess the relationship between socially-sorted partisanship and affective polarization in the United States and cross-nationally. For the American analyses, I use the American National Election Studies (ANES) Cumulative Data File (1948-2016). For the comparative analyses, I use the Comparative Study of Electoral Systems (CSES 2019) Integrated Module Dataset (IMD). I also supplement the CSES IMD with the latest release of data from module 5. In total, I use data from 182 elections in 53 countries.¹ I only include elections from countries that were rated at least partly free by Freedom House (i.e. mean of Freedom House civil and political liberties scores equal to or smaller than 5).

I focus on assessing affective polarization using feeling thermometers and party ratings as done in numerous prior studies (Iyengar, Sood and Lelkes 2012; Reiljan 2020; Wagner 2020).²

¹Note that I consider Belgium two separate countries, Flanders and Wallonia, given that the party systems are separate in that country and because the surveys were run independently in the two regions.

²US studies typically use the ANES feeling thermometers which run from 0 to 100, whereas comparative studies rely on CSES like-dislike questions, which run from 0 to 10.

The dependent variable is a comparison of party ratings among respondents for their own party compared to other parties. In my American analyses, following existing work (e.g. Iyengar, Sood and Lelkes 2012; Iyengar and Westwood 2015), I simply assess the absolute difference between major party partisans’ feeling thermometer ratings of their own party and their ratings of the other major party. The ANES asked respondents to rate partisans (Democrats or Republicans) of each major party from 1964 to 1982 and then each of those parties from 1978 to 2016 using feeling thermometers from 0 to 100. I use partisan feeling thermometers from 1964 to 1978 then party feeling thermometers for subsequent years. I include leaners in all analyses.

In my comparative analyses, I use CSES party like/dislike questions which ask people how much they like each party on a scale from 0 to 10, where 0 means they strongly dislike the party and 10 that they strongly like it. I adopt the measure of affective polarization presented in Reiljan (2020), which consists in assessing the difference between ratings of partisans’ own party and their ratings of each of the other parties, where each difference is weighted by the vote share of the out-party. The affective polarization measure is represented by Equation (1). For each partisan (i), it calculates the difference between their in-party rating (party p) and the rating of each out-party (party z). It then weights each difference by the proportion of votes for each out-party among parties other than party p.

$$\text{Affective Polarization}_i = \sum_{z \neq p} (\text{Rating}_{i,p} - \text{Rating}_{i,z}) \left(\frac{\text{Vote Share}_z}{1 - \text{Vote Share}_p} \right) \quad (1)$$

The concept of party identification has clear limitations in party systems outside the United States with multiple parties. In particular, partisans change their identifications more often outside the US, sometimes more often than their votes (Thomassen 1976) and citizens are influenced by parties they like but do not necessarily identify with. There are also fewer partisans in most non-American democracies (Guntermann 2020). Moreover, outside the US, cleavages do not always map onto a divide between two opposing parties (e.g. Hobolt, Leeper and Tilley 2020). I, therefore, also use alternative measures of affective polarization

developed by Wagner (2020), which are specifically adapted to multi-party systems. I report results using one of his measures, the weighted distance from the most-liked party in the main text, and consider the other three in the Online Appendix.

The weighted distance from the most-liked party is calculated as shown in equation (2). For each respondent, I first determine the highest rating they give to one or more parties ($like_{max,i}$). I then take the squared difference between ratings of each of the parties that do not receive the highest rating (parties p) and the highest rating. Subsequently, I weight these by their vote share (V_p), then I take the square root of these weighted squared differences.

$$\text{Distance}_i = \sqrt{\sum_{p=1}^P V_p (like_{ip} - like_{max,i})^2} \quad (2)$$

To measure social sorting, I assess how well we can predict one’s party using their social group memberships. My approach is related to two approaches to assessing the relationship between partisanship and social group attachments used in the literature. First, Mason (2018) considers the impact of small additive scales of identities associated with partisanship with each party. Because identities can form around a variety of different types of groups, not only long-standing ones (Tajfel 1970; Tajfel et al. 1979), I consider all available measures of social group membership.

Second, Brader, Tucker and Therriault (2014) propose the Cross Pressures Score, which assesses the variability in the predicted probabilities of being a partisan of each party. Their measure involves constructing an additive model of partisanship, predicting the probability that each partisan is a partisan of each party, then, for each partisan, calculating the variance across the probabilities of being a partisan of each party.

This measure nicely picks up the concept of cross-pressures. However, I focus on an alternative measure for two reasons. First, the scale is difficult to interpret. Second, it relies on assumptions about the correct coding of demographic variables and that demographics impact partisanship in an additive way. I, therefore focus on an alternative measure that does

not require decisions about variable coding and that does not impose a particular functional form. I also run analyses using the cross-pressures score though. They are in Section 1 of the Online Appendix.

Instead of using a conventional regression model, I use a Random Forest classifier (Breiman 2001). A Random Forest classifier combines a large number of decision trees, each of which develop branching rules in order to best account for the category of the variable of interest (here, party identification). By leveraging a large number of decision trees, it produces the best possible classifications. For each analysis, after imputing missing demographic variables using a random forest, I run 500 trees using the `randomForest` R package. I then create a dummy variable coded 1 if the Random Forest correctly classifies a partisan's party and 0 if it fails to classify their party. The outcome is thus easy to interpret. If a powerful classification algorithm is able to correctly identify a partisans' party, they are coded 1. Otherwise, they are coded 0.³

In the comparative data, I create separate measures of social sorting using both party identification and party ratings. For partisanship, I simply predict respondents' party identifications. For party ratings, I predict the party they rate highest. If there is a tie for their highest-rated party, I randomly select one of those parties as their preferred party. I create these party-rating based measures for regression models using the affective polarization measures developed by Wagner (2020) for multi-party systems.

It is appropriate to explain further the added value of not relying on a linear model of partisanship. A variable may be associated with support for a particular party among people with certain values of another variable but not others. For example, religious attendance is strongly associated with being a Republican partisan among white Americans. Forty-one percent of whites who never attend a religious service were Republican in 2016 compared to 78 percent of those who attend a religious service every week. While Republican partisanship

³Note that, when creating the social sorting variables, I only include partisans of parties with at least 30 identifiers in the dataset.

does increase about three times when religiosity increases from the lowest to highest levels among Blacks (from four to 13 percent), only small minorities of even the most devout Blacks are Republicans. Thus, a linear measure of social sorting would incorrectly consider a very religious African American to be cross-pressured even though religious attendance does not strongly pull African Americans towards the Republican Party. My approach thus considers a religious African American Democrat socially sorted because a huge majority of people sharing their characteristics identify as Democrats.

I analyze the relationship between socially-sorted partisanship and affective polarization at both the aggregate (i.e. election) and individual levels. In aggregate analyses, I include a number of controls that may make partisans more affectively polarized in some contexts and that may make partisans more socially sorted. These are Dalton's ideological polarization index (Dalton 2008), the effective number of electoral parties (Laakso and Taagepera 1979), the political regime (whether parliamentary, presidential, or semi-presidential), and the electoral system (proportional, majoritarian or mixed).

In subsequent models, I control for the possibility that partisanship is easier to predict in some elections than in others depending on the number of parties and the distributions of demographics and partisanship. I do not control for this variable in initial models because, in contexts where partisanship is easier to predict, partisans should be more affected by the mechanisms mentioned above: they should perceive greater overlap between their partisan and non-political identities, they should interact more with people who share the same partisan attachment, they should be exposed to more homogeneous cues from social group leaders, and they should share more policy preferences with fellow group members. However, I add this control to subsequent models to ensure that results are not artifacts of the classification method I use.

