6-28-2013

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Jennifer N. Victor
George Mason University, jvictor3@gmu.edu

Nils Ringe
University of Wisconsin - Madison, ringe@wisc.edu

Stephen Haptonstahl
Berico Technologies, shaptonstahl@bericotechnologies.com

Presented at the 2013 Political Networks Conference, Bloomington, IN

Multiplex Legislative Networks and the Power of Caucuses to Alleviate Partisan Polarization

Jennifer Victor [*1], Stephen Haptonstahl [†2] and Nils Ringe [‡3]

[1]Assistant Professor of Political Science, George Mason University
[2]Applied Statistician, Berico Technologies
[3]Associate Professor of Political Science, University of Wisconsin, Madison

June 28, 2013

Paper prepared for the 6th Annual Political Networks Conference, University of Indiana, Bloomington, June 26-29, 2013.

Abstract

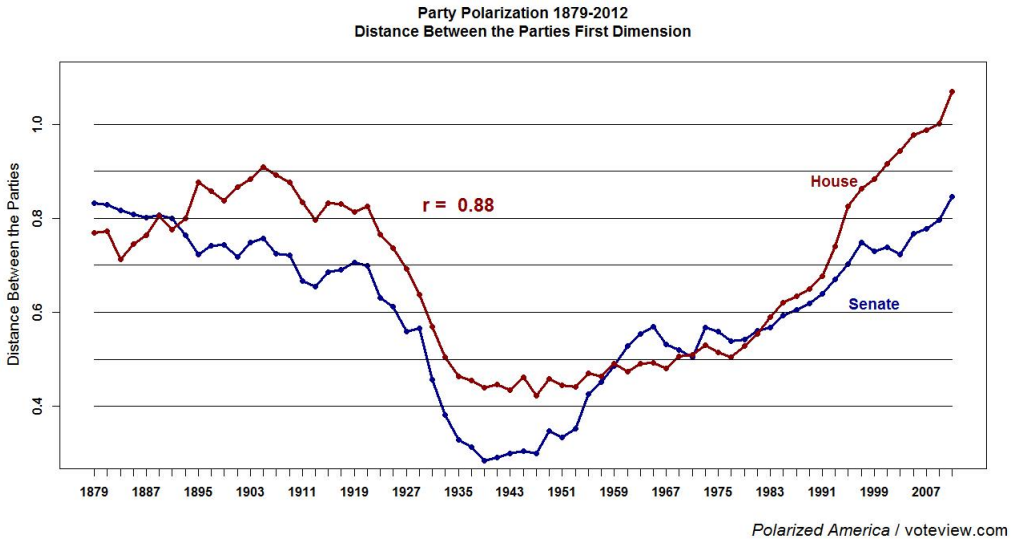
Congress has been increasingly criticized as a broken, gridlocked, polarized, ineffective institution. In this paper we seek to explore the consequences of polarization and whether legislators take steps to alleviate them. We hypothesize that participation in the voluntary, bipartisan, caucus system provides opportunities for legislators to build cross-partisan relationships and profit from shared information, which can alleviate some of the negative effects of polarization. We operationalize polarization using dyadic covoting and show that legislators are more likely to covote if they share more caucus connections, controlling for a variety of factors that predict voting. The data in this analysis spans 9 congresses (1993-2010) and includes multiple connections between legislators.

[*]jvictor3@gmu.edu
[†]shaptonstahl@bericotechnologies.com
[‡]ringe@wisc.edu

Introduction

In this paper we seek to examine whether legislators in the US Congress can alleviate some of the immobilizing effects of partisan polarization through the social and informational benefits of voluntary caucuses. It is well understood that congress has become increasingly polarized in recent years. Figure 1 shows the polarization in Congress by party using roll call votes from 1879-2009 (Poole and Rosenthal 2007). While a vast literature exists to help explain the sources of this polarization, in this paper we focus on its consequences. Scholars and pundits frequently point to congressional polarization as a contributing feature of gridlock in Washington. Meanwhile, new research suggests that some institutional features of legislatures, such as parties and committee, place constraints on legislators' ability to make connections with one another and spread information. Legislators, in part, solve this problem by creating legislative member organizations (LMOs), frequently called caucuses in the U.S. Congress (Ringe and Victor 2013). Given the recent proliferation of caucuses in Congress this research explores the possibility that MCs use caucuses to help alleviate some frustration caused by polarization and gridlock.

