Crafting a Broad Appeal: Audiences and Collaborators in the U.S. House of Representatives

Alison W. Craig†

May 11, 2016

Abstract

I propose a new theory of congressional behavior that focuses on the audiences that members of Congress serve and the actions they take to appeal to those audiences. This is an evolution of Fenno’s original theory of members and their goals adapted to the 21st century Congress where individual members have less control over their ability to achieve their goals and the line between “home style” and “Washington style” has become increasingly blurred. I argue that contemporary members of Congress must concern themselves with the wants and expectations of six distinctive, yet overlapping audiences: voters, parties, colleagues, contributors, interest groups, and the media. Members may prioritize one audience over another, but all six play an important role in a member’s success. With a new dataset of congressional Dear Colleague letters sent over a period of six Congresses, I identify the members of Congress who collaborate with each other on legislation in a substantive and purposive manner and connect them in a network of policy collaboration. Using an exponential random graph model (ERGM) on the resulting network, I examine how members of Congress use these collaborative relationships to appeal to their six audiences. I find evidence of several distinctive collaborative patterns, including a strong tendency towards bipartisan collaboration in a highly polarized Congress, an overall inclination towards homophily, and a network where personal relationships are key. I argue these patterns are the result of members using collaboration with colleagues to balance the sometimes-competing expectations of their six audiences and craft a broad appeal.
In February 2009, Rep. Carolyn Maloney (D-NY) introduced H.R. 847, the James Zadroga 9/11 Health and Compensation Act of 2010, to provide medical treatment and compensation to first responders who became sick as a result of their exposure to toxins at Ground Zero. Representative Maloney was listed as the sole bill sponsor, but the legislation was the product of several years of work on the part of not only Representative Maloney, but also Representative Jerrold Nadler (D-NY) and Representative Peter King (R-NY). These three members described each other as the bill’s “coauthors” in their floor statements, and they sent out joint press releases and Dear Colleague letters to promote their legislation, which was signed into law on January 2, 2011 (Maloney, 2010; King, 2010).

How do members of Congress choose who to collaborate with, and how do they benefit from these collaborative relationships? In the case of the James Zadroga Act, the three coauthors were united by their New York constituents, with Representatives Maloney and Nadler representing Manhattan and Representative King representing Long Island. The need to provide care to New York City’s first responders united these three members in a bipartisan collaboration and they were able to tout their work together to voters, colleagues, and the media. In other cases the unifying thread in a collaborative relationship may not be so obvious. Representatives Adam Putnam (R-FL) and Joe Courtney (D-CT) collaborated on H.R. 897, the Long-term Care Retirement and Security Act of 2009, despite being from opposing parties, representing different states, and sitting on different committees. Their shared interest in promoting long term care may have resulted from a personal interest in the issue, the influence of an outside organization, or some unobserved quality, and the resulting bill could be promoted to interest groups and contributors.

Members of Congress frequently engage in these collaborative relationships with their colleagues. Collaboration is a widespread practice in the House of Representatives as members work together to draft legislation, circulate policy letters, and host events. These relationships go beyond cosponsorship or other signals of support to members actively working together to craft policy and promote their agenda both within and outside of the House.
Yet the formation of these relationships and their implications for our understanding of the legislative process have received little attention.

In this paper, I examine the value of collaboration in Congress by looking at who collaborates with whom. Using a unique dataset of Congressional Dear Colleague letters, which are sent by members to promote legislation and other policy initiatives within the House, I identify the members who, like Representatives Maloney, Nadler, and King, coauthor bills and policy letters together. I argue that members of the House of Representatives choose their collaborative partners based on strategic considerations, personal relationships, and shared policy goals. Through these collaborations members are able to broaden the base of support for their policy initiatives and build relationships with a number of different audiences who are key to a legislator’s success, from voters to interest groups. As a result, collaborative relationships help members be successful in the contemporary Congress where the traditional avenues of legislative success have been limited.

**Congress and its Audiences**

The traditional view of the United States Congress is one in which members are motivated by several goals including reelection, institutional advancement, and good public policy (Fenno 1973, Mayhew 1974). Much of the political science literature studies congressional behavior through the framework of these goals, yet Congress has changed since the 1970s in several important ways. Power has shifted from congressional committees to party leadership (Rohde 1991, Sinclair 1995), floor procedures are more restrictive (Center N.d.), and the combination of the 24-hour news networks, online distribution of printed news, and rise of political blogs and social media have diminished candidate control over the news (Roberts, Hammond and Sulfaro 2012). Members still have the same basic goals, but their environment has changed. Individual members have less control over their ability to achieve their goals as outlined by Fenno and a better way to understand the behavior of members of Congress
is to examine the actions that are fully under their control. Members use these actions to appeal to six different yet overlapping audiences: voters, colleagues, the party, interest groups, contributors, and the media. The demands and expectations of these six audiences are often in competition and members must therefore balance their activities accordingly.

Policy collaboration provides a useful lens to understand the actions that members take to appeal to their target audiences because the decision to collaborate is directly under a member’s control. Whether a member of Congress is able to pass legislation can be considered the result of a myriad of factors both within and outside of a member’s control, including majority party status, committee assignment, seniority, whether the legislation is aligned with the chamber median, and the effort that members put into advancing their agenda (Anderson, Box-Steffensmeier and Sinclair-Chapman, 2003; Krutz, 2005; Volden and Wiseman, 2009; Krehbiel, 1998). However, policy collaboration between two members is entirely within the control of the members working together. For a member with a policy idea, it is a simpler process to draft and introduce legislation alone than find a collaborative partner, agree on the legislative language, and coordinate messaging and strategy. And yet we frequently observe members choosing to collaborate with each other, indicating that they must find some benefit to this action that makes it worth the cost. I argue that policy collaboration is useful to members because different types of collaborative relationships can be used in different ways to appeal to all six of their target audiences. Members can collaborate as much or as little as they wish and with an assortment of different colleagues, but because of the signals that these relationships send there is both a strategy to choosing collaborative partners with the greatest potential pay off and a trade off between different types of collaborative relationships.