To control for how easy it is to classify a partisan in a given context, I create simulated data in each election where I randomly sample, separately for each variable, both partisanship and demographic variables from the actual distributions. In other words, in the

simulated datasets, the univariate distributions of each variable are identical to the real-world distributions. However, because I randomly sample each variable independently, in these simulations, there is no relationship between any of the demographics and partisanship. I then run the random forest classifier on the simulated data to determine how many partisans I would correctly classify due to the number of parties (it is easier to classify partisans when there are fewer parties), the distributions of demographics, and the distributions of partisanship. I calculate the simulated percentages of correctly classified partisans in each election and include them as control variables in aggregate-level models.

3 Results

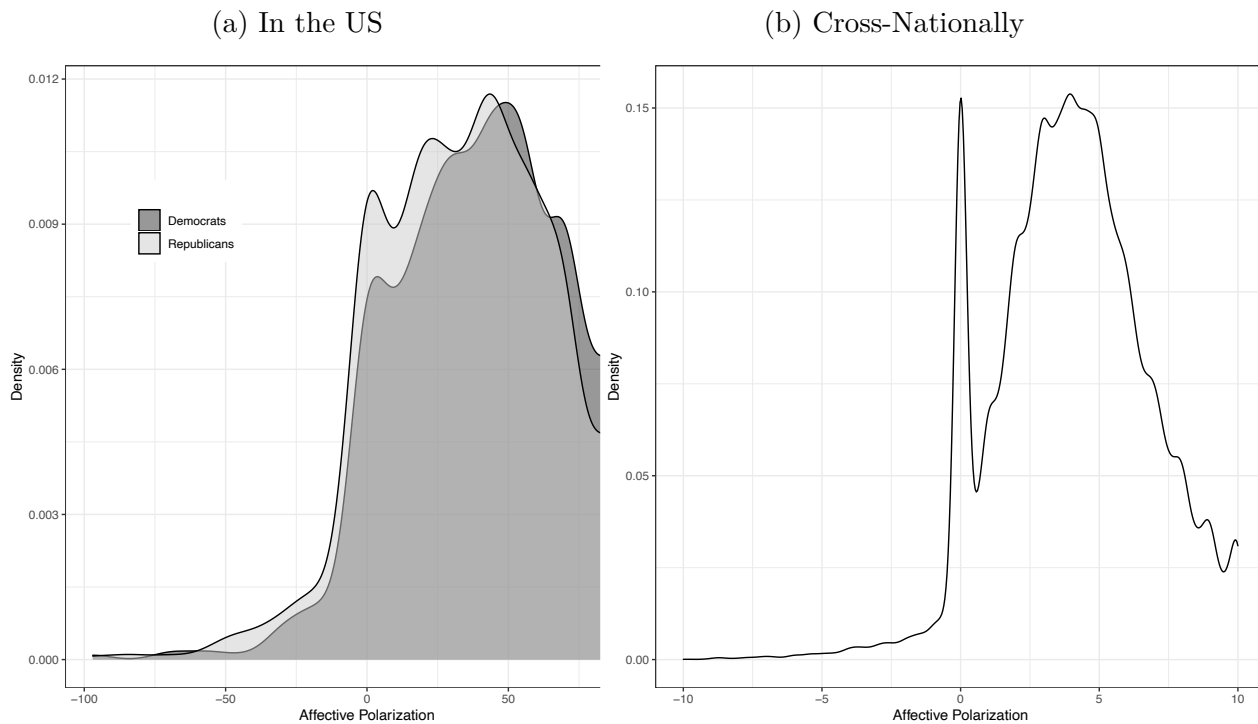
3.1 Heterogeneity in Affective Polarization

Little considered in the literature on affective polarization is heterogeneity in inter-party affect among partisans. Figure 1(a) is a density plot showing the distributions of affective polarization among Democrats and Republicans in the United States, as assessed using feeling thermometers in the 2016 ANES. Recall that all my analyses include leaners and that these results, like all other results presented in this paper, are fully weighted. It shows that American partisans are far from uniformly affectively polarized. Most partisans rate their party between 0 and 50 points higher than the other party (55 percent of partisans of each party). Small minorities have a very strong preference (over 50 points) for their side (23 percent of Democrats and 19 percent of Republicans) or rate the two sides equally (17 percent of Democrats and 20 percent of Republicans). Even smaller minorities prefer the other party to their own (4 percent of Democrats and 5 percent of Republicans).

Partisans cross-nationally also have heterogeneous levels of affective polarization. Figure 1(b) shows the distribution for the entire CSES dataset for all partisans (using the measure presented in equation (1)). Most partisans (55 percent) in the CSES prefer their party to the other parties between 0 and 5 points (5 is the midpoint of the CSES like-dislike

scale). A large minority (34 percent) prefer their party by over five points and minorities rate their party and the other parties equally (7 percent) or rate other parties higher (3 percent). While we cannot clearly compare differences in feeling thermometers to differences in like-dislike scores calculated in slightly different ways between the US ANES data and the CSES, the story seems the same in the US and in the comparative dataset. There is considerable heterogeneity in how partisans feel about their party compared to the out-party (or parties).

Figure 1: Distributions of Affective Polarization



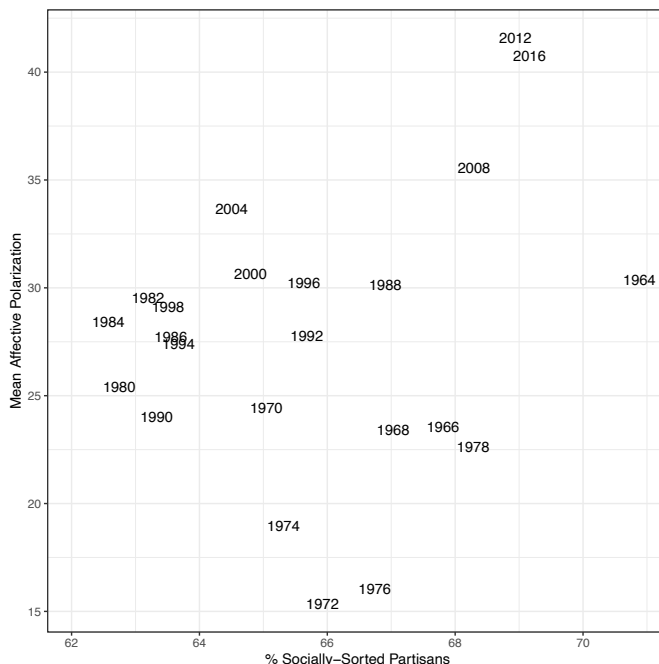
3.2 Social Sorting and Affective Polarization in the United States

I first consider how socially sorted partisans are in the United States and how social sorting relates to affective polarization. Figure 2 shows the relationship between the percentage of partisans whose party we can predict knowing their demographic characteristics and the overall level of affective polarization in each ANES study. It shows that large majorities of American partisans are socially sorted. Social sorting has been higher in the past three

presidential elections although it was at its highest in 1964.

At the aggregate election level, the relationship is unclear. The three most recent presidential elections (and to some extent the 1964 election) have high percentages of correctly classified partisans and high affective polarization. Thus, making the relationship appear to be positive. However, the relationship between the two variables appears negative when looking at the other elections.

Figure 2: Social Sorting and Affective Polarization in the United States



I test the relationship between social sorting and affective polarization both at the election level and at the individual level in a more systematic way in Table 1. The first model is a bivariate election-level OLS regression of the weighted mean affective polarization in a given election on the percentage of socially-sorted partisans. The coefficient on the percentage of socially-sorted partisans fails to reach significance. The second model adds the simulated percentage of socially-rooted partisans and still finds no relationship between socially-sorted partisanship and affective polarization. However, the simulated socially-sorted partisanship variable has a positive and significant coefficient. Note though that this appears to reflect a time trend, since it becomes insignificant when I include a linear trend as well (not shown).