Figure 1: Congressional Polarization: DW-Nominate Scores by party 1879-2009



Theory

The roll call record makes the increasing partisan polarization of the U.S. Congress readily apparent. In the 20-year period between 1992 and 2012 party groups in Congress have become more internally homogenous, and their medians have become increasingly distant from one another, according to roll call votes. Roll calls are a reasonable way to measure the ideological nature of individual legislators and of the Congress, and have formed the basis for such analyses for decades (e.g., NOMINATE scores, see (Poole and Rosenthal 1997,

2007). The sources of this increased polarization are numerous and highly related to electoral competition (Abramowitz and Gunning 2006; Lebo and Koger 2007).

There is also increasing evidence that the polarization in congress results in decreased productivity, or at least and increased dissatisfaction with the institution (Madison 2012). Using the resume of the Congress we looked at the overall productivity of Congress during this time period (Senate 2012).

Figure 2: Legislative productivity of the House of Representatives 1993-2010

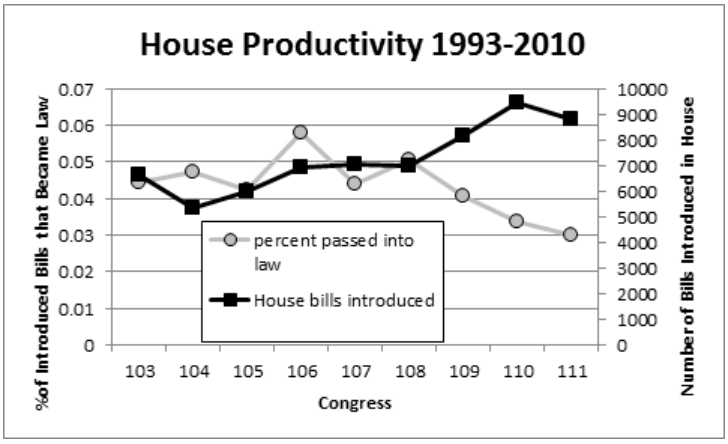


Figure 2 shows that while House members have actively and increasingly introduced legislation over the period of study, the percent of their bills that pass into law has declined. This suggests that single party coalitions pass bills through the chamber that do not become law. For example, in recent years the Republicans have repealed the Affordable Healthcare Act ("Obamacare") 37 times (Farenthold 2013). This is a symbolic act of partisan politics, not a genuine gesture in lawmaking, as Republicans know that President Obama and the Democratically controlled Senate will not follow course. As the legislative gridlock associated with partisan polarization increases, some legislators may seek means of alleviating the negative consequences of gridlock. While it may not be possible to overcome polarization in a way that leads to increased productivity, legislators may seek ways to increase their level of contact and interaction with their peers—particularly cross partisans.

Legislators have strong incentives to stay in communication with members of the opposite party because the need for broad-based political and policy information is deep. Also, legislators have strong incentives to seek interactions with those with whom they are likely to disagree in order to obtain strategic advantage (Huckfeldt and Sprague. 1987), deeper awareness of opposing viewpoints (Mutz 2006), and to increase the confidence in an individual's preference ordering by checking it against the preferences of allies or adversaries with known preferences (Ringe, Victor, and Gross 2013). It is therefore logical to expect lawmakers in a highly partisan legislature to seek opportunities to interact with cross-partisans off the chamber floor.

For this reason, we expect that members of Congress in highly polarized voting environments will be more likely to join bipartisan caucuses. If this is true, then we should observe

growth in the caucus system, and growth in bi-partisan caucuses in particular, to occur as a result of increasing partisanship, rather than the other way around.

