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The Beltway Network:

A Network Analysis of Lobbyists' Donations to Members of Congress

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ABSTRACT

This paper develops a network approach to lobbying. We posit that the building blocks of the lobbying game are relationships, with lobbyists and legislators benefitting from bonds based on familiarity and mutual interest. Using data on contributions from lobbyists to legislators in the 2006 electoral cycle, we identify key dimensions of this network. We find that legislators are more likely to receive donations from the same lobbyists if they are from the same party (in the Senate), state, or committee; if they are both vulnerable in the next election; and the number of common donors increases the more agreement there is in the voting record of a pair of legislators.

Prepared for presentation at the 2009 Meeting of the American Political Science Association in Toronto, Ontario.

Scholars have long been puzzled by the relationships between lobbyists and legislators. A recurring goal has been to understand the game of lobbying by explaining why lobbyists develop relationships with some legislators and not others. While it seems possible that lobbyists “buy” votes and other policy favors by wooing undecided or indifferent legislators, others contend that they purvey information and persuade members of Congress (see for example Caldeira and Wright 1998; Hall and Wayman 1990; Hansen 1991; Kingdon 1989; Milbrath 1963; Wawro 2001). However, several scholars find that lobbyists tend to concentrate their attention on political allies, avoid their ideological adversaries, and infrequently lobby fence-sitters, suggesting that they are not buying votes or persuading legislators on a case-by-case basis (Baumgartner and Leech 1998; Hojnacki and Kimball 1998, 1999; Schlozman and Tierney 1986). As an explanation for this behavior, Hall and Deardorff posit that lobbyists “subsidize” the efforts of members with whom they agree (2006). This paper complements Hall and Deardorff’s model by identifying factors that promote relationships between lobbyists and legislators.

We posit that *relationships* are the essence of lobbying and analyze *networks* of connections between lobbyists and members of Congress. We consider lobbyists’ donations to be investments in long-term relationships, and legislators value these investments as a means to reelection and as a connection with, and potential influence on, other legislators. Specifically, this paper analyzes the factors that explain why legislators have lobbyist donors in common, i.e. the number of donation ties between members of Congress. We use data on over 10,000 donations made by more than 1,200 lobbyists to members of the U.S. House and Senate during the 2006 election cycle. We find that legislators are more likely to receive donations from the same lobbyists to the extent they vote together, sit on the same committee, share a party label,

represent the same state, or are in close races for reelection. These results shed light on both the relationships *between* legislators, and on the relationships between lobbyists and legislators. The next section frames this study, followed by a description of our data, results, and discussion.

II. Lobbyists, Legislators, and Money

Although the 1st Amendment guarantees the right to petition, professional lobbyists have long been a source of curiosity and concern. In the extreme, lobbyists and organized interests may induce legislators to prioritize the claims of friendly and generous lobbyists over the interests of their constituents. Mansbridge (2003), for example, suggests that some interests may receive “surrogate representation” from representatives without a special constituency stake in the group’s interest, particularly if the group is able to offer campaign contributions.

There are several explanations for *why* lobbyists and political action committees donate to members of Congress, and much research on the effects of campaign contributions from organized interests. One perspective is that lobbyists’ contributions are a means of purchasing some good (votes, speeches, etc.) from members of Congress (MCs). Early studies suggesting that donations influences voting patterns (Saltzman 1987; Wilhite and Theilmann 1987; Wilhite and Paul 1989) have been questioned by subsequent research (Wawro 2000). A critical question is how lobbyists could make and enforce contracts to “purchase” specific legislative acts, since any explicit contract would be illegal and MCs might renege on commitments if contributions are made *before* a key vote (McCarty and Rothenberg 1996). To avoid this, organized interests might make their donations nearly simultaneous to key choices (Stratmann 1998).

A similar view is that lobbyists pay for *access*, not actions (Chin et al, 2000; Hall and Wayman 1990; Langbein 1986; Wright 1989). Legislators’ time is scarce and campaign contributions help to make it “worth their while” to meet with lobbyists. This explanation is

consistent with the notion that lobbyists seek to inform or persuade MCs (see Austen-Smith 1996 for a review) to the extent that the information they provide lacks enough intrinsic value to merit access to MCs and their staff.¹

A puzzle for either view of lobbying and donations is that legislators tend to lobby, and donate to, legislators who are their ideological allies while avoiding enemies and undecided MCs (Baumgartner and Leech 1998; Grier and Munger 1986, 1991; Hansen 1991; Hojnacki and Kimball 1998, 1999; Schlozman and Tierney 1986). This is consistent with the claim that lobbyists subsidize the legislative efforts of MCs with whom they agree (Hall and Deardorff 2006). Lobbyists' donations can be understood as investments in long term relationships (Snyder 1990, 1992). Lobbyists will tend to value relationships with MCs with whom they agree on policy, and make contributions as signals of policy agreement (Hall 2009). And, it would be logical for lobbyists to invest their donations and resources in legislators who are effective and powerful legislators (Box-Steffensmeier and Grant 1999; Esterling 2007; Kroszner and Stratmann 2005).

We see two opportunities to contribute to this literature in this paper. First, all previous studies of campaign contributions and lobbying strategies have analyzed donations by *political action committees*. It seems likely that donations made by *organizations* aligned with specific interests are distinct from those made by individual lobbyists—many of whom represent multiple interests at a time—in the context of a long-term personal relationship. We can deepen our understanding of the ties between lobbyists and legislators by analyzing the choices lobbyists make with their own money.