There is thus no relationship between socially-sorted partisanship and affective polarization at the election level in the United States. The third model is an individual-level regression of affective polarization on the dummy variable indicating that a partisan is socially sorted. It also includes election fixed effects. The coefficient on the Socially-Sorted Partisan dummy is 6.77 and significant showing that socially-sorted partisans are 6.77 points more affectively polarized across all elections from 1964 to 2016. The gap of 6.77 points is large considering baseline levels of affective polarization. Across elections, partisans who are not socially sorted score 25.59 on affective polarization (the intercept in the individual-level model). Thus, socially-sorted partisanship is associated with a 26.4 percent increase in affective polarization.

Table 1: Models of Affective Polarization in the United States

	Election Level	Election Level	Individual Level
Intercept	-20.54 (39.36)	-14.47 (34.36)	25.59* (0.79)
% Socially-Sorted Partisans	0.73 (0.60)	-0.10 (0.60)	
% Simulated Socially-Sorted Partisans		0.97* (0.35)	
Socially-Sorted Partisan			6.77* (0.30)
Election FEs	<i>No</i>	<i>No</i>	<i>Yes</i>
<i>N</i>	23	23	40389
<i>R</i> ²	0.07	0.33	0.08
adj. <i>R</i> ²	0.02	0.26	0.08
Resid. sd	6.50	5.66	28.50

Standard errors in parentheses

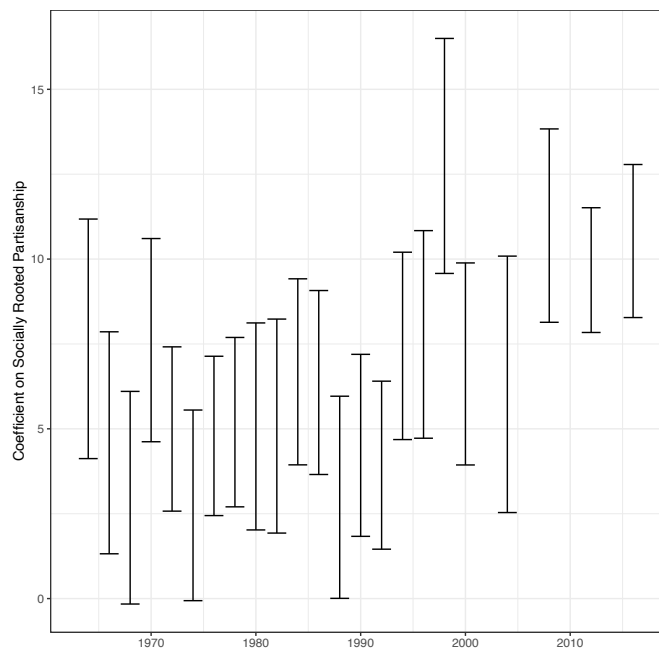
* indicates significance at $p < 0.05$

The first two models are election-level regressions of affective polarization on the percentage of socially-sorted partisans. They show there is no relationship between social-sorting and affective polarization at the election level in the United States. There is a strong relationship between social sorting and affective polarization at the individual level though. Socially sorted partisans are 6.77 degrees more affectively polarized than unsorted partisans.

How does the gap between partisans who are socially sorted and unsorted vary across

elections? Figure 3 shows coefficients on the socially-sorted dummy variable from separate OLS regressions run in each election. It shows that socially-sorted partisans have been significantly more affectively polarized in nearly every election since 1964 (Note that I apply the Holm correction for multiple hypothesis testing). The only exceptions are 1968, 1974, and 1988. The magnitude of the difference was particularly large in 1998, 2018, and 2016, when it was over 10 points. In 2012, it was 9.68 points. These are large gaps. The percentage increase in affective polarization associated with socially-sorted partisanship has been about a third in the past three presidential elections (39 percent in 2008, 28 percent in 2012, and 31 percent in 2016).

Figure 3: Coefficient on Social Sorting in each American Election



This figure shows OLS regressions of affective polarization on sorting sorting in each ANES election study since 1964. Nearly all coefficients are significantly positive even when applying a Holm correction for multiple hypothesis testing. Socially-sorted partisans have become particularly distinct in the past three elections.

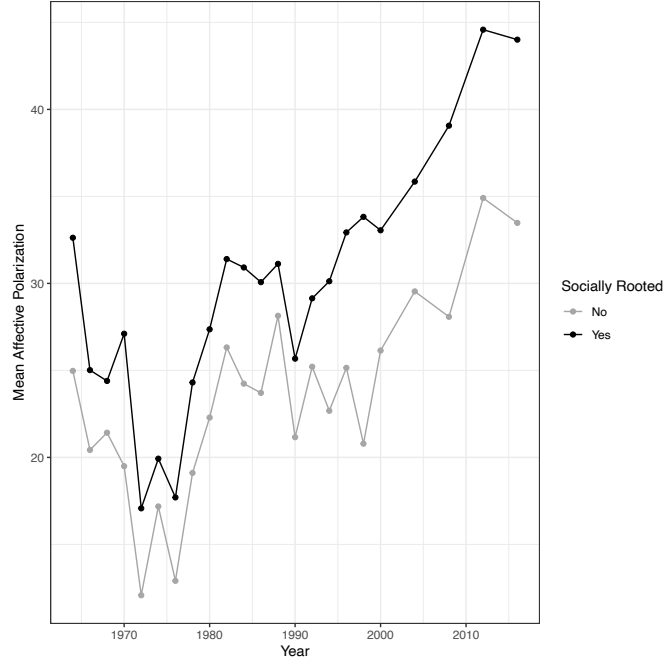
These differences in affective polarization are comparable in magnitude to the effects of recent treatments that have been found to lower affective polarization. Levendusky (2018a),

for example, finds that priming American identity increases ratings of the out-party by 5.60 degrees. If I change the outcome variable to out-party ratings, I find that socially-sorted partisans disliked the out-party 6.11 degrees more in 2016. Thus, the gaps in affective polarization are important differences that should be taken seriously by scholars.

The difference between socially-sorted partisans and partisans who are not socially sorted is largest in elections with high affective polarization. The correlation between affective polarization and the gap between socially-sorted and unsorted partisans is 0.63. In the three elections with the highest affective polarization (2008, 2012, and 2016, when it was above 35 points), the gap between sorted and unsorted partisans was about 10 points.

The divergence between socially-sorted and unsorted partisans can be seen most clearly in Figure 4. It shows the trends in affective polarization among both types of partisans. Socially-sorted partisans were always more affectively polarized. However, affective polarization increased considerably among socially-sorted partisans in the 1990s. Although it increased among unsorted partisans between 2000 and 2012, a big gap in affective polarization has opened up between socially-sorted and unsorted partisans. It is clear that not all partisans have been equally affected by affective polarization. Having a party identification that is rooted in social groups distinguishes partisans whose affective polarization has increased the most.

Figure 4: Trends in Affective Polarization Among Socially-Sorted and Unsorted Partisans



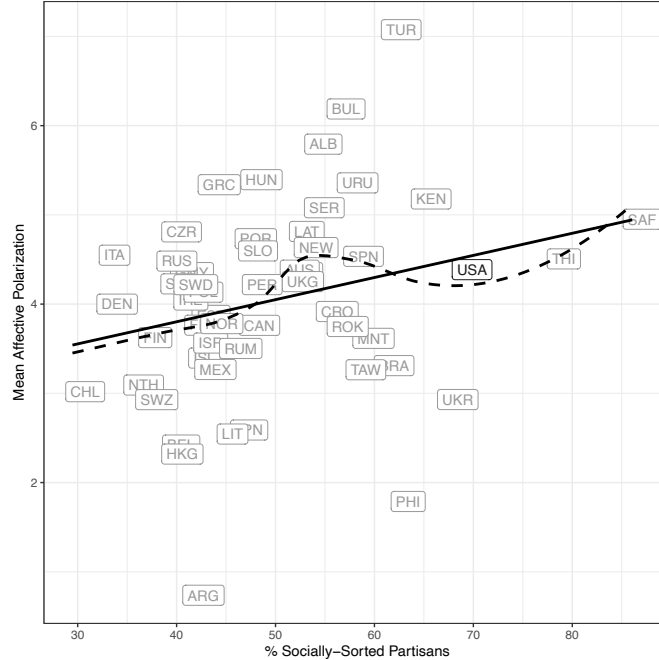
This figure shows that socially-sorted partisans have always been more affectively polarized than unsorted partisans. However, the gap between the two types of partisans increased starting in the 1990s.

