

Four Perspectives on Elite Polarization in Congress Since 1970

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Abstract

Political polarization may well be one of the most dangerous forces in our government, and as a country, the U.S. is experiencing exceptional levels of polarization. So, we endeavored to explore, what has been the trajectory of elite polarization in American politics since the 1970s, and what does that indicate about our current situation? We hypothesize from the literature that there would be low legislative productivity and high inflation in periods of heightened polarization and vice versa for low polarization. This is due to the inability of legislators to cooperate to find solutions that will work for the American people in polarized times. To answer our question, we consider elite polarization in Congress from four perspectives: aggregate polarization, Congressional cooperation, the state of the economy, and overall legislative effectiveness. The aggregate polarization and Congressional cooperation dimensions provide a model to identify ideological differences and levels of bipartisan legislative cooperation, respectively, and act as a benchmark to identify how polarized Congress was at any given time. In contrast, the overall effectiveness and state of the economy analyses will provide an external measure to determine effects. The analyses suggest that polarization has broadly increased since 1970, with few exceptions, regardless of the state of the economy, indicating that economics is not a strong predictor of polarization, nor is polarization a strong predictor of economics. Furthermore, although not definitive, predictive analysis suggests that polarization will only increase.

Keywords: Polarization, Legislative Effectiveness, Inflation, Congressional Representation, Time Series Analysis

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A 2020 Pew Research study found that most Americans harbor dissatisfaction with our political system. The same study found that 47 percent of people say the political system "needs major changes" (Connaughton et al., 2021). For the last few years, there has been a rising tide in the political press of articles warning of polarization and what Americans think about it (Newport, 2019). That, of course, begs the question: what is the true state of polarization?

We must first distinguish between mass and elite polarization to answer that question. As the name suggests, mass polarization references the broad population of American voters. On the other hand, as Frances Lee (2015) explained, elite polarization focuses on members of the political elite – members of Congress and the like (Lee, 2015). This paper will focus on elite polarization, which allows the data to be specific to lawmakers' actions, eliminating the need for less accurate mass survey data; yet, even though elite polarization focuses on the elites, their actions still affect everyone. Their ability, or inability to pass legislation, determines the country's direction in ways that everyone feels. The paper will comprehensively view American elite polarization over the last seventy years by examining Congressional data. From there, we will be able to answer the question of the trajectory of polarization by examining trends over time. The paper will also address two additional questions: is economics a corollary to polarization, and based on the past, what can we say about the future of polarization in the American political system? To answer the first, we examine economic data in tandem with other areas to identify a relationship; to answer the second, we examine historical similarities to the present. In answering these questions, we hope to provide a more data-driven view of polarization that eschews the mass market, sensationalized view of polarization that the political press offers. Although this paper focuses solely on the academic side of polarization, we must also acknowledge that there are concrete implications. Political violence is rising across the country, and while this paper will focus on data analysis, we must not ignore the other, very real, part of this story (Bergengruen, 2022).

Theoretical Overview

There are four perspectives on elite polarization: aggregate polarization, Congressional cooperation, overall legislative productivity, and economics. Aggregate polarization quantifies the ideological difference between the two parties, Congressional cooperation identifies levels of bipartisanship in the legislative process, and overall legislative productivity examines Congressional output. The data used to create the aggregate polarization set was developed by Poole, Rosenthal, and others in a 2009 revision of the W-NOMINATE and older data sets (Carroll et al., 2009). We chose it due to its widespread acceptance as a method to quantify legislators' political leanings. In terms of Congressional

cooperation, in "The Rise of Partisanship and Super-Cooperators in the U.S. House of Representatives," the authors reveal their method for identifying cooperative success in Congress (Andris et al., 2015). In the context of this paper, there will be an attempt to correlate economic strength and polarization, so as a result, the main goal of the economic indicators will primarily be as a measure of economic strength. Stewart, McCarty, and Byrson indicate in their paper that there is a correlation between economic strength and mass polarization (Stewart et al., 2020). This paper will attempt to broaden the correlation to elite polarization as well. As for legislative effectiveness, Volden and Wiseman created a model for Congressional effectiveness in their 2012 paper (Volden & Wiseman, 2012). These models aim to predict how successful every legislator in American history has been at moving a bill through all stages of creation and making it into law. We chose these four areas due to their relevance to their respective fields and the question of elite polarization.

From the existing literature on elite polarization, we hypothesize that there would be low legislative productivity and high inflation in periods of heightened polarization and vice versa for low polarization.

Data and Analysis Plan

As stated above, this paper will use four data points to quantify polarization and identify possible causes. Each presents a unique perspective on polarization and can contribute to a longitudinal, multi-faceted discussion to answer our research question. When looking at these data measures, four time periods have been identified as important to guide the analysis. They are the first two Congresses of Nixon's presidency (1969-73); Reagan's presidency (1981-89); Clinton's Presidency (1995-2003); and the presidencies of Trump and the first two years of Biden (2016 - present). These have been chosen due to their general importance in American history, as well as their unique reputations when it comes to polarization. These eras will only guide the analysis, not restrict it.