¹ This is a possible solution to the puzzle of why MCs grant meetings with nonprofit groups and think tanks without requiring a donation (Berry 1999): these organizations may provide information with high intrinsic value.

Second, we hope to gain additional insight by studying lobbying as a social network. The focus of extant research has been on the interaction between single lobbyists and individual MCs. This approach focuses attention on the attributes of each lobbyist and MC in a dyad, and we can learn a lot from this approach. However, we expect to gain extra leverage on the lobbying game by studying the universe of lobbyists and legislators as a social network. The unit of analysis in a social network is a relationship between actors, and we can study aggregate properties of the network (how dense is it? What is the distribution of ties?) and the position of individual actors within the network. Political scientists have used the methods of social network analysis to study the interactions between interest groups (Heaney and Rojas 2007); media, politicians, party organizations, and interest groups in extended party networks (Koger, Masket, Noel 2009).

Our network approach helps us understand how the interaction between a lobbyist and legislator can have broader implications. For example, if two MCs work with a similar set of lobbyists, that might increase the ties between the MCs. Or, as a lobbyist gains in prominence, his or her legislative allies may benefit as well. The next section explains how this approach can add to our understanding of lobbying and legislating.

III. The Beltway Network

Lobbyists. We assume that lobbyists and MCs are goal-oriented actors embedded within an interdependent network. For the sake of clarity, we assume that lobbyists seek to maximize their income, which is tied to value of their lobbying contracts. Contracts, in turn, are a function of a lobbyist's capacity to influence policy outcomes on behalf of clients with specific interests

(holding price constant). Lobbyists, of course, do not make policy directly; they must work with legislators to influence the Congressional agenda and the content of legislation.²

All else equal, every lobbyist would like to be able to influence policy made by every legislator, and each legislator would like to be allied with every lobbyist. In practice, interaction between lobbyists and legislators is constrained by limitations on campaign contributions and guided by the structure of the U.S. House and Senate. Both chambers impose strict restrictions on gifts from lobbyists, and federal campaign law imposes a dual cap on campaign donations: there is a limit (\$2,400 per election in the 2010 cycle) on donations from an individual to a given candidate, and an overall cap (\$115,500 in 2010) on campaign donations to candidates, parties, and PACs by any individual. This means that each lobbyist's budget for campaign contributions is constrained by his or her income and contribution limits, so lobbyists must set priorities as they develop ties with legislators.

If there was only one lobbyist in Washington D.C., she would undoubtedly devote her contribution budget to building relationships with the most powerful party and committee leaders in Congress. However, there are thousands of registered lobbyists, and they cannot all be close friends of Congress's busiest members. Consequently, lobbyists have an incentive to specialize by finding a market niche that matches their backgrounds and talents, and developing relationships with MCs to fit that niche.

Legislators. Legislators, in turn, desire to influence public policy and to advance their career goals, including extending their career, advancing within the legislative chamber, and running for more prestigious offices (Fenno 1973). Lobbyists can help them with each of these goals. Obviously, lobbyists can promote a MC's reelection by making a campaign contribution,

² Obviously, lobbyists also work with the White House, executive agencies, and courts to influence policy. Our empirical focus is on the Congress, however.

holding a fundraiser, or volunteering for a campaign (e.g. as a D.C.-based fundraiser). Lobbyists can promote a MC's policy goals by recruiting him or her as the sponsor of a bill, and by lobbying other members on behalf of a MC's legislative initiative. Third, lobbyists can aid a MC's effort to win a party leadership post or committee chair by donating to a leadership PAC or lobbying other members on his or her behalf. MCs thus have an interest in developing alliances with lobbyists.

Every legislator receives office space and staff, and has the right to speak on the floor, introduce bills, and cosponsor legislation. Senators also have the privilege of placing a "hold" on legislation and nominations to keep them from the floor for a period of time (Koger forthcoming). However, some legislators are better entrepreneurs than others—they are more interested in making policy, more nuanced in their study of issues, and better able to build coalitions for proposals. Furthermore, legislators are distinguished by the committee structure of each chamber, which assign responsibility over a portfolio of policy issues to subsets of legislators.³ The committee system generates some degree of specialization in both chambers, but its effect is muted in the Senate by the breadth of senators' committee portfolios and its decentralized floor procedures. Finally, legislators are differentiated by their *party affiliation*, and by the *states* which they represent (Matthews and Stimson 1975).

While our data below are not longitudinal, we would expect that lobbyists and legislators seek to develop long-term relationships. Trust is necessary for a strong relationship because of the politically delicate nature of their collaborations, including implicit contracts and pragmatic political calculations; both parties need to know that the other side will be discreet and follow

³ Of course, committee jurisdictions are endogenous (King 1997), possibly overlapping, and can be overridden by a variety of tactics in each chamber.

through on commitments. This is especially the case when there are lags between contributions and rewards, or between legislative actions and additional contributions.

Hypotheses. We test this framework by analyzing on the number of lobbyists who donate to both MCs in a dyad. That is, for any two members, how many lobbyists-donors do they have in common? This is a conventional measure of the connections between actors in social network analysis. In this study, it provides insight on the dimensions that make some legislators especially worthwhile investments to a subset of lobbyists who share their interests or value the traits that they have in common.