3.3 Social Sorting and Affective Polarization Cross-Nationally

In this section, I consider the impact of social sorting on affective polarization in the comparative dataset. Figure 5 is a scatterplot of mean affective polarization in each country on the percentage of socially-sorted partisans.⁴ It includes an OLS regression line as well as a LOESS regression line. As we can see, there is clearly a positive relationship between aggregate social sorting and aggregate affective polarization. By far, the most socially-sorted country is South Africa, which has a correspondingly high level of affective polarization. The US has the third highest level of social sorting although it has the 26th highest level of affective polarization.

⁴I take the average across elections in each country.

Figure 5: Social Sorting and Affective Polarization Cross-Nationally



This figure shows that there is a positive relationship between social sorting and affective polarization at the country level.

Table 2 shows comparative models of affective polarization. The first two columns show results from election-level models and the second show results from an individual-level model. To rule out other possible explanations for affective polarization, the election-level models include the controls described above. The second model also controls for the simulated percentage of socially-rooted partisans. The individual-level model includes election fixed effects.

The election-level model shows that increasing the percentage of socially-sorted partisans by one percentage point increases affective polarization by 0.02 points. When controlling for how easy it is to classify partisans in each election, the gap increases to 0.04 points. The model predicts that moving from the first quartile (40.07) to the fourth quartile (55.16) on social sorting increases affective polarization by 0.30 points. The individual-level model shows that socially-sorted partisans are 0.49 points more affectively polarized across countries

than unsorted partisans. Overall, the gap between socially-sorted and unsorted partisans is smaller outside the United States than in the United States. Affective polarization is 8.67 percent stronger among socially-sorted partisans than among unsorted partisans.

Table 2: Comparative Affective Polarization Models

	Election Level	Election Level	Individual Level
Intercept	2.31*	2.33*	5.72*
	(0.58)	(0.59)	(0.10)
% Socially-Sorted Partisans	0.02*	0.04*	
	(0.01)	(0.01)	
% Simulated Socially-Sorted Partisans		-0.02	
		(0.01)	
Socially-Sorted Partisan			0.49*
			(0.01)
Dalton's Ideological Polarization Index	0.27*	0.27*	
	(0.07)	(0.07)	
ENEP	-0.04	-0.04	
	(0.03)	(0.03)	
Semi-Presidential Regime	-0.14	-0.12	
	(0.19)	(0.19)	
Presidential Regime	-0.67*	-0.60*	
	(0.23)	(0.23)	
Proportional Electoral System	-0.03	-0.03	
	(0.17)	(0.17)	
Mixed Electoral System	-0.31	-0.28	
	(0.20)	(0.19)	
R ²	0.28	0.29	0.11
Adj. R ²	0.25	0.26	0.11
Num. obs.	179	179	159736

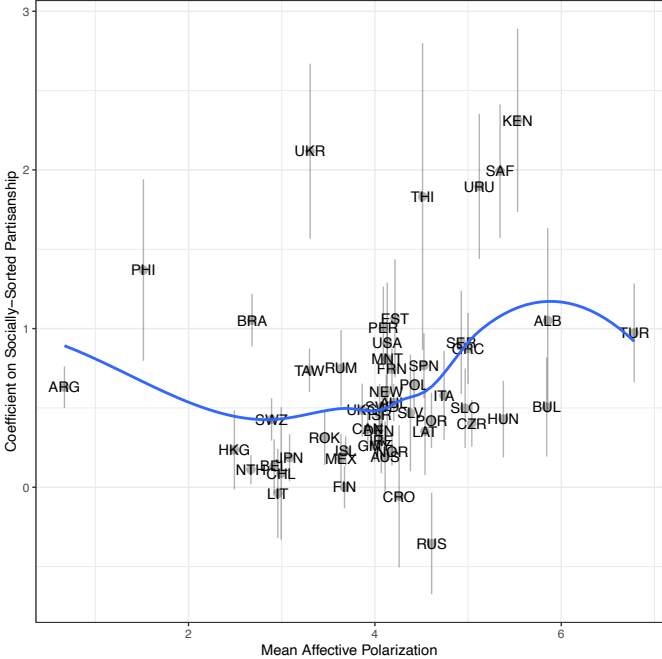
* $p < 0.05$

The first two models are election-level models of affective polarization. They show that elections with one percent more socially-rooted partisans have 0.02 points higher affective polarization. The third model is an individual-level model. It shows that socially-rooted partisans are 0.49 points more affectively polarized. Note that three elections (Hong Kong (1998 and 2000) and Slovenia 2011) were excluded because they had fewer than two parties with at least 30 partisans in the dataset

Figure 6 shows coefficients from separate OLS regressions of affective polarization on

the social sorting dummy in each country. In countries with more than one election in the dataset, election fixed effects are included. The figure presents the coefficients by the mean level of affective polarization in each country. Overall, 74 percent of coefficients are significantly positive after correcting for multiple hypothesis testing using a Holm correction. As in US elections, the percentage of significantly positive coefficients increases as the level of affective polarization increases. Below 5, the coefficient on socially-rooted partisanship is only significant and positive in 68 percent of countries. Above 5, it is significantly positive in all countries. Clearly, in countries that are more affectively polarized, the extent to which one’s partisanship is rooted in social groups distinguishes partisans who are more or less affectively polarized.

Figure 6: Models of Affective Polarization in Each Country



This figure shows the coefficient on the social sorting dummy from separate regressions in each country of affective polarization on the social sorting dummy and election fixed effects in countries with multiple elections in the dataset. Most coefficients are positive and significant (74 percent). All coefficients are significant in countries where mean affective polarization is over 5.

3.4 Alternative Measures

The above analyses were based on measures of partisanship used in the ANES and the CSES. However, the concept of partisanship has long been subject to criticism outside the US (Garry 2007; Guntermann 2020; Thomassen 1976). More recently, Wagner (2020) has proposed measures of affective polarization that better reflect the realities of multi-party systems in which citizens may identify with more than one party and in which multiple cleavages divide voters. In this section, I repeat the analyses presented above, but present results using one of Wagner’s measures, the weighted distance from the most-liked party. Figure 7 shows the distribution of weighted mean distances from people’s most liked party. Unlike the previous measures of affective polarization, this one can only have positive values by definition.

As with the measures created using party identification, values of this measure are extremely variable. Most respondents (54 percent) have scores between 1 and 5, while a large minority has scores above 5 (39 percent). A small minority (seven percent) has a score of 0, meaning that they did not rate even a single party with a non-negligible vote share below the rating of their most-liked party. Thus, as with the the party-identification-based measures, there is considerable variation in scores on the weighted distance measure.

Figure 7: Density of Weighted Mean Distances from the Most-Liked Party

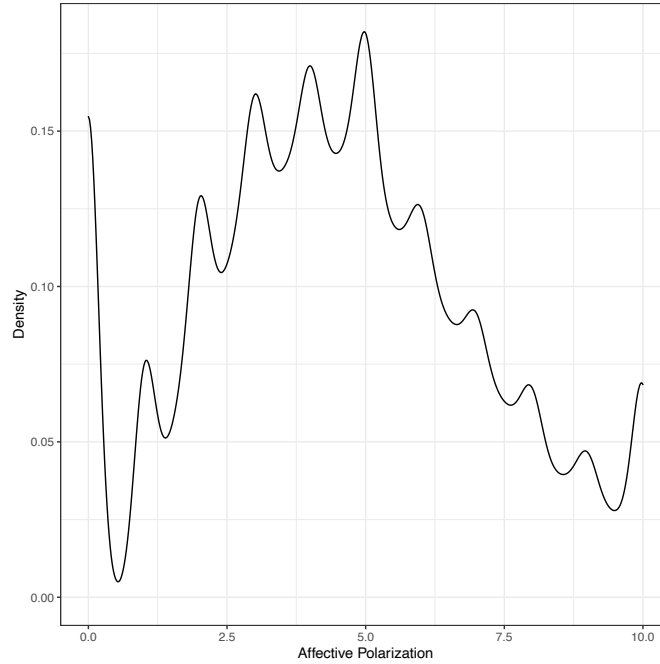


Figure 8 is a scatterplot of the weighted mean distance measure of affective polarization by the percentage of socially-sorted partisans. As we can see, as in Figure 5, there is a positive relationship between aggregate social sorting and affective polarization.