In the forthcoming volume *Bridging the Information Gap: Legislative Member Organizations in the United States and European Union*, Ringe and Victor show that legislators use Legislative Member Organizations (LMOs) (e.g., caucuses in congress) to make connections to legislators with whom they are not otherwise connected (see especially Chapter 5) (Ringe and Victor 2013). LMOs, they argue, offer institutional flexibility not offered by parties and committees. As voluntary organizations with (potentially) unlimited issue scope caucuses offer an opportunity for MCs to collaborate on issues for which they share policy priority (but not necessarily preferences). Ringe and Victor show that the casual nature of caucuses are a benefit to their longevity because for all but the caucus leaders, participation in caucuses, their events, activities, and communication is low-cost and there are no consequences for shirking. Moreover, the potential for caucuses to produce valuable and useful information about policy (e.g., expert information) or politics (e.g., legislative strategy or legislators' revealed preferences) is real, as caucuses tend to be supported by a massive complex of interest groups that use caucuses as a means to access legislators (see especially Chapter 6) (Ringe and Victor 2013) (also Hall and Deardorff 2006; Esterling 2007). Interest groups supply caucuses with high quality information which gets quickly disseminated through the network of caucus members for each caucus. The more caucuses an MC joins, the higher the probability that s/he will be exposed to such information across a variety of issue topics.

Caucus participation, then, provides the opportunity for MCs to make connections of different sorts to other legislators. As caucuses are more bi-partisan, the probability of using caucuses to connect to legislators of the opposite party increases. We therefore expect that as legislators become more involved in caucuses and have the increased opportunity to be connected to other legislators their tendency to vote in lock-step with their party will decline. Legislators who are involved in many caucuses will be exposed to more viewpoints, more policy proposals, and more colleagues from across the aisle. Those who are most involved in caucuses, we argue, will be less likely to consistently vote with their party, and be more likely to buck the party. Caucus participation has the potential to provide benefits to individual legislators in terms of building relationships and providing access to high quality information (Ringe and Victor 2013). These activities can decrease polarization if legislators use them to connect with opposite partisans and get exposed to opposing viewpoints in non-threatening settings. We therefore have the following expectation.

Hypothesis 1 *For any two legislators, as they become more connected in the caucus network their likelihood of voting the same way will increase, all else being equal.*

Research Design

Our effort to understand the complexities of voting behavior requires a deep and longitudinal dataset. Since upwards of 90 percent of voting behavior can be explained by party or ideology, we must control for these commonalities between legislators and hope to explain

the remaining variance in roll calls. In this section we describe our data and data collection process.

Partisan polarization, observed at the dyadic level, is the frequency with which two legislators cast the same votes. We therefore measure polarization as covoting, where polarization and covoting are negatively associated (see Sinclair 2011). An increase in covoting represents a decline in polarization. While polarization is frequently represented as an aggregate measure, summarized by the roll call behavior of legisaltors in a congress, we prefer to disagregate polarization. Taking a dyadic approach, we suggest that a legislative pair who cast few or no votes alike are "polarized," but a pair who votes alike all the time does not exhibit polarization. We therefore seek to explain the frequency of dyadic covoting as a function of caucus participation.

We are, of course, not the first to attempt to link social ties to legislative voting. For example, previous research has considered the impact of friendship (Caldeira and Patterson. 1987), cosponsorship (Cho and Fowler. 2010; Fowler 2006; Koger 2003), spatial proximity (Masket 2008), staff connections (Ringe, Victor, and Gross 2013), lobbyists' donations (Koger and Victor 2009), and legislative member organizations, such as caucuses in the US Congress and intergroups in the European Parliament (EP) (Ringe and Victor 2013).

We collect data on legislators in the U.S. Congress from 1993-2010, or congresses 103-111. We take a kitchen-sink approach to control variables, because we expect the substantive effect of caucus participation on covoting to be small. We seek to control for a variety of factors that are known to determine roll call votes, including serving in the same party, serving on the same committees, being from the same state, the mean electoral winning percent of the dyad, the electoral percent difference, the number of terms served, the number of common cosponsored bills, serving as a legislative leader (including committee chairs and ranking members), gender, mean betweenness, and mean degree.