Aggregate Ideological Polarization

The first perspective is data from the DW-NOMINATE (Dynamic Weighted-Nominal Three-Step Estimation) repository (Lewis et al., 2022). As mentioned above, DW-NOMINATE data has been used empirically to measure polarization amongst the political elites. Similarly, it will be employed in this paper to provide a numerical value for how polarized a certain Congress is. This is a standard measure that allows us to make comparisons across time. We take the ideological scores the data assigns to each member in a given Congress. From there, we compute a score to reflect the overall polarization of a given Congress. This composite score will be calculated by first finding the average DW-NOMINATE score of all Democratic and all Republican lawmakers in a separate congress. The distance between these two numbers will represent polarization in that

Congress. We then chart the calculated aggregate polarization values across time to identify trends.

Congressional Cooperation

The second is the measure of Congressional cooperation. We gather the data from ProPublica's archive of legislation proposed in Congress since 1970 (ProPublica's Represent App, 2023). From the data, we extract the number of Democrats and Republicans who are listed as co-sponsors on each bill. This would allow for the easy calculation of a percentage value of Democratic co-sponsors ($\text{\#D co-sponsors} / \text{\#total co-sponsors}$). Based on the percentage, the bill will be sorted into one of four categories: bipartisan, less bipartisan, more partisan, and partisan. The thresholds for this would be as follows:

Table 1
Cosponsorship Categorizations

ID	Percentage(s)
Partisan	0-10% or 90-100%
More Partisan	10-30% or 70-90%
Less Partisan	30-40% or 60-70%
Bipartisan	40-60%

Two graphs can be created from this data set. The first is a set of bar graphs, indicating for all Congresses between the 93rd Congress (start of the data set) till the 117th Congress (most recently completed session of Congress and the current end of the data set) what percentage of bills falls into each of these categories. This would ideally visually indicate how the makeup of bills has changed over time.

The second eschews the categorization and plots the average percent of Democratic co-sponsors for bills in each Congress. Plotted against each Congress, this would show how the average cooperation has shifted.

State of the Economy

To study the state of the economy during times of polarization, we consider the overall inflation and unemployment rates, chosen because they are both benchmark indicators of economic strength. Both data sets will be gathered from the Federal Reserve Economic Data database (Inflation, Consumer, 2021; Unemployment Rate, 2022).

We plot the data on standard rate versus time graphs indicating high or low inflation and unemployment.

Overall Legislative Effectiveness

The final data set will measure Legislative Effectiveness. The data comes from the Center for Effective Lawmaking's data set and essentially produces a value for every lawmaker denoting how productive they were in their Congress. The data reflect the number of bills that a lawmaker proposes, enters committee debate, passes committee, enters floor vote, passes both chambers, and becomes law (Volden & Wiseman, n.d.). In short, the value measures how much of that Congress' overall productivity was generated by that lawmaker. For example, how much of the 116th Congress' total legislative output was generated by Nancy Pelosi? Importantly, the data set also sorts every bill into one of three categories based on its overall importance, with substantively significant (S.S.) bills being the most important, followed by substantive (S), then commemorative bills (C). Regarding data manipulation, two routes will be taken here.

The first will find the average Legislative Effectiveness Score (LES) for each party in each Congress. From there, the value calculated for the minority party will be subtracted from the value calculated for the majority party, creating one distance value for each Congress. Since this value theoretically measures how different the two parties were in terms of achieving legislative progress, the lower the distance, the closer the two parties were in terms of achievement. In that sense, the closer to zero the difference is, the less it matters which party was in the majority, which could indicate an ability to compromise.

The second route for manipulation is the creation of ratios that measure bills introduced versus bills made into law. For each Congress, the bills will be broken up by the party that introduced them and by type of bill (S.S., S, C). From there, the ratio will be found for each category. That will leave a ratio for C bills introduced by Republicans, C bills introduced by Democrats, S bills introduced by Republicans, and so on, for each Congress.

In terms of graphical analysis, we plot the difference value on a linear graph. The ratios will also be plotted linearly; however, two graphs will be created here: one will show all three types of bills and their ratios, broken up by the party of introduction, for each Congress, while the other will just show the success rate of each of the three types of bills.

There will also be a final, simpler graph created with overall legislative effectiveness data that will show the relative percentages of each type of bill that each Congress passed. For example, it would show in the 100th Congress what percent of the bills passed were categorized as S.S., S, and C.