- ***Hypothesis 1: The more shared committee assignments two legislators have, the more connected they will be via lobbyists.***

Lobbyists may develop special expertise and personal connections to lobby a specific committee, so MCs on the same committee are likely to work with a similar set of lobbyists.

- ***Hypothesis 2: Legislators from the same party will be more closely connected via lobbyists.***

Koger and Victor (2009) find that most lobbyists are highly partisan in their personal campaign donations—they give almost all their money to Democrats, or all their money to Republicans, with few lobbyists allocating equal portions of their budget to legislators of both parties.

Similarly, we predict that legislators from the same party are more likely to have common donors than cross-party dyads.

- ***Hypothesis 3: Legislators from the same state will be more closely connected via lobbyists.***

Classic studies of roll call voting (Kingdon 1989; Matthews and Stimson 1975) find that legislators tend to consult with other legislators from their states, and then are likely to vote with other members of their state delegation. Members of the same state may share common economic and political interests (e.g. in promoting an industry that is important to the state

economy, or protecting a major military base) and, over time, states may develop distinct political cultures. We expect that there may be subsets of lobbyists who specialize in the issues particular to a given state and networking with legislators from that state.⁴

- ***Hypothesis 4: Electorally vulnerable legislators are more likely to be connected via lobbyists than those who are not electorally vulnerable.***

Throughout an election cycle, legislators and their party leaders carefully monitor their reelection prospects, identify the most vulnerable incumbents, and funnel additional contributions to their campaigns. Gimpel, Lee, and Pearson-Merkowitz (2008) demonstrate that there are “national” donors who give to candidates in competitive races across the country, and some of these donors reside in the Washington, D.C. area. Thus we expect to observe that vulnerable legislators will receive more lobbyists’ donations in general, which increases the likelihood that they will share donors with other legislators.

- ***Hypothesis 5: The more frequently two legislators vote the same way, the more likely they are to be connected via the same lobbyists.***

This is a simple test for preferences; holding party, state, and committee constant, legislators who share similar views may tend to have similar donors. We are deliberately ambiguous about the direction of causality in this case; lobbyists may focus on subsets of legislators who hold similar views independent of any lobbying efforts, *or* legislators who are tied to the same lobbyists may be influenced by these lobbyists’ efforts.

IV. Research Design

To test the proposition that lobbyists are primarily motivated by their desire to create and expand their working networks, and that legislators respond in kind, we have collected data on

⁴ For example, lobbyists often participate in state “societies” that host social events for legislators and staff that represent a given state.

lobbyists' individual campaign donations during the 2006 election cycle.⁵ Network data is particularly sensitive to missing observations and sampling error. We therefore seek to test our hypotheses with a complete population of network data. Our data allow us to identify the network of lobbyist donors between members of Congress. We identified 20,639 donations by 1,225 lobbyists from January 2005 to December 2006. These include donations to members of Congress, challengers and candidates for open seats, political action committees, and national and state party committees. Donations from lobbyists' spouses are matched to the lobbyist. From this master list of lobbyist donations in the 2006 cycle we reduced the dataset to include only aggregated lobbyist donations to incumbent members of Congress, their leadership PACs, and the national party campaign committees. This results in 10,362 observations of lobbyist donations to members of Congress or the national party committees.

We created a 508x508 matrix of all the members of congress and national party committees in the data and calculated the number of common lobbyists between each dyadic pair of legislators. Table 1 provides some summary statistics on these data. Here you can observe the great variance that exists in these data. A given member of congress may receive donations from as few as 1 or as many as 220 individual lobbyists (Senator Clinton was the recipient of the highest number of donations). The number of donations in common for any dyad of legislators also ranges from 0 to 101. Of the 128,778 dyads, there are 85,156 dyads with no common lobbyists. The pair with the most common lobbyist donors (101) is Senator Clinton and the Democratic Senatorial Campaign Committee. Table 2 shows the top 10 dyads with the most common lobbyist-donors.

[Table 1 goes about here]

[Table 2 goes about here]

⁵ Data were acquired from the Center for Responsive Politics.

In our analysis, we conceptualize legislators as existing in a network. To use the parlance of social network analysis, the “nodes” of this network are individual legislators, and the “edges,” or connections between the nodes, are the number of common lobbyist donors to any two members of congress. A cursory look at this network reveals a somewhat meaningless tangle of so many nodes and edges that one can barely discern the difference between the two. In order to provide more context to these network graphs, we have developed a series of hypothetical graphs that provide a point of reference for visual examination. We can use these graphs to help determine if expected relationships exist in the data. Figures 1 and 2 respectively present the lobbyist-donor network for the House and Senate. Blue nodes represent Democrats and red nodes represent Republicans. In each Figure, the graph on the left represent hypothetical data, where the edges are the average number of common lobbyists between legislators, while the graph on the right represents the actual data. In Figures 1 and 2 there are so many nodes and edges that it is difficult to infer any meaning, but these graphs at least provide a visual benchmark of the data.

[Figure 1 goes about here]

[Figure 2 goes about here]

We engage in two stages of analysis to test our hypotheses. First, we run a series of bivariate t-tests and visually examine partitions of the network to determine if the relationships we expect to find in the data are indeed present. Next, we use a more traditional regression approach to model the entire structure of the data and ascertain if, controlling for a set of usual covariates, we find expected relationships in the data.