Members of Congress are undeniably strategic in their decision to collaborate and for members pushing a bill they hope to see signed into law, the ideal collaborator is one from the opposing party. In interviews with congressional staff, legislative aides frequently described

---

1 Other activities under a member’s direct control such as the legislation introduced and the language used to describe their activities will be explored in future work.
their bosses as actively seeking bipartisan collaborators on the legislation they introduced, primarily due to the belief that bipartisan legislation is more successful in the contemporary Congress. For members of the minority party, finding a majority party colleague to work with is almost a necessity if they wish to see their legislation considered in the House, to the point that several staff members said that they had drafted legislation and the necessary supporting materials and then handed it over to a majority party colleague to introduce as the lead sponsor. Members of the majority party also said that they sought bipartisan collaborators, because under divided government, they believe bipartisan legislation to be more likely to pass the Senate and be signed into law (interviews 2016). For members of both parties the ultimate goal is the same: to attract a broad base of support for a bill that will improve its chances of passage.

Bipartisan collaboration also sends a signal to audiences outside of Congress, particularly voters. Voters in the aggregate want their elected representatives to represent the median of their district (Black 1948; Downs 1957) and have been shown to punish members of Congress who are too closely aligned with their party rather than the district (Canes-Wrone, Brady and Cogan 2002). Policy collaboration provides a tool for members to give the appearance of being willing to work across the aisle and moderate than their voting record might reflect. Although it is unlikely that the member’s constituents are aware of many of the bills the member either sponsored or collaborated on, press releases frequently highlight legislation as being bipartisan such as the one issued by Representative Betty McCollum (D-MN) on June 12, 2014 entitled “McCollum Introduces Bipartisan Legislation to Improve Access to Health Care for Native Americans” which touted the bill she collaborated on with Representative Tom Cole (R-OK) (McCollum 2014). Social media is also used to highlight collaboration, such as in figure [1] which shows a 2014 public Twitter exchange between Representative Kurt Schrader (D-OR) and Representative Reid Ribble (R-WI) highlighting their collaboration on the Biennial Budgeting and Enhanced Oversight Act. A commitment to bipartisanship is

\[2\] This will eventually be fleshed out more with direct quotes once I finish transcribing the recently-completed interviews.
also a common talking point in members’ reelection campaigns, as it was for Representative Ann Kuster (D-NH) who includes “Working Across the Aisle” as one of eight key issue areas on her campaign website\footnote{kusterforcongress.com} in which she describes herself as “working across the aisle with Republicans and Democrats to cut wasteful spending and make our government more efficient” and highlights her role in cofounding the bipartisan United Solutions Caucus.

**H1: Bipartisan collaboration dominates the policy collaboration network.**

However, not all bills are introduced with the expectation that they will become law. Members of Congress frequently introduce symbolic legislation to take a position on an issue or stake a claim on a policy area for future Congresses. In these cases, members are more likely to introduce the legislation without any collaborators, or work with colleagues in their own party. Here the strategy differs by party. For members of the majority party there is still an incentive to collaborate within the party and demonstrate to the leadership that there is a broad base of support for the bill within the party. While the bill may not be successful in the Senate or be signed into law, the majority party can pass it in the House and point to the Senate and/or the Administration as obstructionists. For members of the minority party there is little to no hope that these messaging bills will ever be considered by the House and so there is rarely any incentive to do more than introduce the legislation as pure position-taking.

The exception to this is the member playing the role of party soldier. For members of both
parties, championing a policy priority of their party and building a broad base of support among their co-partisans is a way to earn a reputation as a team player, which is key to those with aspirations of institutional advancement. As articulated by Friedman (1993), “Getting ahead in Congress appears to require certain qualities: a desire to follow congressional norms, a willingness to compromise and build coalitions, and a general understanding of playing the political game.” Prime committee assignments are given to those who are viewed as “responsible legislators,” described as legislators who respect the institution of Congress, are respected by their colleagues, willing to compromise, and generally seen as team players (Masters, 1961). Championing party policy priorities can also be used to build support among the state and local party infrastructure back home, a subset of the voters who are less interested in bipartisan compromise and expect a measure of ideological purity from their elected representatives.

H2: Within-party collaboration is common for members of the majority party and rare for members of the minority party.

Once the decision is made to seek a collaborator from either the opposing or same party, the next step is for the member to find a colleague who is willing to work with them on the policy in question. Despite the high value that members place on bipartisan collaboration, interviews with congressional staff repeatedly revealed the belief that it has become more difficult to find collaborators from the other side of the aisle. The task then is to find some common ground. One aide to a Democratic member recounted how her boss had formed a collaborative relationship with a Republican colleague despite “agreeing on virtually nothing.” However, a shared policy priority of their constituents led these two members from neighboring states to collaborate on a series of bills in one issue area because it was important to the voters in their districts. Another congressional staffer described the role that interest groups can play in developing collaborative relationships, bringing members together to work on the group’s policy priorities, as a bipartisan collaboration on the committee of jurisdiction is the best chance an interest group has to be successful in achieving their goals (interviews).
Shared policy priorities can take several different forms, but they are a key aspect to the formation of collaborative relationships in Congress. Members frequently find collaborators who represent the same state, sit on the same committee, or co-chair a caucus together. They may not have the same views, but to at least some degree they represent the same interests. Collaboration with colleagues from the same state is another way that members can appeal to voters. In this case, the collaboration is intended to deliver projects and policies that the voters care about. Teaming up to collaborate on a bill to address the needs of a prominent home-state industry or benefitting a local constituent group may increase the likelihood of passage if the collaboration sends a signal to other members that an issue has regional support. In some cases it may be a response to a local news story, such as H.R. 5131 in the 110th Congress, the Lance Corporal Jeremy Burris Act, which was introduced by Representatives Ted Poe (R-TX) and Chet Edwards (D-TX) to make it a federal crime to vandalize the grave of a fallen soldier. Both members are able to promote the legislation to their constituents to demonstrate that they are responsive to local concerns, and because the bills that result from these same state collaborations often have minimal ideological content, the cost of collaboration is lower as members do not have to compromise their positions to agree on the bill language that doesn’t fall onto the traditional left-right ideology scale. (Lee, 2009).