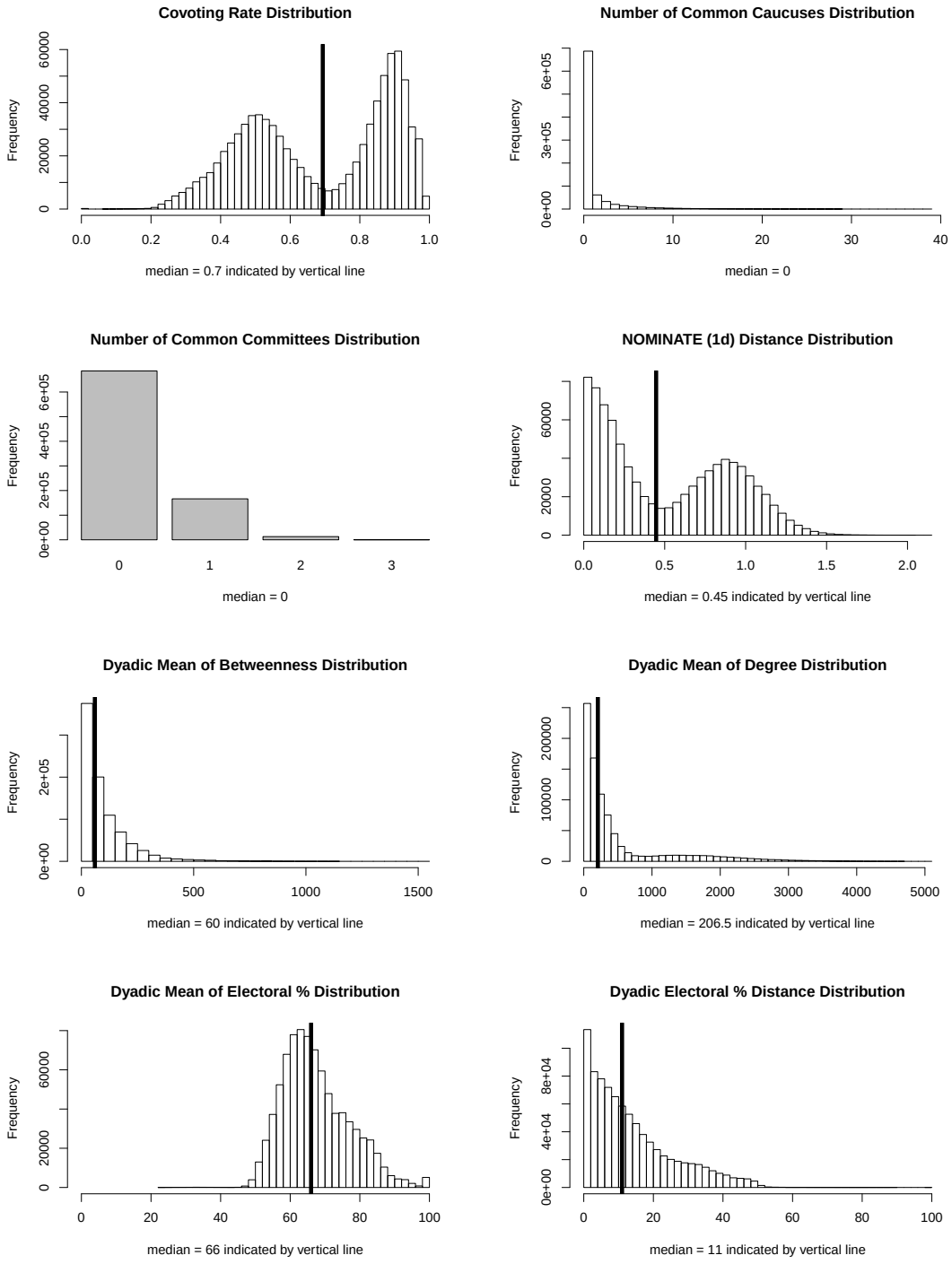
We collect roll call data from the 103rd through 111th congresses (Poole and McCarty 2011). The resources from voteview.com also provide data on legislators' party affiliations, state delegations, and ideological scores (Poole and McCarty 2011). We collected congressional caucus membership information from the same time period by hand recording data from the Congressional Yellow book (Michaela Buhler 1994-2010). This process included a member-by-member recording of caucuses listed in the winter volume of the second session for each congress.[1] For more information on this process see Chapter 4 of Ringe and Victor (2013). We also collected legislative data on congressional committee assignments from (Nelson 1993, n.d.; Stewart and Woon 2009) and calculate the number of common committee assignments between all dyads. Additionally, we collected data on legislators' gender, race, and leadership status (Manning and Shogan 2009, 2010; Tong 2010; Library of Congress 2010; Office of the Clerk 2010*b*).[2] Electoral winning percent data come from the House Clerk (Office of the Clerk 2010*a*).