The bivariate test of our first hypothesis requires that we examine the number common lobbyist-donors between legislators who share committee assignments and those who do not. In

the House, where committees are larger and each legislator sits on up to three committees, legislators may share zero, or up to three common committee assignments. The mean number of shared committees between dyads is 0.226. In the Senate, where members tend to sit on more committees than House members do, the range of shared committee assignment is 0 to 4 and the mean is 0.719. Table 3 provides a tabulation of shared committee assignments for each chamber. To test the hypothesis that members who share committee assignments will be more likely to have common lobbyist donors we examine the number of common lobbyist for dyads that share zero committees and those that have at least one committee assignment in common. The results for all t-tests for all four hypotheses are presented in Table 4. The hypothesis that House members who share committee assignment are likely to have common lobbyist-donors is supported. House members who share at least one committee assignment have 1.2 common lobbyists on average while those with no common committee assignments have 0.46 common donors. In the Senate, while we have the same expectation as we do for the House, we do not find the same result. Senators with no common committee assignments have more common lobbyists (3.7) than senators with at least one common committee (0.8). This is a somewhat surprising result that suggests the network of common lobbyists in the House operates differently, or reveals something different, than it does in the Senate. We will investigate this finding further in the multivariable analysis in the next section.

[Table 3 goes about here]

[Table 4 goes about here]

Our second hypothesis seeks to test the idea that legislators of the same party will be more likely to share common lobbyist donors than those of opposite parties. While 50% of the dyads are from the same party, recall that these data are from the 109th Congress where the

Republicans held a majority in both chambers. At that time, Republicans held 221 seats in the House to Democrats' 183. Also, Republicans held 54 seats in the Senate to Democrats' 40. A simple test of this idea is to look at a t-test of same party dyads versus opposite party dyads for the entire network. If we examine the entire network we find that same-party dyads have an average of 1.33 common lobbyist donors while opposite party dyads have 0.35 common lobbyist donors ($t = -76.97$). Table 4 shows the results broken down for the House and Senate. In the House, same party dyads have 0.84 lobbyist donors in common, while opposite party dyads have 0.22 common lobbyist donors. In the Senate the difference is even more pronounced; same party dyads have 6.1 lobbyist donors in common, while opposite party dyads have 1.5 lobbyist donors in common. This provides cursory support for hypothesis 2.

Hypothesis 3 states that legislators from the same state should share more lobbyist donors than those from different states. Here we examine the entire network and find that legislators from the same state have an average of 1.4 lobbyist donors while those from different states have 0.82 common lobbyist donors. Overall, in the data 3.4% of dyads are from the same state. Even with this relatively small percent of same-state dyads, we still find that those from the same state share more lobbyist donors. This supports our expectations.

Hypothesis 4 states that legislators who are electorally vulnerable should have more common lobbyist donors than those who are electorally safe. In the Senate, we only examine senators who were up for reelection in 2006. By this standard, in dyads where both senators are in cycle they share, on average, 13.2 lobbyist donors. If at least one member of the dyad is not in cycle, they will share an average of 0.8 lobbyist donors. In the House, we consider a legislator to be electorally vulnerable if Charlie Cook identified the district as "competitive." By this standard, if both members of the House dyad are vulnerable, they will tend to share 1.37 lobbyist

donors; whereas, if at least one member of the dyad is not vulnerable they will share 0.8 lobbyist donors. This hypothesis lends itself to a visual examination better than the others because we are examining a relatively small number of nodes. Figure 3 shows the 34 legislators in competitive districts. The graph on the left shows edges with a hypothetical, or average, tie strength between nodes, and the graph on the right shows the actual tie strength between these 30 most electorally vulnerable legislators. The opacity of edges indicates the strength of the tie. The right graph displays darker connections between nodes than the left graph. Figure 4 displays the same data for the 29 senators who are in cycle. The left graph, that displays edges with an average number of lobbyist donors, shows connections that are lighter in color than the graph on the right. The right graph shows dark connections between senators in cycle, indicating that they tend to share many common lobbyist donors.

Multivariate Analysis

While our initial inspection of the data suggests that our predictions are plausible, we seek to engage in a careful multivariate analysis that will allow for a simultaneous test of our hypotheses. In choosing a model to fit to our data we want to be particularly sensitive to the fundamental problem of social network data—autocorrelation. This problem arises whenever dyads are the unit of observation, but is further complicated with network data. In a standard regression we assume that observations are independent, but when the unit of analysis is a dyad, observations on a pair of actors in a network are highly dependent. Clearly, Rep. Hoyer, for example, is member of many dyads in the data and these observations cannot be considered independent, for they contain the same actor. There has been great progress in recent years in developing models to address this problem. The best approach for continuous variables has been in the use of mixed models, or hierarchical models. In these models, one can use a random

effects estimator to capture much of the network-based autocorrelation. We describe our application of this approach below. In addition, our dependent variable is a count variable and in order to make accurate inferences with our coefficients, we require a model that accurately captures the distribution of the data, since they are clearly not normally distributed. In our case, the dependent variable is a count of the number of common lobbyist donors between any two legislators.