Results

Aggregate Polarization

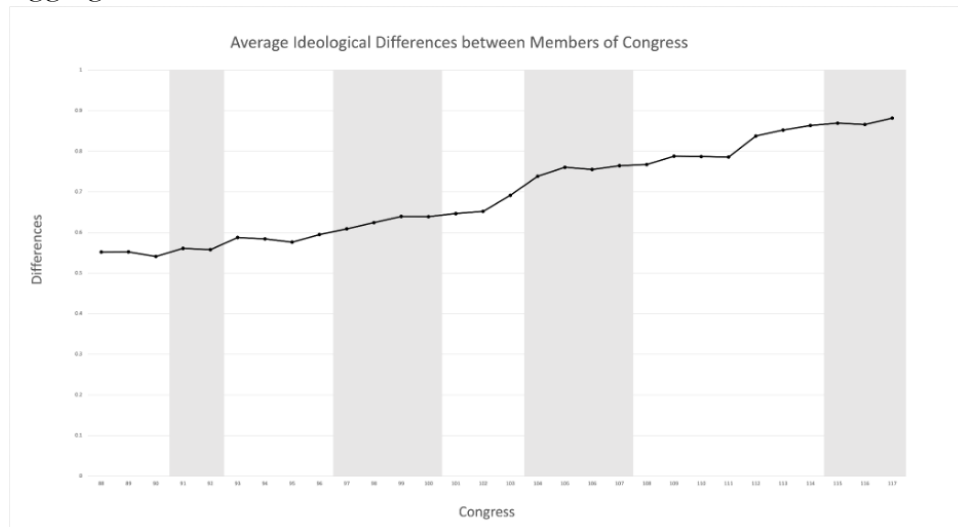


FIGURE 1. Difference between the mean ideologies for Democrat and Republican Members of Congress.

The aggregate polarization graph shows that the average difference between the members has steadily increased. Between the 91st and 117th Congresses, the difference has increased by about 57%.

Interestingly, the periods of focus seem to not be within periods of great increase. Rather they seem to be in periods of plateau (with the exception of the period between the 97th and 99th Congress). Conversely, the time before the focus periods witnessed sudden growth. For example, before the 104th - 107th Congress stagnated, there was a sharp rise in the 102nd and 103rd Congress. Similarly, before the stagnation of the 115th-117th, there was a sharp rise in the 112th. Granted, this comes more than half a decade before, but after the sharp rise of the 112th begins the plateau that lasts into the focus period. The outlier here is again the 97th - 99th Congress, with the 93rd-97th not having the same style of sudden growth.

Congressional Cooperation

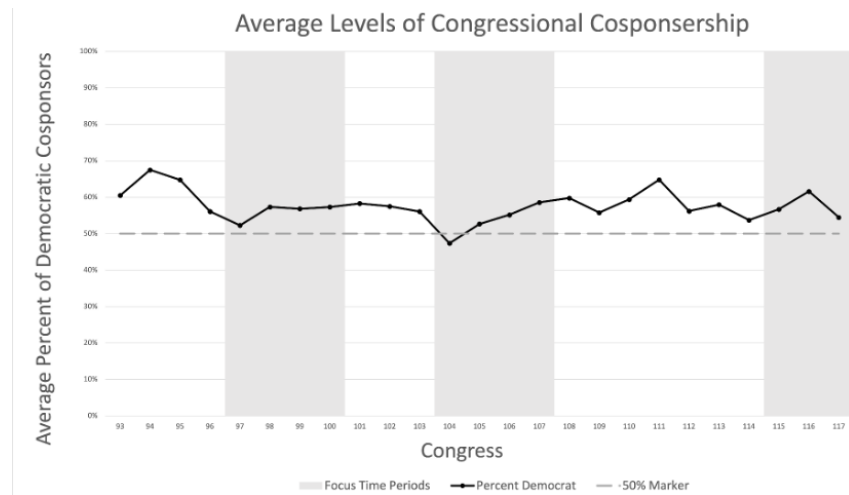


FIGURE 2. Average Percent of Bill Co-sponsors who are Democrats by Congress.

A critical note to remember with this graph is that the closer to 50% the value is, the closer to perfect bipartisanship the Congress was because the 50% line indicates that the bills were perfectly split between Democratic and Republican co-sponsors. This graph indicates that levels of Congressional cooperation have remained constant within this project's scope. Broadly, the average has stayed between 45% and 70%. Indeed, with two exceptions (the 104th and 116th Congresses) during the focus periods, the average percentage was between 50% and 60%. Another similarity between the focus periods is the phenomenon of a drop before entering, then a slight rise after the start of the period. For example, there is a sharp decline between the 94th and 97th Congress, and then between the 97th and 98th, there is a slight increase before stagnation. Then again, before the 104th Congress, there was a decline from the level of the 103rd before a slight rise to the 105th level, followed by steady growth. As an exception to this rule, there is a slow fall between the 111th and 114th Congress but a rise before the start of the period (the 115th).

Interestingly, despite control of Congress switching parties multiple times throughout the scope of this graph, and indeed despite control being with the Republican party for many of these Congresses, there is only one Congress, the 104th, where the average indicates more Republican co-sponsors. For all the other periods (including the 105th-107th during Republican control), on average, Democrats made up a majority of co-sponsors.