This dataset includes 864,879 dyad-Congresses across 295,748 dyads for up to nine Con-

[1]Yellow books are published quarterly from Leadership Directories, Inc. We opted to collect the data from one book for each two-year congress, selecting the final book published for each congress under the logic that the final book might have the most complete information for a term.

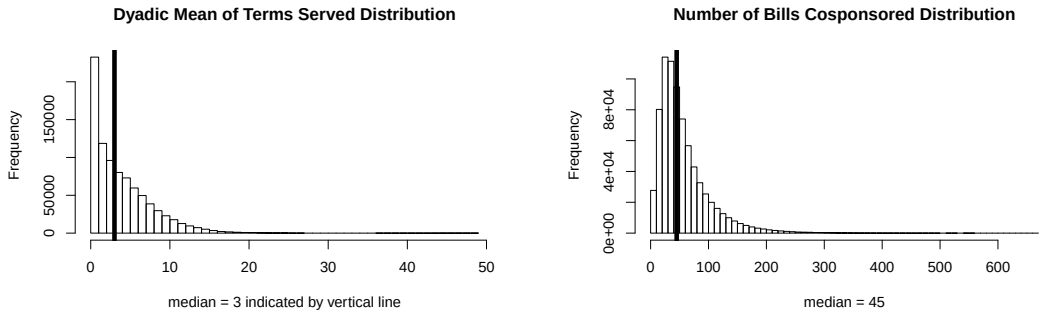
[2]Legislators are considered a leader if they served as Speaker, Minority/Majority Leader, Minority/Majority Whip, or the Chair or ranking members on a standing legislative committee.

Figure 3: Descriptive Statistics for Member of Congress Dyads



Notes: All dyads for Congresses 103-111. $n_{\text{dyad-Congress}} = 864879$, $n_{\text{dyads}} = 295748$.

Figure 4: Descriptive Statistics for Member of Congress Dyads



Notes: All legislator dyads for Congresses 103-111. $n_{\text{dyad-Congress}} = 864879$, $n_{\text{dyads}} = 295748$.

gresses. Of those dyad-Congresses, 50.2% share the same party, 4.2% are from the same state, 1.9% are both female, and 1.3% are both leaders. As can be seen in Figures 3 and 4, the covoting rates and NOMINATE distances are bimodal as is expected given the likelihood of covoting with copartisans. The number of common caucuses ranges from zero to 39 but is zero more than half the time, as is the number of common committees. Mean betweenness and mean degree appear to follow power law distributions, as do the mean number of terms served and the number of bills cosponsored. The mean electoral % is roughly normally distributed and the electoral % distance is generally away from zero with a median of 11%.

To test our hypothesis a panel data model is appropriate given that we want to test the hypothesis where there is variation both across legislator dyads and across Congresses. There may be concerns about correlation within dyads, so one might include fixed or random effects by dyad. However in this data set this is not a major concern. Even though we have data for nine consecutive Congresses the mean number of Congresses per dyad is less than three, so on average the effects of correlation within dyads is negligible.[3] The model is

[3]Rerunning the analysis within single Congresses removes completely concerns about correlation within dyads and yields the same substantive results, thus we report results from the analysis across Congresses.

$$
\begin{aligned}
\text{Covoting rate}_{i,t} = \text{Covoting rate}_{i,t-1} + \\
&\text{Number of common caucuses}_{i,t} + \\
&\text{Number of common committees}_{i,t} + \\
&\text{Dummy for same party}_{i,t} + \\
&\text{Dummy for same state}_{i,t} + \\
&\text{Dummy for both female}_{i,t} + \\
&\text{Dummy for both party leaders}_{i,t} + \\
&\text{NOMINATE distance}_{i,t} + \\
&\text{Mean betweenness score}_{i,t} + \\
&\text{Mean degree}_{i,t} + \\
&\text{Number of measures cosponsored}_{i,t} + \\
&\text{Mean electoral \%}_{i,t} + \\
&\text{Electoral \% distance}_{i,t} + \\
&\text{Mean number of terms served}_{i,t}
\end{aligned}
$$

The lagged dependent variable addresses autocorrelation in the dependent variable. We estimate the model in `R` using the `plm` package to ensure our measures of uncertainty take into account the panel structure of the data.