To develop a model that appropriately accounts for the count-nature of the dependent variable and the dependence and unobserved heterogeneity associated with our dyadic social network data, we employ a poisson model with a legislator-specific random intercept ζ_{ij} (see Rabe-Hesketh and Skrondal 2008). In a typical hierarchical model one conceives of occasions, (i), as a level-1 component, and subjects (j), as a level-2 component. Instead, we conceive of the first level “clusters” as legislator-legislator dyads (i), and the unit embedded within the clusters as being individual legislators (j). In our data, each dyad has two legislators (i, j). Our data therefore has just two “clusters” since each dyad includes two legislators. However, each legislator is a part of $N-1$ dyads, where N is the number of legislators. We are not so concerned with modeling legislators as clusters, as is common with a random effect approach; rather, we use the random effect estimator to account for the unobserved heterogeneity between observations and allow us to make appropriate inferences on coefficients.

Our count data has the added complication of being overdispersed (the variance is greater than the mean). We therefore wish to model this overdispersion, which is typically done through a negative binomial model. However, the random-intercept model with a normally distributed random intercept does not have a closed-form likelihood. To solve this problem we take the approach described by Rabe-Hesketh and Skrondal (2008, 390-1) and induce a closed-form

likelihood by specifying a gamma distribution for the exponentiated random intercept. The model we estimate therefore looks like the following:

$$\begin{aligned}
 u_{ij} &\equiv E(\text{number of common lobbyists}_{ij} | x_{ij}, \zeta_{1j}) \\
 &= \exp(\beta_1 + \beta_2 \text{voting coincidence}_{2i} + \beta_3 \text{committee coincidence}_{3i} \\
 &\quad + \beta_4 \text{same party}_{4i} + \beta_5 \text{same state}_{5i} + \beta_6 \text{electorally vulnerable}_{6i} \\
 &\quad + \beta_7 \text{number of common donors}_{7i} + \zeta_{1j})
 \end{aligned}$$

where $\zeta_{ij} | x_{ij} \sim \Gamma(1, \alpha)$, so that α corresponds to $\exp(\psi^{(1)}) - 1$. In this way, we include a level-2 random intercept (ζ_{ij}) that will account for the dependence between observations, and we employ a distributionally appropriate model that accounts for the overdispersion in our count data.

We estimate the House model separately from the Senate model. There are 407 House legislators and 95 individual senators in our data. In the House data there are 85,078 dyads and the Senate data has 4,465 dyads. In the hierarchical setup each dyad is represented twice in the analysis so that the unit of analysis is the individual legislator. This makes the total (possible) N for each model 170,156 and 8,930, respectively.⁶

To test hypothesis 5, which states that we expect legislators who vote together more often to have more common lobbyist donors, we require a measure of voting coincidence. We develop this measure by gathering data on every vote that every legislator took in the 109th Congress. For each dyad, we calculated the percentage of votes on which both legislators in each dyad voted together, given that they both voted. In the House this voting coincidence score ranges from 0.157 to 1, with a mean of 0.69. In the Senate this voting coincidence score ranges from 0.29 to 0.97, with a mean of 0.649.

⁶ Some missing cases in the House data brings our N to 161,986.

Additionally, we include a covariate for the total number of lobbyists that lobbied a dyad in order to control for the total number of donors to any pair of legislators. This control variable helps to render observations comparable, given that some legislator may have many more lobbyist donors than others.

V. Results

The results of our House and Senate mixed models are presented in Table 5. Both models (House and Senate) produce robust results with coefficients in the expected directions. We have presented the incident rate ratios (IRR) as opposed to beta coefficients, for ease of substantive interpretation. We find that in both chambers the more members vote alike, the more common lobbyist donors they share. In the House, a one unit increase in the rate with which two legislators vote the same corresponds to sharing 22 lobbyist-donors, all else being equal. In the Senate the effect is not quite as strong. In the Senate, a one unit increase in the rate with which two senators vote the same corresponds to sharing 6 common lobbyist donors, all else being equal.

In both the House and Senate models we find that overlapping committee service is positive and statistically significant (hypothesis 1). This supports our expectations. Legislators who serve on committees together are more likely to share lobbyist donors than those who do not serve on committees together. In each chamber, a one unit increase in the coincidence of committee service leads to sharing an additional lobbyist-donor. This is indicative of the overlapping policy interests of these legislators, which lobbyists also recognize and seek to support.

Regarding hypothesis 2, being in the same party, we find support in the Senate model but not in the House model for our expectations. In the House the coefficient is not statistically

significantly different from zero. This is a somewhat surprising result in the rule-laden House that has such strong party loyalty. This result merits further investigation. In the Senate, we find that senators from the same party are likely to have 2 more common lobbyist donors than those who are not from the same party.

Regarding hypothesis 3, we find support in the House model for our expectations, but not in the Senate model. The coefficients for *same state* in both models are positive, but only in the House model is the standard error of the estimate sufficient small to confidently distinguish the estimate from zero. This shows that House members from the same state are likely to share lobbyist donors (2.2 donors), but that Senators from the same state are no more likely to share lobbyist donors than those from different states.

Finally, in both chambers we find that legislators who are electorally vulnerable are more likely to share lobbyist donors than those who are not at risk. In the House the 34 legislators who sit in competitive seats are more likely to share lobbyist donors than those from safe seats. In the Senate, being in cycle renders one more likely to share lobbyist donors than being out of cycle. In both chambers, being electorally vulnerable leads to a dyad sharing an additional lobbyist-donor. These findings support our expectations.