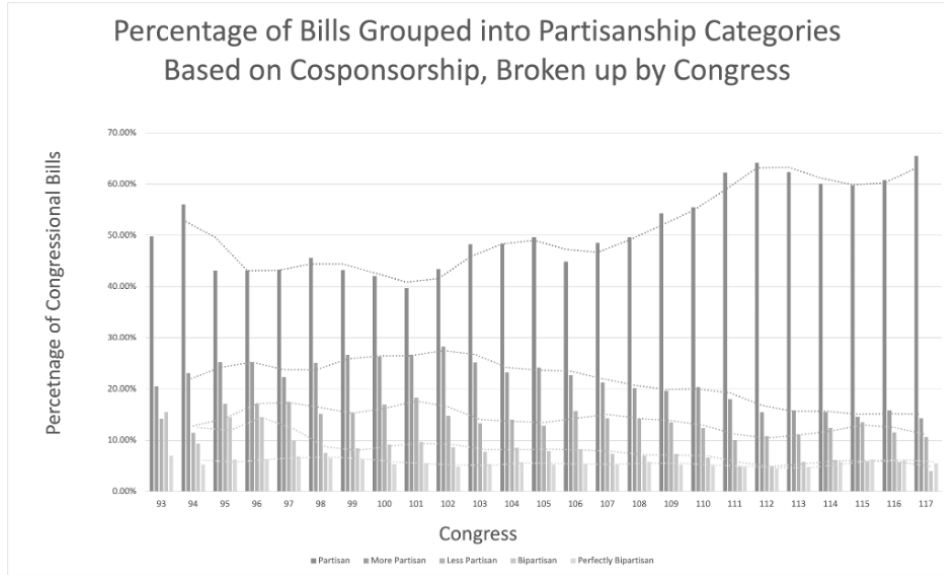


FIGURE 3. Sorted Percentage of Bills Introduced in each Congress.

This graph indicates an interesting phenomenon. As we get closer to the present, the percentage of bills categorized as partisan steadily increases, with sharper rises between the 107th and 112th Congress. Logically, the percentage of all others falls as this rises. The only exception seems to be between the 94th and 101st Congresses, where the percentage of partisan bills seems to decline before starting the rise mentioned above.

State of the Economy

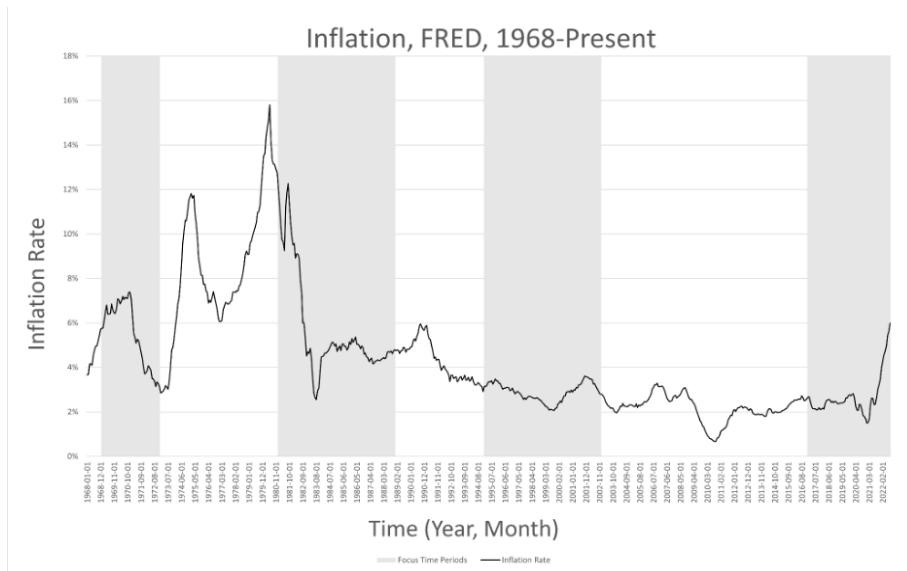


FIGURE 4. U.S. Inflation Rate from 1968 to the present.

From this relatively standard Inflation graph, we see varying inflation profiles in the periods of focus. In the first period, between 1968-73 (91st - 92nd Congress), there was a sharp drop midway through, coinciding with the end of the 1969-70 recession. Between 1981-88 (97th-100th Congresses), there was a sharp drop, followed by a period of stagnation. The drop coincides with the high inflation of the 1970s. From there, however, is a steady decline that continues, with some fluctuations, until 2021. This includes the second period (104-107th Congress) and most of the third (115-present). The final bit of the third period sees a significant spike in inflation rates coinciding with the COVID-19 economic recession.