Collaboration with a colleague on the same committee or a caucus leader allows a member to appeal to interest groups by taking a leadership role on a group’s policy priority. Those who are members of a committee with jurisdiction over an interest group’s issue area are in the best position to champion the causes of that group. Members who sit on the same committee not only have policy expertise in the same issue area, but are more likely to be responsive to constituencies with issues within the committee’s jurisdiction (Miler, 2007). Here we may see two members collaborating on legislation to benefit an interest group that is a substantial contributor to members of the committee, or as Miler argues, because
a committee member’s familiarity with an issue makes the associated constituency more salient. In some cases, the interest group may have encouraged the collaboration, proposing the legislation and bringing two members together to work on it. An example of this sort of collaborative effort is H.R. 6229 in the 111th Congress, a bill to allow states to award grants to local groups working to strengthen student achievement. Sponsored by Representatives Judy Chu (D-CA) and David Loebsack (D-IA), who were both members of the House Education and Labor Committee at the time, the bill was also endorsed by a coalition of seventeen education interest groups including the National Education Association and the American Federation of Teachers. If the perception is that collaborative legislation is more successful then members who wish to demonstrate that they are actively working to advance an interest group’s policy priorities should seek out collaborators from the committee of jurisdiction and it is in the interest group’s best interest to foster these collaborative relationships as well.

For members who are not on the relevant committee but wish to build relationships with an interest group or establish themselves as a leader within the House on a policy area, they may be able to do so by taking leadership on an allied caucus. Caucuses allow members to share information and form relationships with colleagues with a common interest in a particular issue (Ringe and Victor, 2013). Members who co-chair caucuses together have chosen to establish themselves as leaders on a particular issue and are therefore more likely to collaborate. Whether a major national interest group with an associated PAC, or a coalition of smaller advocacy organizations, there is typically some form of organized interest that benefits from the caucus’s activities and so taking a position as a leader of that caucus and being active in caucus activities appeals to those groups.

H3: Members with shared policy goals who represent similar interests are more likely to collaborate with each other.

Finally, personal relationships play an important role in the ability of members to find

4While Ringe and Victor study caucus membership, I distinguish between caucus leadership and membership, focusing solely on the former. Although caucus membership facilitates information sharing, it does not necessarily indicate substantive action on an issue, while leading a caucus demonstrates a commitment to the issue.
collaborative partners. Just as members cite their friendships in the chamber as a factor in their voting decisions (Kingdon 1989), it is reasonable to expect that these relationships will also play a role in the drafting of legislation and other policy initiatives. In several different contexts, legislators have been shown to build reputations in their district through their collaborative relationships (Crisp, Kanthak and Leijonhufvud 2004), their voting decisions are influenced by those with whom they spend time in close proximity (Masket 2008; Young 1966), and they repeatedly collaborate with the same colleagues over multiple years (Desmarais et al. 2015). In some cases, existing relationships may overlap with shared policy goals, such as the members who became friends through their shared committee membership, but here existing relationships are intended to capture the friendships, reputations, and relationships that shape the collaboration network but cannot otherwise be explained.

Personal relationships in Congress are captured primarily through endogenous network characteristics such as triadic closure and preferential attachment. These terms represent not just the nature of the relationships between individual members, but also dyadic dependence in the policy collaboration network as a whole (Hunter et al. 2008). Triadic closure is a common network phenomenon, otherwise known as “a friend of a friend is a friend” (Goodreau, Kitts and Morris 2009). In the context of the policy collaboration network, this may represent members who have a collaborative relationship with each other recommending additional collaborators to their colleague, or members seeking out collaborators based on their existing shared partners. Preferential attachment accounts for the propensity of some members to collaborate more than others, whether because they develop a reputation through their collaborative relationships as someone who is easy to work with and willing to collaborate, or because they are more likely to seek out collaborative partners. More broadly, these terms capture the non-independence of members in the policy collaboration network. Although the inability to survey Congress makes it difficult to identify the existing relationships in the chamber, we can examine how the existence of a collaboration between

\footnote{In a small number of cases, it also represents collaborations between more than two members on a single bill, as in the example of the Zadroga Act.}
two members affects their relationships with those around them in the network.

\textit{H4: Members are more likely to collaborate when there is an existing relationship or reputation.}

**Dear Colleague Letters in Congress**

Obtaining a measure of collaboration in Congress that represents substantive and purposive interaction on the part of members has proved challenging. Contemporary members of Congress are generally unable or unwilling to participate in survey research and their staff are only somewhat more accessible. Although members acknowledge their collaborations with their colleagues through floor statements, press releases, and media appearances, these relationships are difficult to quantify in a systematic form. The cosponsorship network has been used as an approximation of collaboration, but cosponsorship does not distinguish between members who actively collaborate on legislation and those who sign on in a brief staff-level email exchange.

With a new dataset of Dear Colleague letters, I am able to directly measure collaboration by identifying the members who work together on legislation and other policy matters through their signatures to these letters. In the contemporary Congress, Dear Colleague letters are the official correspondence among members and they are widely used to distribute information in the House. Their most common purpose is to solicit cosponsors for legislation, but they are also used to inform members about events, gather signatures on policy letters, and urge members to support or oppose floor actions. Figure 2 shows the distribution of letters by purpose for the 111th Congress. For a member of Congress seeking to quickly disseminate information in the House, the Dear Colleague letter is the most efficient tool available. Several sample letters are provided in the Appendix, showing a few of the different uses of these letters and the variation in signers.