VI. Conclusion

We set out to understand the relationships between lobbyists and legislators, particularly the dimensions along which actors in the “Beltway Network” cluster and divide. We have found that lobbyists make campaign donations to members of Congress in a systematic manner that reveals information about the common interests of legislators. Legislators who vote the same way, share committee assignments, and who are electorally vulnerable will share more individual lobbyist campaign donors than legislators who do not have these characteristics. In the House,

we also find that being from the same state makes legislators more likely to share lobbyist-donors, while in the Senate being from the same party has that effect.

By using common lobbyist donors as a way to link legislators, we find many expected patterns regarding policy areas (committees), party, geography, voting and electoral vulnerability. These expected patterns show that lobbyists make relationships (as revealed through their campaign donation behavior) with likeminded legislators, suggesting both a bifurcation of the lobbying community and a tendency of homophily between legislators and lobbyists.

REFERENCES

- Austen-Smith, David. 1996. "Interest Groups: Money, Information and Influence." In *Perspectives on Public Choice*, ed. Dennis Mueller. Cambridge: Cambridge University Press.
- Baumgartner, Frank R. and Beth L. Leech 1998. *Basic Interests: The Importance of Groups in Politics and in Political Science*. Princeton, NJ: Princeton University Press.
- Berry, Jeffrey M. 1999. *The New Liberalism: The Rising Power of Citizen Groups*. Washington, D.C.: Brookings.
- Box-Steffensmeier, Janet M., and J. Tobin Grant. 1999. "All in a Day's Work: the Financial Rewards of Legislative Effectiveness." *Legislative Studies Quarterly* 24:511-523.
- Caldeira, Gregory A. and John R. Wright. 1998. "Lobbying for Justice: Organized Interests Supreme Court Nominations, and United States Senate." *American Journal of Political Science*, Vol 42, No. 2: 499-523.
- Chin, Michelle L., Jon R. Bond, Nehemia Geva. 2000. "A Foot in the Door: An Experimental Study of PAC and Constituency Effects on Access." *Journal of Politics* 62:534-549.
- Esterling, Kevin M. 2007. "Buying Expertise: Campaign Contributions and Attention to Policy Analysis in Congressional Committees." *American Political Science Review* 101(1): 93-109.
- Fenno, Richard. 1973. *Congressmen in Committees*. Boston: Little, Brown.
- Gimpel, James G., Frances E. Lee, and Shanna Pearson-Merkowitz. 2008. "The Check is in the Mail: Interdistrict Funding Flows in Congressional Elections." *American Journal of Political Science* 52:373-94.
- Grier, Kevin B., and Michael C. Munger. 1986. "The Impact of Legislator Attributes on Interest Group Contributions." *Journal of Labor Research* 7:349-361.
- Grier, Kevin B., and Michael C. Munger. 1991. "Committee Assignments, Constituent Preferences, and Campaign Contributions." *Economic Inquiry* 29:24-43.
- Hall, Richard L. 2009. " ". Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago, IL.
- Hall, Richard L. and Alan V. Deardorff. 2006. "Lobbying as Legislative Subsidy." *American Political Science Review* 100(1): 69-84.
- Hall, Richard L., and Frank W. Wayman. 1990. "Buying Time: Moneyed Interests and the Mobilization of bias in Congressional Committees." *The American Political Science Review*. 84: 797-820.
- Hansen, John Mark. 1991. *Gaining Access: Congress and the Farm Lobby, 1919-1981*. Chicago: The University of Chicago Press.
- Heaney, Michael, and Fabio Rojas. 2007. "Partisans, Nonpartisans, and the Antiwar Movement in the United States." *American Politics Research* 34 (4):431-64.
- Hojnacki, Marie and David C. Kimball. 1998. "Organized Interests and the Decision of Whom to Lobby in Congress." *The American Political Science Review*. 92(4): 775-790.
- Hojnacki, Marie and David C. Kimball. 1999. "The Who and How of Organizations' Lobbying Strategies in Committee." *The Journal of Politics*. 61(4): 999-1024.
- King, David C. 1997. *Turf Wars: How Congressional Committees Claim Jurisdiction*. Chicago: University of Chicago Press.
- Kingdon, John W. 1989. [1973]. *Congressmen's Voting Decisions*, 3rd ed. Ann Arbor, MI: University of Michigan Press.