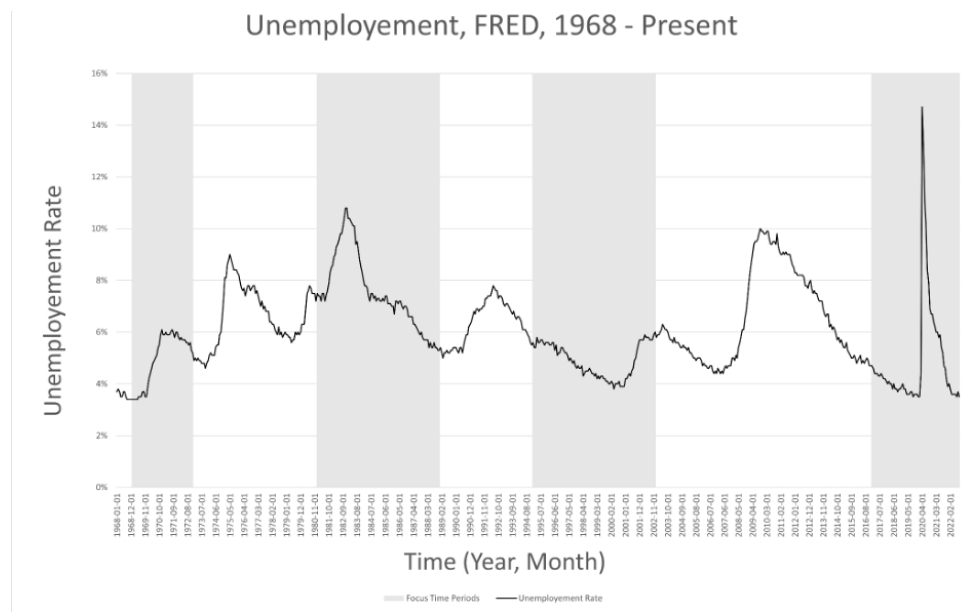


FIGURE 5. U.S. unemployment rate from 1968 to the present.

Overall, there is a repeating pattern in the unemployment graph, with the period between 1981 and 1989 seemingly repeated with different magnitudes. In other words, there is a period of steady falling, followed by a sudden spike, and then steady falling again. What changes is the period within which one of these patterns occurs, as well as the size of the spike. Interestingly, all four of the periods seem to fall within a different section of this pattern: the first two time periods both start in a period of slow falling, or stagnation, followed by a sudden spike, with the first period about ending there, and the second continuing into the period of slow falling. The third period starts with a more extended period of slow falling, followed by a smaller spike towards the end. The final period follows the pattern of the first two, except with a slightly longer falling period followed by a much more significant spike.

It should be mentioned that the economic data stands alone in that it includes Nixon's first term: between 1969 and 1973. The other data sets rely primarily on certain Congressional record-keeping practices that were started only during or after the 93rd Congress, excluding the Nixon era.

Overall Legislative Effectiveness

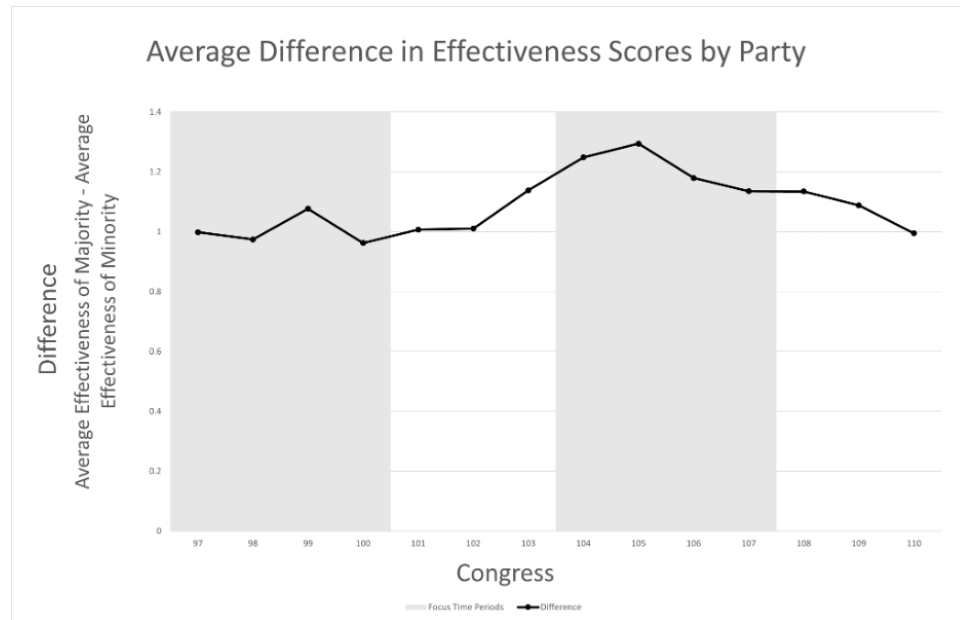


FIGURE 6. Difference in effectiveness between the majority and minority party in each Congress measured by subtracting the mean effectiveness score of the minority from that of the majority.

Within the two periods shown on this graph, there is a slight pattern that can be found: both periods have small spikes, followed by some decline. However, this is a relatively weak pattern because the first period starts with a decline, whereas the second with an increase, and the spike comes later in the first than in the second. Overall, the second period is generally higher than the first, denoting less cooperation between the majority and the minority in the second period.

It is essential to note that legislative effectiveness data for both the House and Senate don't go past the 110th Congress. In contrast, separated House/Congress data is available till 2020. This is how the final graph of legislative effectiveness data (for just the house) continues until the 116th Congress.