Paper letters were initially distributed via the House internal mail system, but during the

\footnote{Based on a sample of 1600 letters.}
105th Congress, the Dear Colleague listserv was established, allowing members and their staff to distribute Dear Colleague letters by e-mail. The popularity of the electronic distribution system has grown steadily since its introduction and in 2008, the Chief Administrative Office of the House created a web-based “e-Dear Colleague” system to further streamline the process. The vast majority of letters are now sent electronically, with 98% of House members using the e-Dear Colleague system in the first session of the 111th Congress [Straus, 2012].

Although there has been little systematic study of Dear Colleague letters due to the difficulty of tracking letters prior to the shift to electronic Dear Colleagues, members have repeatedly cited their use and importance. Representative Daniel Lipinski describes his use of Dear Colleague letters to gain original cosponsors, to stake a claim on an issue and to alert members to a planned amendment [Lipinski, 2009]. In the literature on cosponsorship and legislative effectiveness, Dear Colleague letters are repeatedly mentioned in member and staff interviews as one of the tools by which members build support for their policy proposals [Koger, 2003; Campbell, 1982; Krutz, 2005]. A study of interest group endorsements in Dear Colleague letters shows how members use these letters to send cues to their colleagues and gather cosponsors for legislation [Box-Steffensmeier, Christenson and Craig, 2013].

The volume of letters sent through the e-Dear Colleague system also demonstrates the
role they play in the legislative process. During the 111th Congress, 31,994 Dear Colleagues were sent, an average of 112 letters per legislative day. The letters are an essential tool for communication in the modern Congress as members and staff rely on them to know what legislation has been introduced and quickly assess the merits of a bill. As described by a former Legislative Assistant to a House member, “The Dear Colleague system serves as a way to quickly get the best information about your legislation distributed to congressional offices. It can be a crucial factor in building support for legislation, and to get pertinent facts and figures in front of the staffers who advise the members what they should be supporting” (Interviews 2013).

When multiple members work together on a piece of legislation or a policy issue, they typically also sign a Dear Colleague letter together based on this work. For example, in March 2009, Representative Brad Miller (D-NC) introduced H.R. 1702, the Shelter, Land and Urban Management Assistance Act of 2009. He sent a Dear Colleague letter that he signed with Representative David Price (D-NC) asking members to sign onto what they describe as “our bill,” but in the absence of the Dear Colleague letter there would be no way of distinguishing Representative Price from the other 24 cosponsors on H.R. 1702. Here the collaboration is on an issue of importance to North Carolinians and therefore forms between two members of the state delegation. In another instance, Representatives Dan Burton (R-IN) and Patrick Kennedy (D-RI) sent a Dear Colleague opposing a policy against sending condolence letters to the families of service members who commit suicide. The connection between Burton and Kennedy is less obvious, but the letter reveals that it was drafted in response to the suicide of one of Representative Burton’s constituents. As a member of the minority party, he sought a collaborator in the majority and Representative Kennedy was a natural choice as a result of his reputation on mental health issues. Regardless of how the collaboration originates, members signing a Dear Colleague letter together are sending a clear signal that the policy in question is a joint effort. The signers on the letter have coordinated

Letters are typically filtered by issue area to the appropriate staff member so the volume is not unmanageable.
their efforts in a substantive manner and are now sharing credit and responsibility for the policy in question.

**Research Design**

My data are drawn from a comprehensive archive of the electronic Dear Colleague letters sent between members of the House of Representatives from the 2nd session of the 105th Congress through the 1st session of the 112th Congress\(^8\) The dataset consists of 111,250 emails sent to the Dear Colleague listserv over a period of fourteen years in the House of Representatives, although I am currently working with a subset of 3,017 letters sent during the 111th Congress that were hand coded to identify all of the members listed in the closing signature block.\(^9\) A team of research assistants worked to identify the names of all signing members, as well as the title, any referenced legislation, the issue are as defined by the sending staff member in the email subject, interest group endorsements, and the purpose of the letter as defined by a rubric that classifies each letter into one of ten categories.\(^10\) Because I am using a subset of letters from a single Congress, results here should be viewed as preliminary.

Figure 3 shows the distribution of the number of signers per letter based on this sample data, which ranges from one to ten. The average number of signers on a letter is 1.66. For the 648 letters with more than one signer, the average number of signatures is 2.63. While the majority of letters are signed by a single member, the collaboration between members is significant, particularly for pairs of legislators. Large scale collaborations of more than four members do occur, but they are far from the norm and still relatively constrained in size.

---

\(^8\) Corresponding years are 1998 to 2011.

\(^9\) Because this project is interested in members collaborating on policy rather than each individual letter, I remove all duplicate letters from the dataset. Duplicate letters were identified as those having the same, or substantively similar subject lines and the same signers. As members frequently send multiple copies of the same letter during a given Congress, removing the duplicate letters leaves me with a sample of 1600 letters.

\(^10\) The ten categories are seeking bill cosponsors, seeking original cosponsors, seeking letter cosigners, urging support on the floor, urging opposition on the floor, invitation, general informative, request to join caucus, request for other action, and miscellaneous. In cases where a letter fit more than one category, it was classified in all that applied.
In comparison, for the 4867 bills introduced in the House during the 111th Congress with at least one cosponsor, the average number of cosponsors is 22 and the range is from 1 to 425. The likelihood that a member has meaningful interactions with all 22 of the cosponsors on her bill is low in comparison to the likelihood that she has a relationship with the single colleague who cosigns a Dear Colleague with her.

These signatures are used to construct an affiliation network of members and the letters that they sign onto. In two-mode form, the events in my network are the 1600 letters and the actors are the 412 members who signed one or more letters in the dataset. In this form, the members are not directly connected to one another, but through their common letters. However, my primary interest is in the relationships between the members and it is therefore appropriate the flatten each network into a one-mode projection where the nodes represent the 412 members and the edges are undirected ties indicating that two members have signed a Dear Colleague letter together (Breiger, 1974; Wasserman and Faust, 1994)\(^{11}\).