- Koger, Gregory. Forthcoming. *Filibustering: A Political History of Obstruction in the House and Senate*. Chicago: University of Chicago Press.
- Koger, Gregory, Seth Masket, and Hans Noel. 2009. "Partisan Webs: Information Exchange and Party Networks." *British Journal of Political Science* 39:633-653.
- Koger, Gregory and Jennifer Nicoll Victor. 2009. "Polarized Agents: Campaign Contributions by Lobbyists." Forthcoming, *PS: Political Science and Politics* 42(3).
- Kroszner, Randall S., and Thomas Stratmann. 2005. "Corporate Campaign Contributions, Repeat Giving, and the Rewards to Legislator Reputation." *Journal of Law and Economics* 48:41-71.
- Langbein, Laura I. 1986. "Money and Access: Some Empirical Evidence." *The Journal of Politics*. 48: 1052-1062.
- Mansbridge, Jane. 2003. "Rethinking Representation." *American Political Science Review*. 97:515-528.
- Matthews, Donald R. and James A. Stimson. 1975. *Yeas and Nays: Normal Decision-Making in the U.S. House of Representatives*. New York: John Wiley & Sons.
- McCarty, Nolan and Lawrence S. Rothenberg. 1996. "Commitment and the Campaign Contribution Contract." *American Journal of Political Science* 40(3): 872-904.
- Milbrath, Lester W. 1963. *The Washington Lobbyists*. Chicago: Rand McNally.
- Rabe-Hesketh and Skrondal. 2008.
- Saltzman, Gregory M. 1987. "Congressional Voting on Labor Issues: the Role of PACs." *Industrial and Labor Relations Review* 40: 163-79.
- Schlozman, Kay Lehman and John T. Tierney. 1986. *Organized Interests and American Democracy*. New York: Harper and Row.
- Snyder, James M., Jr. 1990. "Campaign Contributions as Investments: The U.S. House of Representatives, 1980-1986." *Journal of Political Economy* 98:1195-227.
- Snyder, James M., Jr. 1992. "Long-Term Investing in Politicians; Or, Give Early, Give Often." *Journal of Law and Economics* 35(1): 15-43.
- Stratmann, Thomas. 1998. "The Market for Congressional Votes: Is Timing of Contribution Everything?" *Journal of Law and Economics* 41(1): 85-113.
- Wawro, Gregory. 2000. *Legislative Entrepreneurship in the U.S. House of Representatives*. Ann Arbor: University of Michigan Press.
- Wawro, Gregory. 2001. "A Panel Probit Analysis of Campaign Contributions and Roll-Call Votes." *American Journal of Political Science* 45(July): 563-79.
- Wilhite, Allen, and John Theilman. 1987. "Labor PACS Contributions and Labor Legislation: A Simultaneous Logit Approach." *Public Choice* 53: 267-76.
- Wilhite, Allen, and Chris Paul. 1989. "Corporate Campaign Contributions and Legislative Voting." *Quarterly Review of Economics and Business* 29:73-85.
- Wright, John R. 1989. "PAC Contributions, Lobbying, and Representation." *Journal of Politics* 51:713-29.

Table 1 Descriptive Statistics of Donations to Members of Congress

	Mean	Median	S.D.	Min	Max
# of donors per MC	22	13	27	1	220
Proportion of all donors who gave to an MC	9%	5%	11%	.5%	100%
# of donors per Dyad of MCs	.8	0	2.3	0	101

Table 2 Top Incumbent Recipients, by Number of Common Lobbyist Donors

Member 1	Member 2	Number of Common Lobbyist Donors
DSCC	Clinton	101
DSCC	Cantwell	83
Cantwell	Clinton	76
DCCC	DSCC	68
Santorum	Allen	67
DCCC	Clinton	65
Conrad	Cantwell	61
Carper	Cantwell	60
DSCC	Conrad	60

Table 3 Number of Shared Committees for each Dyad

Number of Shared Committees per Dyad	House Frequency	House Percent	Senate Frequency	Senate Percent
0	128,086	79.06	4,028	45.11
1	31,270	19.30	3,570	39.98
2	2,594	1.6	1,154	12.92
3	56	0.03	168	1.88
4	-	-	10	0.11
Total	162,006	100.0	8,930	100.0