Figure 8: Social Sorting and Weighted Mean Distance from the Most-Liked Party

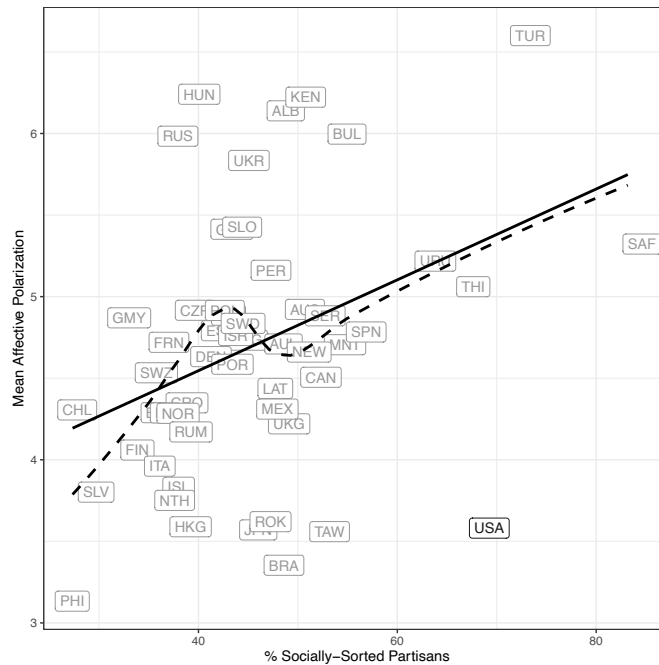


Figure 3 presents models similar to those presented above but using the weighted distance from people’s most-liked party as the dependent variable. As we can see, at the election level, there is a slightly weaker relationship between the percentage of people with socially-sorted preferences and the aggregate measure of affective polarization than using the party identification measure. At the individual level, however, the relationship is stronger. Socially-rooted partisans are 0.67 points more affectively polarized than non-rooted partisans. Thus, the finding that socially-rooted partisanship is more biased holds using this alternative measure of polarization. Section 2 of the Online Appendix presents similar results using the three other measures developed by Wagner (2020). Results are similar with the other three measures.

Table 3: Models of Weighted Mean Distance from Most-Liked Party

	Election Level	Election Level	Individual Level
Intercept	2.61*	2.62*	6.14*
	(0.54)	(0.52)	(0.08)
% Socially-Sorted Partisans	0.02*	0.02*	
	(0.01)	(0.01)	
% Simulated Socially-Sorted Partisans		-0.00	
		(0.01)	
Socially-Sorted Partisan			0.71*
			(0.01)
Dalton's Ideological Polarization Index	0.28*	0.28*	
	(0.05)	(0.05)	
ENEP	0.02	0.02	
	(0.04)	(0.03)	
Semi-Presidential Regime	-0.09	-0.08	
	(0.22)	(0.23)	
Presidential Regime	-0.16	-0.16	
	(0.22)	(0.23)	
Proportional Electoral System	0.00	0.01	
	(0.24)	(0.24)	
Mixed Electoral System	-0.07	-0.06	
	(0.29)	(0.29)	
R ²	0.31	0.31	0.10
Adj. R ²	0.28	0.28	0.10
Num. obs.	182	182	275855

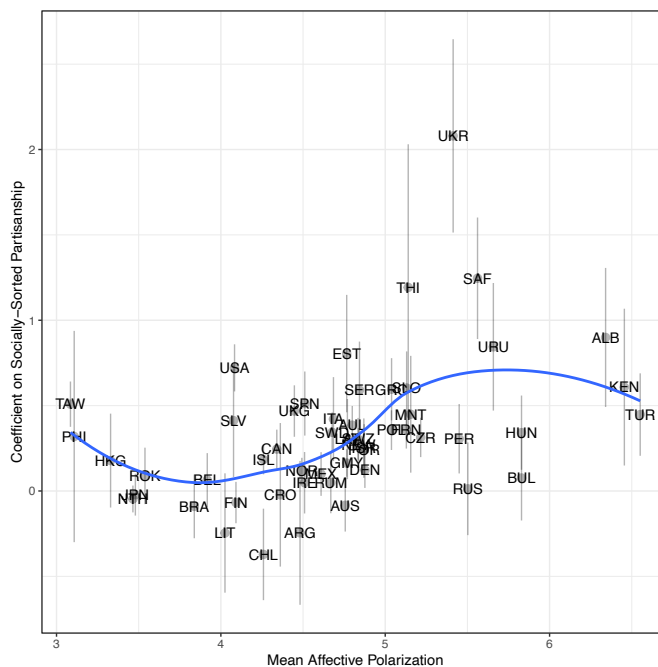
* $p < 0.05$

The first two models are election-level models of weighed-mean distance from the most-liked party. They show that elections with one percent more socially-rooted partisans have 0.02 points higher affective polarization. The third model is an individual-level model. It shows that socially-rooted partisans are 0.71 points more affectively polarized.

Figure 9 shows coefficients on the socially-sorted partisanship dummy in each country by the level of overall affective polarization as assessed using this measure. It shows that the gap between socially-sorted and unsorted partisans is larger in elections with more affective polarization. Overall, 47.2 percent of coefficients are significantly different from 0 and positive. That percentage is higher in countries with affective polarization above the median

(61.5 percent) than in countries where it is below the median (30.8 percent). Thus, as I found in my analyses above, social sorting matters most when affective polarization is high.

Figure 9: Coefficient on Socially-Sorting Dummy by Mean Weighed Distance from Most-Liked Party



I also used the cross-pressure score developed by Brader, Tucker and Therriault (2014) as an explanatory variable and find similar results (See Section 1 of the Online Appendix). I also tried alternative classifiers. I tried using multinomial regression with demographic variables included additively and found similar results. I also tried running a classifier using demographic variables that are common to all election studies in the CSES and found similar results.

4 Conclusion

Recent scholarship has shown that affective polarization is a reality in the United States and elsewhere. While numerous studies seek to explain this phenomenon, most do not consider heterogeneity in affective polarization. I consider such variation among partisans.

Building on recent work by Mason (2018) on social sorting, I argue that partisans whose party attachments are rooted in social groups are more likely to have a strong preference for their in-group over the out-group. I provide five reasons for this difference. Two of them are from Social Identity Theory: social sorting clarifies who is in the in-group and increases the motivation for being biased in favor of one's in-group (Roccas and Brewer 2002). Two others follow from sociological perspectives on political behavior: socially-rooted partisans communicate more with fellow partisans and they are more exposed to cues from social group members who support the same party. A fifth reason follows from the policy-oriented perspective on affective polarization (Bougher 2017; Orr and Huber 2020): social group members share policy preferences, which in turn may produce affective polarization.

Using data from the American National Election Study (ANES) and the Comparative Study of Electoral Systems (CSES), I show that there is considerable heterogeneity in affective polarization in the United States and cross-nationally. I also show that social sorting accounts for part of the variation in affective polarization at both the individual level and across countries. I show that this finding holds even when using alternative measures of affective polarization.