Figure 4 shows a map of the member-level projection of the affiliation network. From the

\(^{11}\)In future work, I intend to identify the “primary” signer of each letter and consider the network as directed, however it is difficult to distinguish between letters where there is a clear “first author” and those where all collaborators contributed equally so for the time being I treat all relationships in the network as equal.
1600 letter sample, I observe 412 members of Congress signing one or more letters ($N_v = 412$) and 1365 collaborations between them ($N_e = 1365$). The resulting adjacency matrix, $A$, is binarized so that $A_{ij}$ is equal to 1 if nodes $i$ and $j$ signed any Dear Colleague letter together and 0 if they do not.\textsuperscript{12} As it is a projection of a two-mode network, the resulting graph is particularly dense which limits its usefulness, but it is worth noting two interesting features of the network. First, aside from the 33 isolates who sign at least one letter in the dataset, but are not observed in any collaborations, the remaining members are all connected in one giant component. This indicates that even within this sample, the policy collaboration network is very well connected. Second, party attributes were added to the network so that the red nodes represent Republican members and the blue nodes represent Democratic members. While the dense core of the network leans Democratic, overall the network represents a fairly bipartisan network where there are frequent collaborations between Democratic and Republican members of Congress.

A closer look at the partisanship of the edges between members confirms that this is a network dominated by bipartisan ties. Figure 5 shows the breakdown of ties by partisanship. Of the 1365 ties between members, 49\% of them are between a Democrat and a Republican. 43\% of the ties are between two Democrats and the remaining 8\% of the ties are between two Republicans. As expected, bipartisan ties occur most frequently, followed closely by collaborations between majority co-partisans. Members of the minority party appear to have far more to gain from collaborations with majority party colleagues than with another minority party member based on the small number of Republican to Republican collaborations.

My collaboration hypotheses are tested using an exponential random graph model (ERGM) to identify the characteristics of the network that best explain its formation. The ERGM estimates the probability of observing a given network $N$ based on both network interdependence and exogenous covariates, which are represented in the equation as $h(N)$.\textsuperscript{12} I do lose data by thresholding the adjacency matrix to represent the presence of any tie rather than weighting it by the number of letters signed together, however in the sample data over 95\% of the ties represent only one or two letters signed together.
Figure 4: One-Mode Projection of the Member Network

Figure 5: Partisanship of Ties

\[
P(N, \theta) = \frac{\exp(\theta^T h(N))}{\sum_{N^* \in \mathcal{N}} \exp(\theta^T h(N^*))}
\]

The ERGM specification allows me to identify the attributes that make members more
or less likely to form ties with each other, as well as the structural features of the network that may encourage or discourage tie formation. This makes it ideal to test my hypotheses of members collaborating with colleagues as a result of strategic considerations, shared policy goals, and personal relationships.

The strategic party hypotheses are tested with a node-mix term that creates separate covariates for *Opposite Party*, representing the likelihood of tie formation between members of opposing parties, and *Same Party:*\(R\), representing the likelihood of tie formation between two Republican members. Collaboration between Democratic members is the excluded reference category. For the bipartisan collaboration hypothesis, I expect to see a positive tendency towards tie formation between members of opposing parties, representing the tendency to use collaboration to demonstrate a broad base of support for the legislation. For the co-partisan hypothesis, I expect to see a negative tendency towards tie formation between Republican co-partisans, representing the limited incentives for within-party collaboration among minority party members.\(^{13}\)

Shared policy goals are captured by a series of exogenous covariates. *Same Committee* is an adjacency matrix constructed using Stewart and Woon’s congressional committee data (Stewart and Woon, 2011). For each of the 435 members of the House of Representatives in the 111th Congress, the edge between member \(i\) and member \(j\) is coded as 1 if they served on a committee together and 0 if they did not. The matrix is then included in the model as an edge covariate and is expected to be positive, indicating that members who serve on the same committee together are more likely to collaborate with each other. *Caucus Leader* is a similarly constructed adjacency matrix using Victor’s U.S. Congress caucus leadership data (Victor, 2013). An edge is coded as 1 if members \(i\) and \(j\) co-chaired a caucus together and 0 if they did not. Again, I expect that the coefficient for the edge covariate will be positive, indicating that members who co-chair a caucus together are more likely

\(^{13}\)I don’t expect that this effect is the result of Republicans collaborating less than Democrats, but a majority vs. minority effect as the current sample is from the 111th Congress. In future work I will be able to use multiple sessions of Congress to tease out the difference between partisan and majority effects.
to collaborate with each other. *Same State* is a nodematch term that uses each member’s state ICPSR code (drawn from the Congressional Bills Project ([Adler and Wilkerson 2009-2010](#)) and estimates the probability of tie formation between two members with matching state codes. I expect that this will be a positive effect as well. Finally, first and second dimension DW-NOMINATE scores are both included in the model in absolute difference terms to estimate the probability of tie formation as members move further apart on either ideology scale. I expect the effect of both to be negative, with most of the effect being on the first dimension, representing the traditional liberal to conservative scale. The second dimension has less explanatory power post-1980, but may capture the growing split between establishment and Tea Party Republicans that was just starting to appear in the 111th Congress.