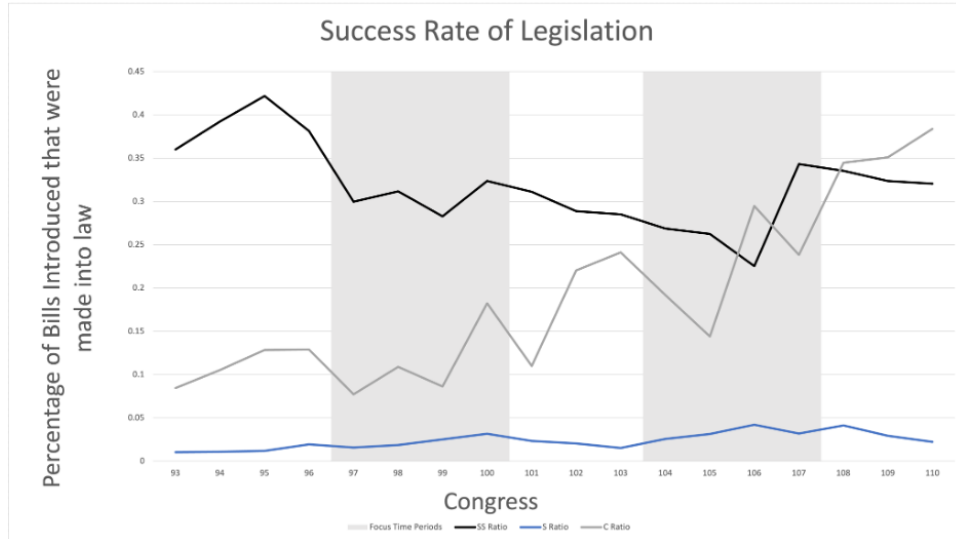


FIGURE 7. Percentage of bills introduced that passed into law, broken down by their significance as denoted by the Center for Effective Lawmaking.

In terms of overall trends, it seems that all three types of bills witnessed different movements within the two periods. The S.S. bills, the most important, generally fell between the 95th and 106th Congresses but then suddenly spiked in the 107th. This could be explained by the September 11th attacks, which caused many significant bills to be passed with much bipartisan support. On the other hand, throughout the graph's era, the passage rate of S bills, the middle-significance ones, stays low and mostly constant. On the other hand, the passage rate of C bills rises over time.

Within the periods, there seem to be no observable patterns separate from those described above.

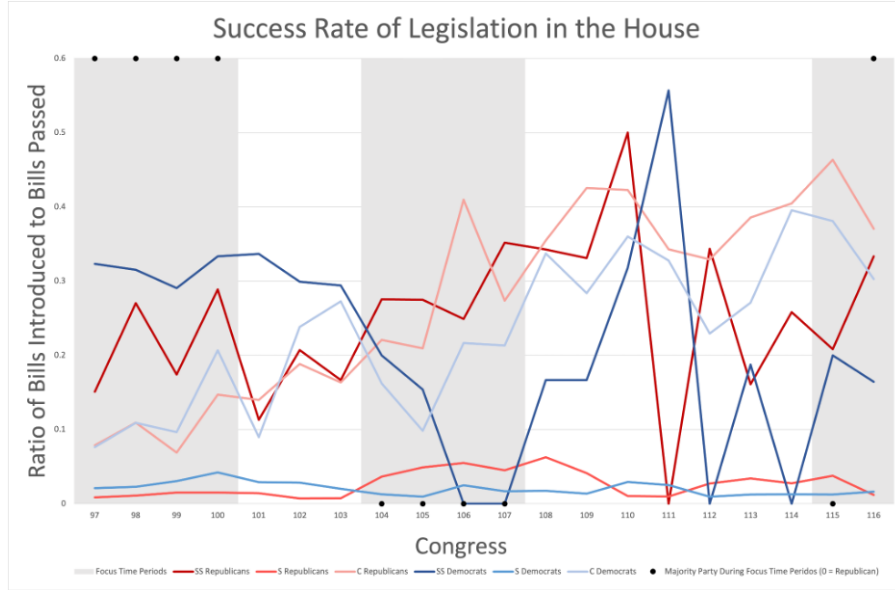


FIGURE 8. Ratio of Bills Passed (in the House), Sorted by LES Importance Categories.

Similar to the graph above, the rate of S bills for both parties seems to stay consistently low, despite the movement of all other types. As for C bills, despite party control, the rate of passage for both is rising slowly but steadily over time. The outlier to consistency is the S.S. bills. The only actual observable pattern within S.S. bills are those of the Democrats within the first two time periods. This value is the highest in the first period, with a Democratic Congress, and lower in the second period, with a Republican-controlled House. After that, Democratic and Republican S.S. values fluctuate between the 110th and 112th, reaching a point in the 115th where Republicans are higher during Republican control.