These results have major implications for the study of affective polarization and for assessments of possible solutions. While seeking to explain affective polarization, scholars should consider that not all partisans are equally polarized. The variables that make some socially-sorted partisans more polarized might not have the same effect on unsorted partisans. Moreover, when considering solutions to reduce affective polarization, scholars must consider whether their proposed solutions work on different types of partisans. If a treatment reduces affective polarization among unsorted partisans, it should probably be seen as less effective than one that manages to reduce it among socially-sorted partisans, whose greater inter-party animosity may be much more challenging to reduce.

Much more remains to be done to understand heterogeneity among partisans. While I have identified one important correlate of heterogeneity, there are surely others. Future work

should identify these and determine how they influence the strength of affective polarization as well as responses to proposed solutions.

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Socially-Sorted Partisans Are More Affectively Polarized: Evidence from the United States and Elsewhere

Online Appendix

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October 8, 2020

1 Analyses using reverse cross-pressure scores

These analyses are based on the cross-pressure score proposed by Brader, Tucker and Theriault (2014). However, I do not rescale them so that higher values indicate greater cross-pressures. Instead, higher values indicate more social sorting. The number of elections for which I can calculate cross-pressure scores is smaller than the number for which I have measures of correct classification because I exclude partisans with values of factor variables shared by fewer than 30 respondents. This is necessary to get the regression models to run. The x-axis in the figure below is on a log 10 scale.

Figure 1: Reverse Cross-Pressures and Affective Polarization

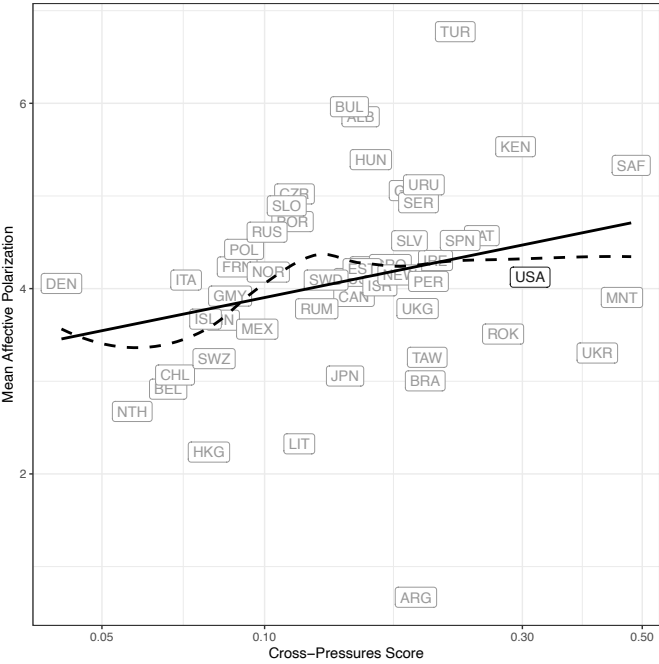


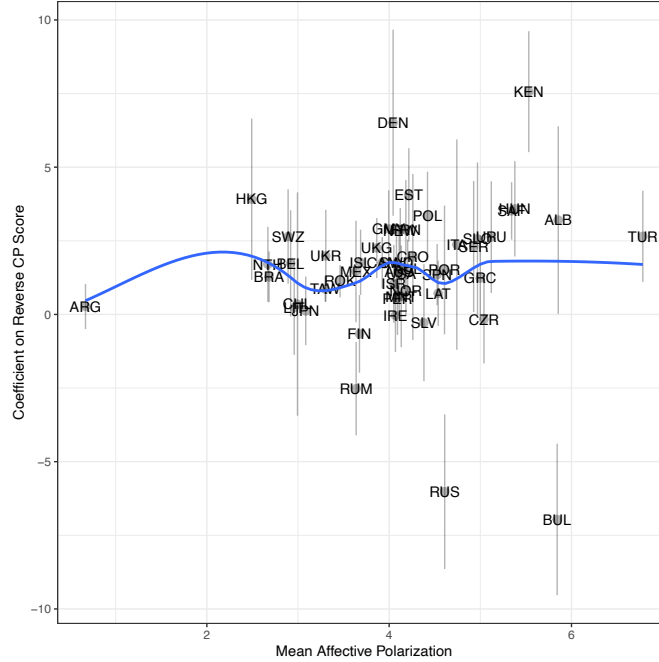
Table 1: Affective Polarization Models

	Election Level	Individual Level
Intercept	3.32*	5.77*
	(0.38)	(0.10)
Cross-Pressures Score	2.72*	1.26*
	(0.83)	(0.07)
Dalton's Ideological Polarization Index	0.23*	
	(0.07)	
ENEP	-0.06	
	(0.04)	
Semi-Presidential Regime	-0.16	
	(0.19)	
Presidential Regime	-0.53*	
	(0.21)	
Proportional Electoral System	-0.03	
	(0.18)	
Mixed Electoral System	-0.31	
	(0.18)	
R ²	0.26	0.10
Adj. R ²	0.23	0.10
Num. obs.	162	122251

* $p < 0.05$

These analyses include fewer elections than Random Forest models because of lost cases due to small numbers in variable categories.

Figure 2: Coefficients on Reverse CP Scores and Affective Polarization Cross-Nationally



2 Analyses using measures of affective polarization proposed by Wagner (2020)

In addition to the weighted mean distance from the most-liked party I use in the main text, Wagner (2020) proposes three other measures:

- Unweighted mean distance from the most-liked party

$$\text{Unweighted Distance}_i = \sqrt{\frac{\sum_{p=1}^P (\text{like}_{ip} - \text{like}_{\max,i})^2}{n_p}} \quad (1)$$

- Unweighted Spread of like-dislike scores

$$\text{Unweighted Spread}_i = \sqrt{\frac{\sum_{p=1}^P (\text{like}_{ip} - \overline{\text{like}}_i)^2}{n_p}} \quad (2)$$

where $\overline{\text{like}}_i$ is the average like-dislike score respondent i gives across all parties.

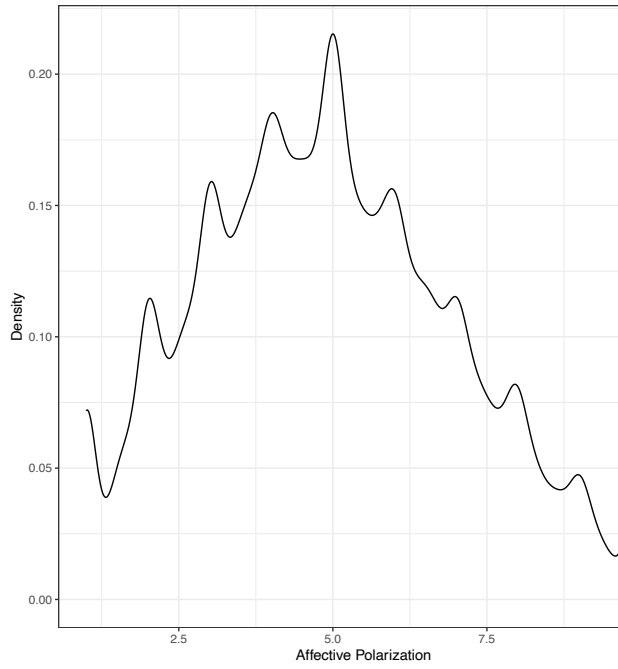
- Weighted Spread of like-dislike scores

$$\text{Weighted Spread}_i = \sqrt{\sum_{p=1}^P V_p (\text{like}_{ip} - \overline{\text{like}}_i)^2} \quad (3)$$