Endogenous network effects are uniquely suited to capture existing relationships in the network as they measure the probability of tie formation based on the other relationships in the network. I include the geometrically weighted edgewise shared partner (GWESP) statistic in the model, which captures the tendency towards tie formation between members who have other shared partners, and the geometrically weighted dyadwise shared partner (GWDSP) statistic, which captures the tendency for two nodes to collaborate with the same shared partner ([Hunter et al. 2008](#)). When included in a model together, the GWESP statistic is a measure of *Triadic Closure*, where a tie from $i$ to $j$ and a tie from $j$ to $k$ increases the likelihood of a tie from $i$ to $k$, while the GWDSP statistic is a measure of *Structural Imbalance*, where $i$ and $k$ are both tied to $j$, but not to each other ([Wimmer and Lewis 2010](#)). I expect there will be a positive tendency towards triadic closure in the network, and a negative tendency towards structural imbalance. *Preferential Attachment*, or the tendency to form ties with nodes that are particularly popular or sociable in the network, is captured by the geometrically weighted degree (GWD) statistic. I expect this will also have a positive effect, capturing the reputation effect in the network. Finally, I include an exogenous nodematch statistic that uses the first Congress served for each member (also
drawn from the Congressional Bills Project) and estimates the probability of tie formation between two members who first served in the same Congress. I expect this covariate, Same Class, to have a positive effect as well.

Controls are also included for the race, gender, and ethnicity of the collaborators. Race, ethnicity, and gender covariates were coded using data from the Congressional Research Service and the U.S. House Historian and Clerk (Office of the Historian and Office of the Clerk [2013], Manning and Shogan [2012], Manning and Brudnick [2014], Tong [2013]). The race/ethnicity covariate is coded 1 for black members, 2 for hispanic and latino members, 3 for asian members, and 0 for all others. An adjacency matrix is then created to indicate when two members are both from the same racial or ethnic minority group. An edge between a black member $i$ and a black member $j$ is coded as 1, while edges between two white members or a black member and a hispanic member are coded as 0. I expect that Same Minority will have a positive effect on the likelihood of a tie between two members. Gender is a binary covariate where 1 indicates a female member and 0 indicates a male. It is included in the model using a node-mix term so that it estimates the probability of tie formation between members of the opposite gender, Opposite Gender, and between two female members Same Gender:F. I expect that women will be more likely to collaborate with other women and that ties will be less likely to form between members of the opposite gender. Finally, I include the Minority variable, which is coded 1 for members of a racial or ethnic minority and 0 otherwise. This terms is a control included as a component of the Same Minority interaction term. I also expect that members who represent electorally vulnerable districts will be more likely to collaborate with colleagues because they are able to tout these collaborative efforts back in the district as evidence of being moderate or bipartisan. Electoral Margin is therefore included as a measure of each member’s electoral margin in the previous election, which is calculated as the difference between the winner’s share of the two-party vote and his or her opponent.

---

14The probability of a tie between two male members is excluded to avoid perfect collinearity and is therefore included in the constant, which in an ERGM specification, is the edges term.
The exponential random graph model treats the full network as a single observation and estimates the probability of observing that network, based on the model covariates, out of all possible permutations of the network. As “all possible permutations of the network” very quickly becomes computationally impossible with more than a handful of nodes, the model is best estimated using Markov chain Monte Carlo (MCMC) maximum likelihood to sample from the possible network configurations \cite{Cranmer2011}. The model here is estimated using a sample size of 500,000 and a burn in of 100,000 spread over eleven chains through parallel processing. MCMC diagnostics show that the model has full converged.

Analysis

Preliminary model results are shown in Table 1. The model was estimated using the statnet package \cite{Handcock2008} with coefficients representing the conditional log-odds of a tie between two nodes as a result of the covariate. All four hypotheses are strongly supported by the model results. Looking first at the party hypotheses, I find that both of the coefficients yield significant results in the expected direction. Members of the opposite party are significantly more likely to collaborate, indicating that members of both parties find an advantage in reaching across the aisle to find a collaborator for a bill or policy initiative to claim it is a bipartisan effort. As expected, minority party members are significantly less likely to collaborate with each other, as their minority party status means they receive little benefit from these relationships. A minority party member seeking to advance her agenda expects to find greater success if she has a majority party collaborator to work with as a result of the majority party’s agenda control.

The shared policy goals hypothesis is strongly supported by five of the six coefficients included in the model. As expected, members from the same state, who sit on the same committee, and who co-chair caucuses together are significantly more likely to collaborate,

\footnote{The sixth coefficient, \textit{Same Contributors} isn’t discussed in any detail here because at this point it’s a poor measure that’s mostly a placeholder until I come up with a better way to capture contributors.}
indicating that these relationships are key to members seeking to find common ground with their colleagues in Congress. Members from the same state work together on issues of local and regional importance, while members who sit on the same committee and co-chair caucuses together work on issues within the jurisdiction of their committee or the policy priorities of the caucus.\footnote{The size of the caucus leader effect is partly attributable to the Dear Colleague letters sent out on behalf of the caucus to disseminate information or recruit additional caucus members. However, caucus letters represent only 2\% of the Dear Colleague letters sent, so at least some of these collaborations between caucus leaders are on other issues.}

The ideology coefficients are also significant and in the expected direction,
indicating that even as members seek out bipartisan collaborators, they also try to minimize the ideological distance between collaborators to minimize the amount of compromise that must be done.

The personal relationships hypothesis receives mixed support. There is a strong tendency towards triadic closure in the policy collaboration network, indicating that when controlling for the exogenous covariates included as well as the other structural terms, members of Congress are more likely to form collaborations with colleagues when they share collaborative partners. If member A collaborates with both member B and member C, a collaboration is significantly more likely to form between members B and C. This likely accounts for both collaboration that forms as a result of existing collaborative relationships and the unobserved personal relationships. Members B and C may collaborate because their previous work with A made them realize they’d be well-suited to a collaboration, or because A, B, and C all have a personal relationship not otherwise captured in the model. Preferential Attachment has a significant and substantively large, negative effect, which is in the opposite direction from my prediction. Members who collaborate frequently with colleagues, either because they are more prone to reach out to colleagues (sociability) or because they develop a reputation as an appealing collaborator (popularity), do not appear to attract additional collaborators as a result of their reputation. Structural Imbalance is significant as well, although the effect is substantively small. Members have a slight tendency against collaborating with a common partner but not with each other. Still, the magnitude and significance of these three coefficients, even when not in the expected direction, demonstrates the important role that endogenous relationships play in the decision to collaborate. Same Class is significant as well, although the effects are substantively small. Members who were first elected in the same year are slightly more likely to collaborate with each other than those from different classes.