Results

Given the size of the dataset we expect that coefficient estimates are measurably differentiable from zero, and except for the mean number of terms served we are able to distinguish these coefficients from zero. The results for the control variables largely comport with expectations. For instance, larger NOMINATE distance between members of a dyad is associated with much less covoting and being members of the same party is associated with more covoting.

Table 1: Covoting Rate by Members of Congress

	Estimate	SE	t-value	p-value
(Intercept)	0.26745	0.00100	267.79458	0.00000
(lagged DV)	0.62273	0.00104	599.16819	0.00000
Number of common caucuses	**0.00302**	0.00007	44.03197	0.00000
Number of common committees	-0.00046	0.00017	-2.65690	0.00789
Dummy for same party	0.04104	0.00038	108.32349	0.00000
Dummy for same state	-0.00286	0.00037	-7.67071	0.00000
Dummy for both female	-0.00420	0.00058	-7.21858	0.00000
Dummy for both party leaders	0.00381	0.00060	6.34343	0.00000
NOMINATE distance	-0.12306	0.00051	-239.46165	0.00000
Mean betweenness score	0.00000	0.00000	4.22019	0.00002
Mean degree	-0.00002	0.00000	-73.63501	0.00000
Number of measures cosponsored	0.00022	0.00000	108.95901	0.00000
Mean electoral %	0.00044	0.00001	49.41905	0.00000
Electoral % distance	-0.00008	0.00001	-11.29045	0.00000
Mean number of terms served	0.00002	0.00003	0.88245	0.37753

Notes: Dropped 103rd Congress due to inclusion of lagged dependent variable. Includes all legislator dyads for Congresses 104-111. $n_{\text{dyad-Congress}} = 769613$, $n_{\text{dyads}} = 262497$.

The coefficient on the number of common caucuses is about .003. One way to look at this is that one additional common caucus is associated with three additional votes in agreement across a 1000-vote congress. Another interpretation is that three additional common caucuses is associated with about a 1% higher covoting rate.

Conclusion

In this paper, we recognize that partisan polarization in congress has left some members of congress frustrated with its associated gridlock. Congressional caucuses provide an excellent institutional setting in which legislators can seek refuge from gridlock because they are voluntary, bipartisan, tend to be focused on substantive topics of interest to legislators, and provide important opportunities for developing relationships across the aisle and obtaining access to high quality information. Caucuses are also offer a very low cost of membership. We therefore hypothesize that as congress becomes more polarized caucus participation will increase as a means of alleviating the negative consequences of polarization.

We measure polarization as covoting and show that covoting increases as a result of common caucus participation, all else being equal. The substantive effect of caucus participation is small; each additional common caucus is associated with three additional votes in agreement in a 1000-vote congress.

There is a complicated causal feedback in this system that we have not fully teased out. Increased polarization causes caucus participation, because polarization breeds frustration

and caucuses and potentially alleviate that. But here we show that caucus participation causes decreased polarization. We seek to better leverage our time series data to tease out these effects. Additionally, our data offer opportunities to leverage the multiple connections between legislators on which we have observable data. We encourage readers to provide comments along these lines to help improve this research.

While these results are promising we seek to go further with this project and strengthen the inferential link between the theoretical claim that legislators use caucuses to seek relationships with those whom they would not otherwise have much opportunity to connect, and that caucuses have the potential to help alleviate legislative gridlock caused by hyper-partisanship and polarization. There is a wealth of data that we have not yet explored, including graph-level properties of these multiplex networks. We suspect we can learn something about the functionality of congress by examining these properties overtime.

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