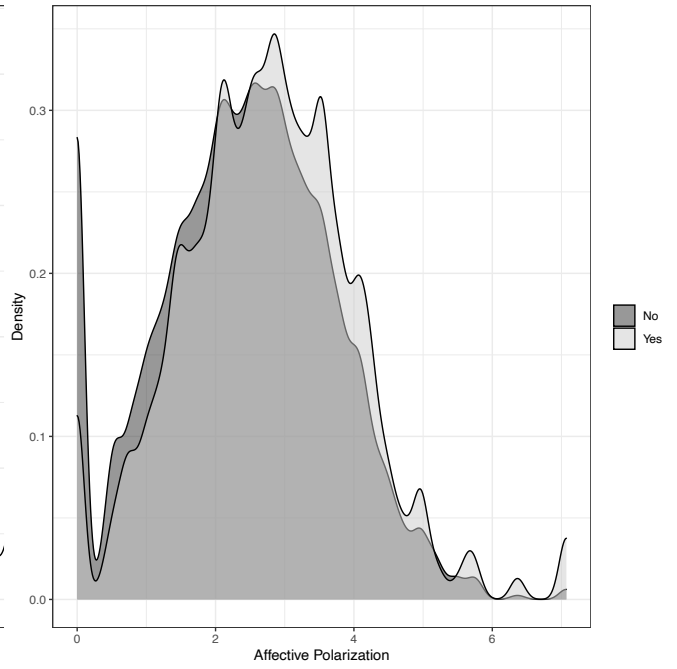
$$\text{where } \overline{\text{like}_i} = \sum_{p=1}^P V_p * \text{like}_{ip}$$

Figure 3: Distributions of Each Measure of Affective Polarization

(a) Unweighted Mean Distance from the Most-Liked Party



(b) Spread of Like-Dislike Scores



(c) Weighted Spread of Like-Dislike Scores

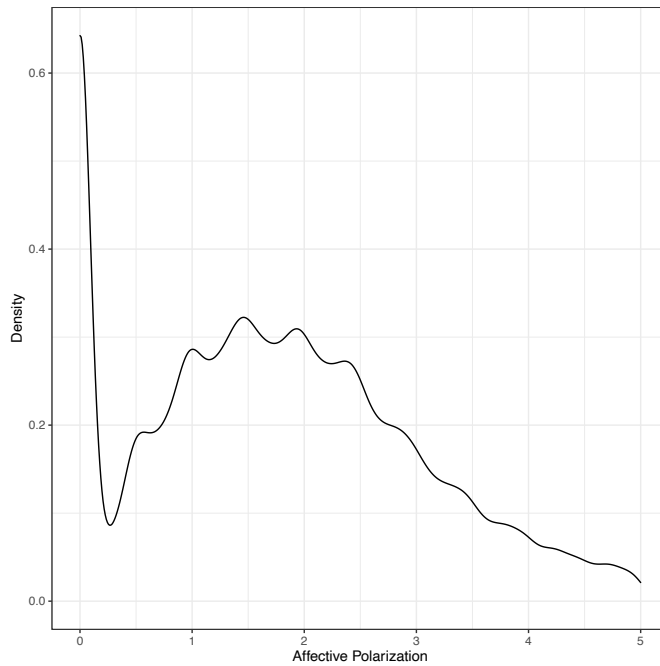
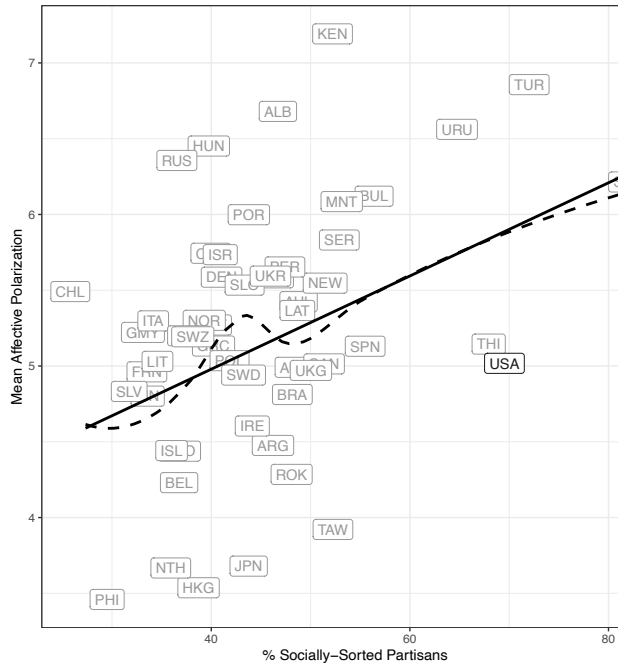
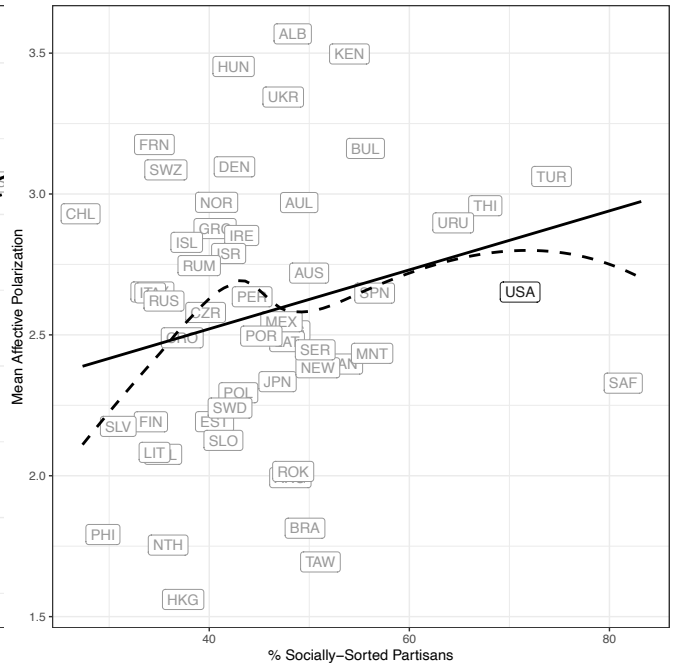


Figure 4: Social Sorting and Each Measure of Affective Polarization Cross-Nationally

(a) Unweighted Mean Distance from the Most-Liked Party



(b) Spread of Like-Dislike Scores



(c) Weighted Spread of Like-Dislike Scores

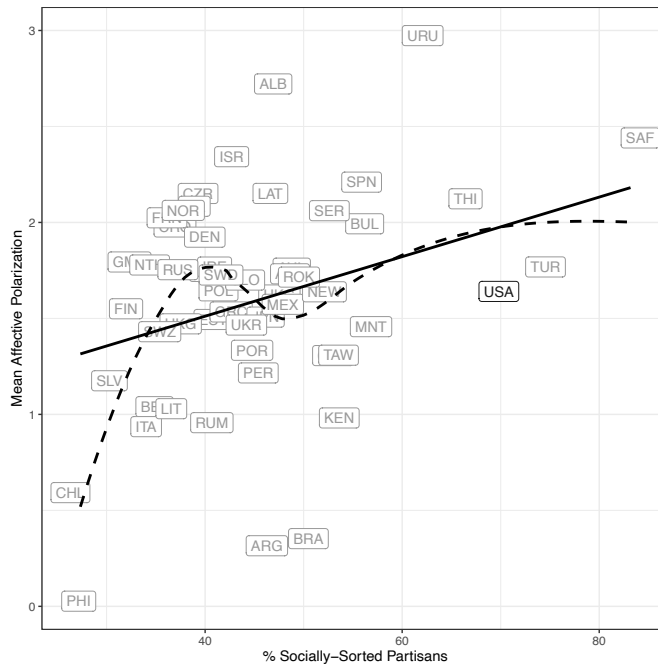


Table 2: Models of Unweighted Mean Distance from Most-Liked Party

	Election Level	Election Level	Individual Level
Intercept	2.91*	2.91*	6.34*
	(0.52)	(0.51)	(0.07)
% Socially-Sorted Partisans	0.02*	0.02*	
	(0.01)	(0.01)	
% Simulated Socially-Sorted Partisans		0.00	
		(0.01)	
Socially-Sorted Partisan			0.44*
			(0.01)
Dalton's Ideological Polarization Index	0.24*	0.24*	
	(0.05)	(0.05)	
ENEP	0.02	0.02	
	(0.03)	(0.02)	
Semi-Presidential Regime	-0.00	-0.00	
	(0.22)	(0.23)	
Presidential Regime	-0.02	-0.02	
	(0.22)	(0.24)	
Proportional Electoral System	0.04	0.04	
	(0.23)	(0.23)	
Mixed Electoral System	0.10	0.10	
	(0.27)	(0.28)	
R ²	0.27	0.27	0.11
Adj. R ²	0.24	0.23	0.11
Num. obs.	182	182	257748