To better illustrate the degree to which covariate explains tie formation in the policy collaboration network, Figure 6 plots the model coefficients using the texreg package in R
Figure 6: Partisanship of Ties

Bars denote CIs.

(Leifeld, 2013). Significant coefficients are printed in red, while the two insignificant coefficients are in blue. Here we can more directly see the magnitude of the coefficients as they effect the probability of tie formation in the policy collaboration network. Caucus Leader, Triadic Closure, and Preferential Attachment have the largest effect on the structure of the network, highlighting the importance of endogenous network relations on explaining policy collaboration. There are also substantively large, positive effects for Same Committee, Same Minority, Same Class, Opposite Party, and Op-posite Gender, indicating that these four terms, representing
both homophily and bipartisanship, play a significant role in the network structure. *Same Party:*R and *1st DW-NOMINATE* have substantively large negative effects, indicating that these covariates discourage tie formation in the network. As hypothesized, strategic considerations, shared policy goals and personal relationships all play a meaningful role in the decision to collaborate with a colleague. Members seek collaborators from the opposing party when they wish to demonstrate a broad base of support for a bill and from their own party when they are championing a party policy priority. Once that decision is made, members turn to colleagues with whom they have shared policy priorities and personal relationships to identify individual collaborative partners who are willing to work with them.

These collaborative relationships are important not only for the signals that they send about the underlying legislation, but also because members can and do use them to send signals to different audiences within and outside of the House. Bipartisan collaboration can be used to signal to voters that a member is a moderate, to colleagues in the chamber that a member is willing to compromise, and to interest groups that a member is prioritizing their policy priorities. Within party collaboration can signal to colleagues and the party leadership that a member is a team player and willing to push the policy priorities of the party. Collaborating with colleagues from the same state can demonstrate that the member is working on the policy priorities of his constituents, while collaborating with colleagues on the same committee can be used to show support to interest groups with business before the committee.

As previously discussed, the exponential random graph model uses Markov chain Monte Carlo (MCMC) maximum likelihood to sample from the possible network configurations and as a result, the best test of the model’s fit is to compare summary statistics for the sampled networks against those for the actual network. Figure 7 shows the goodness of fit plots for the degree, edge-wise shared partners, and minimum geodesic distance statistics. The solid line represents the statistics for the observed network, while the boxplots are the range of values from the sampled networks. A good fit is one in which the statistics for the observed
network are statistically indistinguishable from the sampled distribution.

The goodness of fit for this model is less than ideal. The distribution of the sample networks closely approximates the observed network for minimum geodesic distance, but completely fails to capture the edge-wise shared partners statistic. The degree statistic is in between the two, with the sampled distribution approximating the general shape of the observed network statistics, but lacking any degree of precision. As a result, I conclude that while the model results support my hypotheses, the model fails to adequately capture the
structure of the observed network and requires further specification\footnote{I expect that at least some part of the difficulty in finding a model with a solid goodness of fit that converges is the result of my sample data. Once I have the full network coded, I will revisit the model specification and analysis to try and improve the overall fit of the model.}

**Discussion**

Members of Congress frequently collaborate with colleagues in the legislature, but until now, we have had very little understanding of what these relationships look like and how they form. I present a theory of policy collaboration in which the decision to collaborate with a colleague is the result of three factors: strategic considerations, shared policy goals, and existing relationships. These collaborative relationships are important because of the signals that they send to the six audiences that members must appeal to: voters, colleagues, the party, interest groups, contributors, and the media. Using a unique dataset of congressional Dear Colleague letters that provide a measure of purposive collaboration and an exponential random graph model that explains network structure using both endogenous and exogenous covariates, I find strong support for all four of my hypotheses.

Collaboration is a valuable tool because members of Congress have direct control over who to collaborate with and when to collaborate on a bill or other policy initiative. As a result they can use these relationships to balance the demands and expectations of the six key audiences, as demonstrated by the diverse patterns of behavior identified in the policy collaboration network. As congressional staff frequently reported, members of Congress seek out bipartisan collaborators whenever possible because they believe that legislation supported by members of both parties is more successful. When the ultimate goal is to have a bill signed into law, creating a broad base of support in the House can be the key to success, particularly for members of the minority party or under divided government.

However even bills with bipartisan support can languish in committee. As it becomes increasingly difficult for members to pass legislation, members have to find other ways to demonstrate that they are working on behalf of their constituents and other interested parties
and collaboration has become a tool by which they can accomplish this. As explained by one congressional staff member, public opinion of Congress is so poor that even if a member can’t get a single bill passed under their own name, they can claim credit and build their reputation just by working towards an audience’s priorities (interviews, 2016). Seeking collaborators of any kind sends a clear signal to the interested audience that the member has prioritized their desired policy, whether it’s a within-state collaboration on behalf of local constituents, a bipartisan committee effort on behalf of an interest group, or a collaboration with co-partisans on a party platform bill.

The tendency towards strategic collaboration has important implications for how we study legislation in Congress. Members are generally assumed to introduce legislation at or close to their own ideal point, but when collaboration between multiple sponsors is obscured by the House rules allowing for only a single sponsor per bill, we miss the compromise that occurs before the bill is even introduced. Many bills represent not just the priorities and goals of a single sponsor, but of a small group of legislators who spent time working out the details of the legislation and finding common ground while drafting the bill. When Representative Maloney brought Representatives Nadler and King on board the James Zadroga 9/11 Health and Compensation Act of 2010, the bill had to be written in a way that all three members could support. For Representative Maloney, whatever compromises had to be made to appease Representative King were worth the benefit of being able to claim that the bill was a bipartisan effort. And in this case, their effort paid off as the bill finally passed the House and was signed into law after several years of work.
References


Interviews, Staff. 2013. “Personal interviews conducted by the author with member and CAO staff in the House.”.