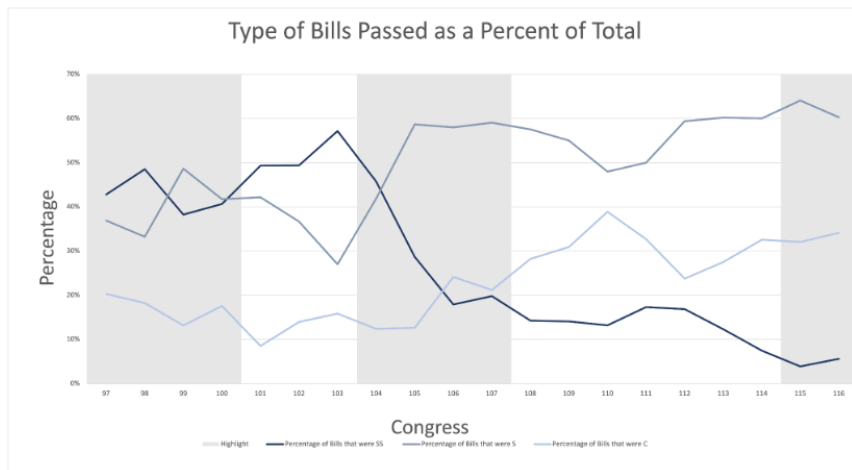


FIGURE 9. Percentage of Bills Passed in the House, for Each Congress Broken Down by Importance Type.

More so than the other graphs, this one clearly shows the change in S.S. bills over time. Specifically, within the second period (104th-107th Congress), there was a sudden and sharp decline in the percentage of bills that were S.S. Once this decline happened, the levels did not recover and stayed low. Conversely, the rate of bills that were C has steadily climbed, along with the overall slow growth of S bills.

Aggregating the Four Perspectives

The polarization story can't be told from just one angle, and when observing multiple data points in tandem, additional trends can be observed. The first is that, overall, elite polarization has increased from 1971 to the present day, which can be identified using the two predictors established: aggregate polarization and Congressional cooperation. There was a 58 percent increase in aggregate polarization from 1971 to the start of 2023. This difference value denotes how far apart the parties are on average regarding ideology. The increase suggests that the two parties have moved significantly away from each other. The Congressional cooperation data corroborates this trend by revealing the types of bills introduced in successive Congresses. The percentage of bills introduced to Congress categorized as partisan increased from 49.78 percent in the 93rd Congress, 1971, to 65.50 percent in the 117th Congress, 2022. Conversely, the percentage of bills categorized as bipartisan decreased from 15.3 percent in the 93rd Congress to 4.01 percent in the 117th Congress. That is a 31.5 percent increase in the partisan percentage and a 73.8 percent decrease in the bipartisan bills, indicating that there has been less cooperation within Congress on lawmaking over time. From these two, it seems that the two sides of government are moving farther away from each other, and in doing so, they are moving legislation away from cooperative bills to ones that they prefer.

This change in legislation seems to be compounded by a shift in the type of legislation passed. The increased polarization seemingly resulted in Congress passing less essential legislation in favor of nominal legislation, as shown by the final overall legislative effectiveness graph. From the 93rd to the 106th Congress alone, there was a 37.5 percent decrease in the percentage of S.S. (substantively significant) bills, as opposed to a 248.35 percent increase in the percentage of C (commemorative) bills. With SS bills supposedly denoting those that are important and C bills indicating things like renamings and other largely insignificant pieces of legislation, it seems that as Congress has become polarized, less of the productive output is significant progress. That is demonstrated up until the 106th Congress; however, there is a shift in the 107th Congress, with a sudden increase nearly up to the levels of the 93rd; yet this can be explained as a result of circumstance rather than an indicator of overtime trends. The 107th Congress began on January 3,

2001, which would mean the 107th Congress would have been in power during 9/11 and its aftermath, which included declarations of war and other pieces of legislation that undoubtedly counted as significant. This would explain the sudden jump from the 106th to the 107th Congress and, to some extent, the dip after the 107th Congress. All said, it seems that the overall trend, when not interrupted, seems to be moving towards less important, more nominal bills. However, this points to an interesting phenomenon, possibly suggesting that an attack against the country prompts a sudden reduction in polarization and spurs the passage of more important legislation. A slight dip in the percentage of partisan bills in the 107th Congress is also consistent with this conclusion.

The data collection also included economic measures to identify if they were associated with polarization. On that front, the data is largely inconclusive. The two periods fit into two broad categories: times of economic calm and times of economic turmoil. Based on measures of unemployment and inflation, the second and final periods witnessed financial stress, with the second period, 97th - 100th Congress, seeing sharp fluctuations in inflation and peak unemployment until 2020. This fits with the larger economic picture of the recession of the early 1980s and the Great Inflation of 1980. The economic turmoil of the last period, 115th Congress - present, can be explained largely by the COVID-19 pandemic, which began in the 116th Congress, and caused record-high unemployment and inflation. The other two time periods see comparatively stable economies. The third period, 104th - 107th Congress, is probably the calmest of the four periods, with slowly declining unemployment and inflation broken only by a small spike towards the end of the period. The first period, 91st-92nd Congress, is sandwiched between the recession of 1969-70 and 1973-5. As a result, it sees higher unemployment and inflation figures than the second period, but compared to the second and final period is still relatively constant. Where the four can be sorted into buckets by economics, with the first and third periods together, and the second and last together, the same cannot be said for their polarization profiles. The only polarization measure that extends to all four of the periods is aggregate polarization, which shows that in all four time periods, the difference was relatively constant throughout the time. The main observable difference between the periods is that each takes place at a higher value, almost like an increase to a plateau. Congressional cooperation data, unfortunately, only includes the final three time periods and, like aggregate polarization, does not tell a convincing story indicating a correlation. In fact, out of the three time periods, the most similar seem to be the second and third periods, categorized by slight rises early on and a small dip towards the end in the percentage of partisan bills. The final period sees only a steady rise. Considering that the second and final are supposed to fall together if there is an economic correlation, it seems that from these data points, the evidence for economics being a predictor of polarization is lacking in the context of this paper. There is nothing to