* $p < 0.05$

Table 3: Models of Unweighted Spread of Like-Dislike Scores

	Election Level	Election Level	Individual Level
Intercept	1.91*	1.95*	3.05*
	(0.24)	(0.22)	(0.04)
% Socially-Sorted Partisans	0.01*	0.01*	
	(0.00)	(0.00)	
% Simulated Socially-Sorted Partisans		-0.01	
		(0.00)	
Socially-Sorted Partisan			0.30*
			(0.00)
Dalton's Ideological Polarization Index	0.12*	0.12*	
	(0.02)	(0.02)	
ENEP	0.00	0.00	
	(0.02)	(0.01)	
Semi-Presidential Regime	-0.05	-0.04	
	(0.10)	(0.10)	
Presidential Regime	-0.07	-0.05	
	(0.11)	(0.11)	
Proportional Electoral System	-0.24*	-0.23*	
	(0.08)	(0.08)	
Mixed Electoral System	-0.22*	-0.20	
	(0.11)	(0.12)	
R ²	0.29	0.31	0.10
Adj. R ²	0.26	0.27	0.10
Num. obs.	182	182	271661

* $p < 0.05$

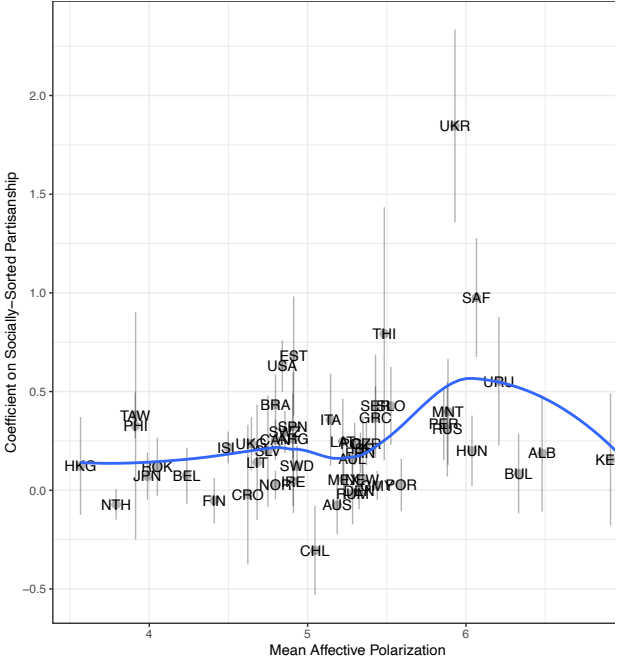
Table 4: Models of Weighted Spread of Like-Dislike Scores

	Election Level	Election Level	Individual Level
Intercept	0.92*	0.94*	2.80*
	(0.36)	(0.37)	(0.04)
% Socially-Sorted Partisans	0.01*	0.02*	
	(0.00)	(0.00)	
% Simulated Socially-Sorted Partisans		-0.00	
		(0.01)	
Socially-Sorted Partisan			0.41*
			(0.00)
Dalton's Ideological Polarization Index	0.12*	0.12*	
	(0.04)	(0.04)	
ENEP	-0.01	-0.01	
	(0.03)	(0.02)	
Semi-Presidential Regime	-0.16	-0.16	
	(0.12)	(0.13)	
Presidential Regime	-0.50*	-0.49*	
	(0.13)	(0.13)	
Proportional Electoral System	-0.22	-0.21	
	(0.15)	(0.16)	
Mixed Electoral System	-0.19	-0.17	
	(0.16)	(0.17)	
R ²	0.26	0.27	0.11
Adj. R ²	0.23	0.23	0.11
Num. obs.	182	182	230024

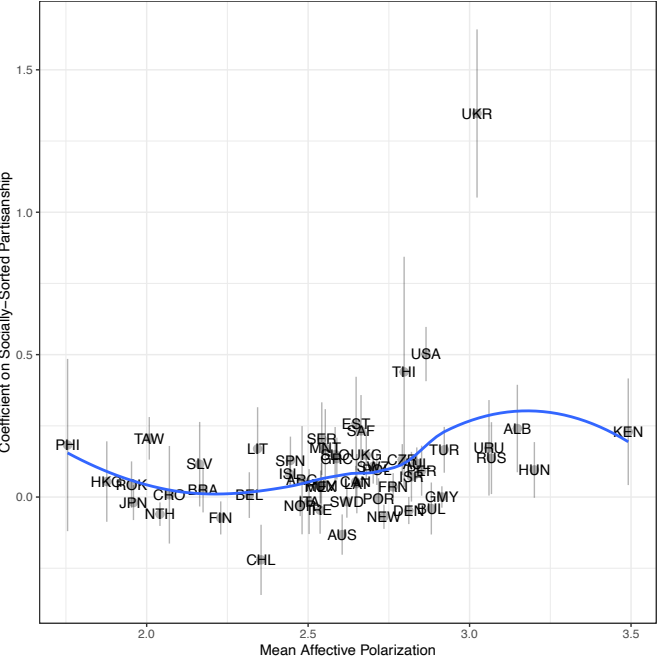
* $p < 0.05$

Figure 5: Affective Polarization and Gaps Between Socially-Sorted and Unsorted Partisans by Country

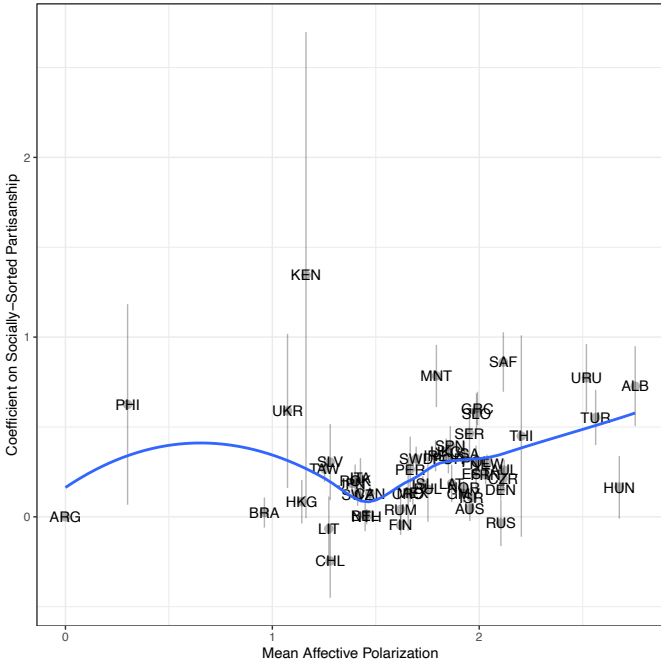
(a) Unweighted Mean Distance from the Most-Liked Party



(b) Spread of Like-Dislike Scores



(c) Weighted Spread of Like-Dislike Scores



References

Brader, Ted, Joshua A. Tucker and Andrew Therriault. 2014. “Cross pressure scores: An individual-level measure of cumulative partisan pressures arising from social group memberships.” *Political Behavior* 36(1):23–51. ISBN: 0190-9320 Publisher: Springer.

Wagner, Markus. 2020. “Affective polarization in multiparty systems.” *Electoral Studies* .