Interviews, Staff. 2016. “Personal interviews conducted by the author with member staff in the House.”.


29


Appendix

For illustration, I present three sample Dear Colleagues letters in Figures 8, 9 and 10. The first letter shows a bipartisan network of signers: Representatives Zach Space (D-TN), Lee Terry (R-NE), Marion Berry (D-AR), and Jerry Moran (R-KS). This letter was sent on December 22, 2009 to urge members to sign a letter that the four members had drafted to the Centers for Medicare and Medicaid Services. The second letter was written and signed by the chairs of the Qatari-American Economic Strategic Defense, Cultural and Educational Partnership Caucus: Representatives Nick Rahall (D-WV), Dana Rohrabacher (R-CA), and Carolyn Maloney (D-NY). This letter, which was sent on December 18, 2009, is urging members to join the Qatari-American Partnership Caucus. The third letter was sent on June 5, 2009 by a single member of Congress, Representative Laura Richardson (D-CA), and asks members to become original cosponsors of the Equal Rights for Health Care Act, which was introduced on June 9, 2009 as H.R. 2744.
**PRESERVE ACCESS FOR AMERICA’S SENIORS**

*Help Community Pharmacies Combat Burdensome Requirements*

***Deadline Today – December 22, 2009***

**Supported by the National Community Pharmacists Association and the National Association of Chain Drug Stores**

Cosigners: Herseth Sandlin, McMorris Rodgers, Welch

Dear Colleague:

Beginning January 1st, pharmacies will be required to have completed a lengthy and costly accreditation process in order to maintain a supplier number under Medicare Part B to provide durable medical equipment (DME). As a result, many pharmacies have already surrendered their right to provide DME, leaving Medicare beneficiaries without the benefit of access to care for these supplies and services at their local pharmacies.

Earlier this year, the House passed a three month delay of the implementation of these requirements, which was signed into law. Unfortunately, many pharmacies are still struggling to achieve the needed accreditation, and any changes to these accreditation requirements addressed in proposed health care reform legislation will not be implemented prior to the January 1st deadline.

Without an additional delay, America’s seniors will lose access to DME supplies that they so desperately need. Particularly in rural areas, where pharmacies are long distances apart, the resulting limitation of access is particularly troubling.

We invite you to join us in sending the attached letter to CMS, requesting that CMS extend its planned date for pharmacy accreditation and delay in enforcement of these requirements for pharmacies. Please contact Ryan Mann with Congressman Space, Tessie Alexander with Congressman Terry, Cynthia Blankenship with Congressman Berry, or Brian Perkins with Congressman Moran to sign on to the letter.

Sincerely,

//s// //s// //s// //s//
ZACK SPACE LEE TERRY MARION BERRY JERRY MORAN
Please Join the Qatari-American Economic Strategic Defence, Cultural and Educational Partnership Caucus

Dear Colleague:

We invite you to become a member of the QATARI-AMERICAN ECONOMIC STRATEGIC DEFENCE, CULTURAL AND EDUCATIONAL PARTNERSHIP CAUCUS.

The Caucus serves as a forum to brief Members of Congress on Qatar’s strategic defense opportunities for the U.S. and Qatar, as well as its political, economic, social, academic and cultural prospects for a greater stability in the Middle East. Years of reform and stability in Qatar and its commitment to an open, democratic society with free press, universal suffrage, and private and foreign ownership, have cemented the bonds between our two nations.

The objectives of the Caucus are to be an educational source of information within the Congress on the U.S.-Qatar relationship and to promote a better understanding of that relationship. The Caucus will also strengthen the U.S. discourse on bilateral and regional issue areas by engaging Qatar perspectives on issues of mutual interest.

Qatar and the U.S. have signed a number of agreements expanding defense, commercial and cultural ties. For example, a number of U.S. companies are currently operating under production sharing agreements for enhanced oil recovery/production and are increasing their investments. Also Qatar has established satellite branches of the following institutions: Cornell Medical, Texas A & M, VA Commonwealth and Carnegie Mellon. Also, in the ensuring course of modernization, Qatar is home to the largest pre-positioning of United States military equipment in the world.

We hope you will join us in this opportunity to work toward increasing the strong ties the United States shares with Qatar as the two countries’ relationship continues to grow. Join the Caucus by emailing kate.denman@mail.house.gov with Rep. Rahall; paul.berkowitz@mail.house.gov with Rep. Rohrabacher; or Kristina.spiegel@mail.house.gov with Rep. Maloney.

Sincerely,

Nick J. Rahall, II Dana Rohrabacher Carolyn Maloney
Member of Congress Member of Congress Member of Congress
Dear Colleague:

Please join me in becoming an original co-sponsor of legislation that I believe should be part of the fast-approaching healthcare debate.

As a fundamental right, all Americans should be guaranteed equal access to healthcare, and it is unfortunate that this issue has not yet been adequately addressed. I urge you to join me in reaching a solution by becoming a co-sponsor of the Equal Rights for Health Care Act - Title 42. Inspired by Title IX, the goal of this legislation is to ensure that all Americans are treated equally when obtaining healthcare treatment.

As you know, Title IX was passed in 1972 and created federal law prohibiting discrimination on the basis of sex in any federally funded education activities. Title IX has attracted much attention by leveling the playing field in athletics, but it has also had a tremendous impact on gender equality in all educational activities. Similarly, my legislation will expand upon the belief that Americans should receive equal treatment in all areas of their lives from education to healthcare. Specifically, this legislation will prohibit discrimination in Federal assisted health care services and research programs on the basis of sex, race, color, national origin, sexual orientation, gender identity, or disability status.

With the introduction of this legislation we are taking a step toward equal access to healthcare, and I urge you to become an original co-sponsor the Equal Rights for Health Care Act - Title 42. For further information or to be added as an original co-sponsor please contact Mariel Lim at x5-7924 or Mariel.Lim@mail.house.gov.

Regards,

Laura Richardson
Member of Congress