suggest a complete lack of this effect, yet it does seem that, from 1970 onward, there is no evidence suggesting a strong correlation between the two.

One of the auxiliary questions this paper set out to answer was, based on the analysis of the past, what can be predicted about the present and possibly the future of polarization? The proposed method would match the present with historical periods with similar data profiles. However, when looking at the data, there only seems to be one dataset where the data from the present resembles the past: congressional cooperation. There, the periods between the 98th and 103rd Congress resemble, in some ways, the periods between the 112th Congress and the 117th Congress. Both periods see an almost u-shaped movement in their trend line, and both have their minimum of four Congresses after the start of the period. Furthermore, both periods result in an overall increase in the number of partisan bills. The years after the 98th-103rd Congresses period saw an increase, with one exception, to the 112th Congress. Assuming all else equal, that would predict nine Congresses after the 112th-117th period being steady increases in the polarization of bills. That exact numerical prediction is likely flawed, given the many other factors influencing this measure. Nevertheless, the general prognosis of an increase fits with the overall trend of Congressional cooperation and the data writ large. The aggregate polarization set and the economic data are the other possibly relevant datasets for this predictive analysis. Unfortunately, the legislative effectiveness data that incorporates both the Senate and the House ends at the 110th Congress, making it irrelevant in the analysis of the present. Furthermore, the state of the economic data set was addressed above. The conclusion is that it can't reliably be used as a predictor of polarization, meaning it does not have much relevance here, either. That leaves the aggregate polarization set. As mentioned above, there does not seem to be one specific time period that can be correlated to the present from this set. This data set has steadily increased over this project's scope. Given the variation of the last seventy years, nothing would be so drastic as to change that trend significantly. This is to say, although there may be Congress-to-Congress decreases in levels of aggregate polarization, it is likely that over the next set of Congresses, there will continue to be this increase.

Discussion and Conclusions

The broad conclusions that can be drawn both from aggregating the perspectives and examining individual data sets boil down to one main idea: since the 1970s, there has been an increase in elite polarization, which has brought, along with it, a decrease in the significance of legislation passed.

Unfortunately, one of the project's biggest limitations is the accessibility of data. Across the four data sets, there are discrepancies in their start dates. Whereas the aggregate polarization and state of the

economy sets are available from earlier than the purview of this project, the overall legislative effectiveness and Congressional cooperation data sets do not begin until the 93rd Congress, when there were new data collection rules introduced, meaning the first period, 91st-92nd Congress is cut out. Furthermore, as mentioned above, one of the overall legislative effectiveness datasets, that of combined House and Senate data records, finishes with the 110th Congress, which ended in 2009. Unfortunately, some overall legislative effectiveness data is unavailable for the final period, 115th onwards. This was particularly problematic when attempting to identify the economic correlation and when doing the predictive analysis.

Further research could elaborate on three areas: First, placing polarization research within its place in greater American history. Ideally, it would look at other times of high polarization in American history, the antebellum period under Fillmore, Pierce, and Buchanan, or the Civil Rights Era of the 1960s, to identify how this period compares to those. The second expansion would be to do a broader analysis to identify the causes of polarization more closely. In the context of this paper, the only data set used to correlate with polarization levels was, effectively, economic data. However, future research could take many other paths in identifying corollaries, which could be helpful if the goal is to reduce polarization. Another interesting path would be to study periods of war and conflict and examine how polarization changed around them. The data in this paper alone indicates unexpected trends around 9/11 and the start of the War on Terror, so further research could yield interesting results.

The warnings of rising polarization in the media are not misplaced: there is significant truth behind the fact that elite polarization is growing and will continue to. Amid that gloomy future, however, it is crucial to hold on to some hope. Often, the political press – which, as mentioned, writes ad nauseam about the dangers of polarization – can blow things out of proportion. As the rest of this paper attests, polarization is increasing, but that does not mean all hope is lost. A summer 2022 Washington Post article points out that the 117th Congress made significant strides on policy issues contrary to its public reputation (Editorial Board, 2022). Focusing on large-scale data, this paper comprehensively looks at polarization over time. Still, it is essential to remember that behind the stats is genuine progress, and any progress means there is a chance to reverse the trend.

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