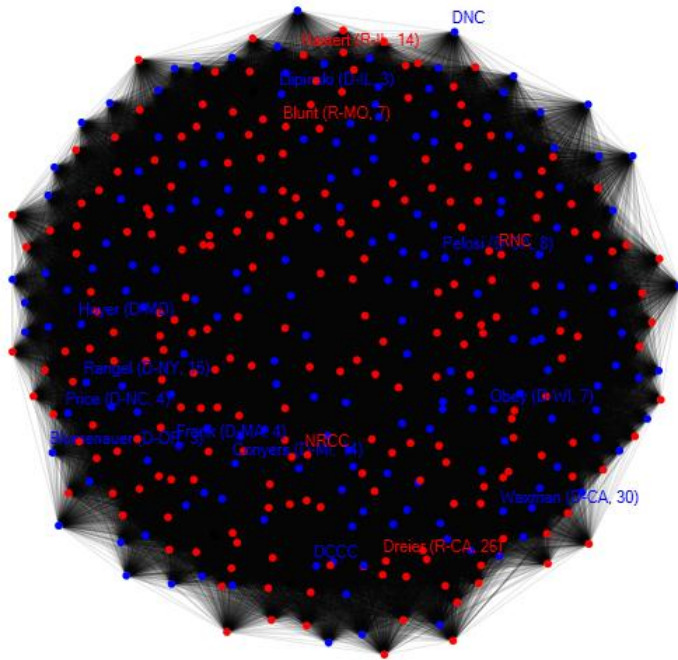
Table 4: T-Tests for Hypotheses 1-4

Hypothesis	Description	Variable	Mean #	T	Pr(T)	Result
			of Common Lobbyist Donors			
1	<i>Legislators that share the same committee assignments will share more lobbyist donors</i>	HOUSE: Dyad shares no common committee assignments	0.46	-58.45	0.000	supported
		HOUSE: Dyad shares at least one common committee assignment	1.20			
1	<i>Legislators that share the same committee assignments will share more lobbyist donors</i>	SENATE: Dyad shares no common committee assignments	3.70	55.66	0.000	unsupported
		SENATE: Dyad shares at least one common committee assignment	0.80			
2	<i>Legislators of the same party will share lobbyist donors.</i>	HOUSE: Same party dyads	0.84	-68.7	0.000	supported
		HOUSE: Opposite party dyads	0.22			
2	<i>Legislators of the same party will share lobbyist donors.</i>	SENATE: Same party dyads	6.10	-24.2	0.000	supported
		SENATE: Opposite party dyads	1.50			
3	<i>Legislators from the same state will share more lobbyist donors.</i>	Legislators from same state	1.4	-15.7	0.000	supported
		Legislators from different states	0.82			
4	<i>Senators in cycle in 2006 will share more common lobbyist donors than those not in cycle.</i>	Both Senators in Cycle	13.20	-110	0.000	supported
		Neither or one Senator in cycle	0.80			
4	<i>House members in competitive seats will share more lobbyist donors than those not in competitive seats.</i>	Both legislators are in competitive districts	1.37	-5.3	0.000	supported
		Neither or one legislator in a competitive district	0.838			

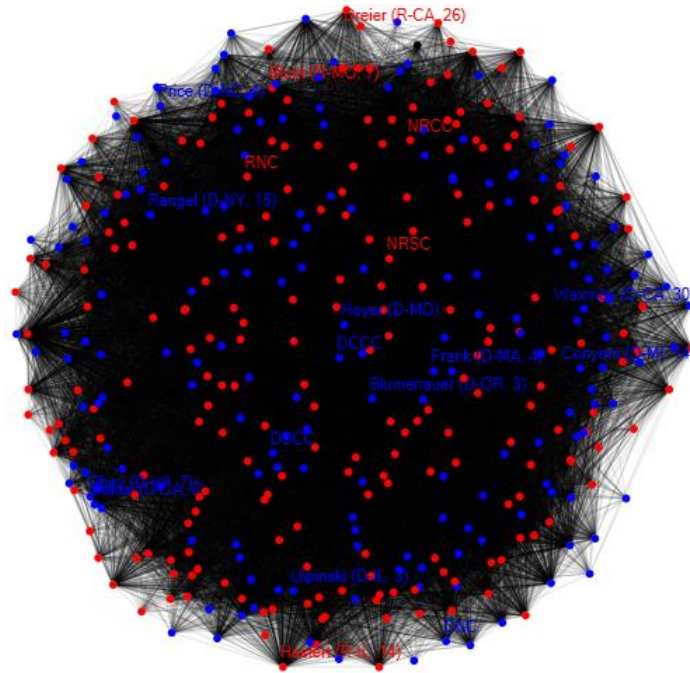
Table 5**Random Intercept Poisson Model, 2006 election cycle**

	House		Senate	
	Common Lobbyist Donors		Common Lobbyist Donors	
<i>FIXED EFFECTS</i>	IRR	Pr> z	IRR	Pr> z
Voting Coincidence	22.259280 (2.85776)	0.000	6.358215 (1.3338)	0.000
Committee Service Coincidence	1.311490 (0.023387)	0.000	1.053011 (0.0269)	0.043
Dyad in Same Party	1.075230 (0.0558802)	0.163	2.172521 (0.18936)	0.000
Dyad in Same State	2.284830 (0.0856034)	0.000	1.095768 (0.2065)	0.627
At least one member of Dyad Electorally Vulnerable	1.466812 (0.0309803)	0.000	3.842020 (0.15299)	0.000
Number of Common Donors	1.009795 (0.0002013)	0.000	1.001071 (0.00016)	0.000
alpha	3.829929 (0.0444605)		1.379640 (0.03966)	
N	161986		8930	
Number of Groups	80993		4465	
Wald Chi-squared (6)	9403.75		2637.19	
Prof > F	0		0	
Log Restricted-Likelihood	-110344.31		-15589.7	

Figure 1 The House Lobbyist-Donor Network

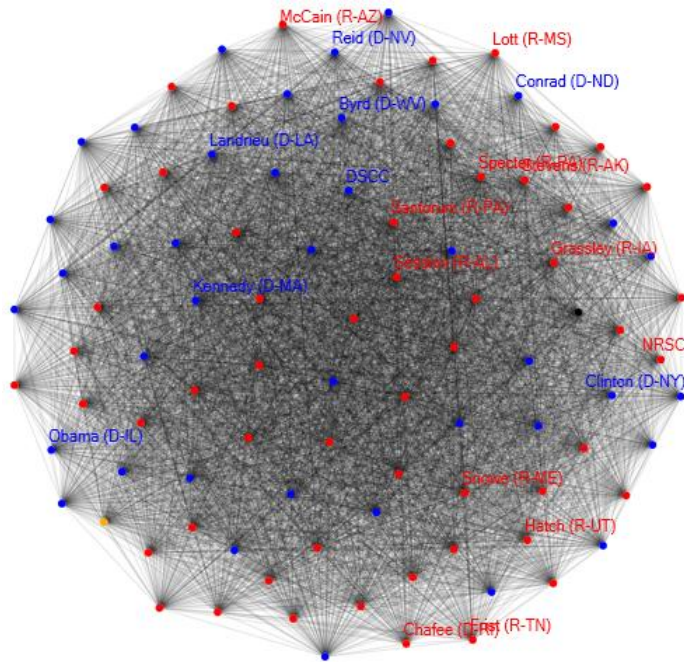


Hypothetical Data: Average number of donors between legislators.

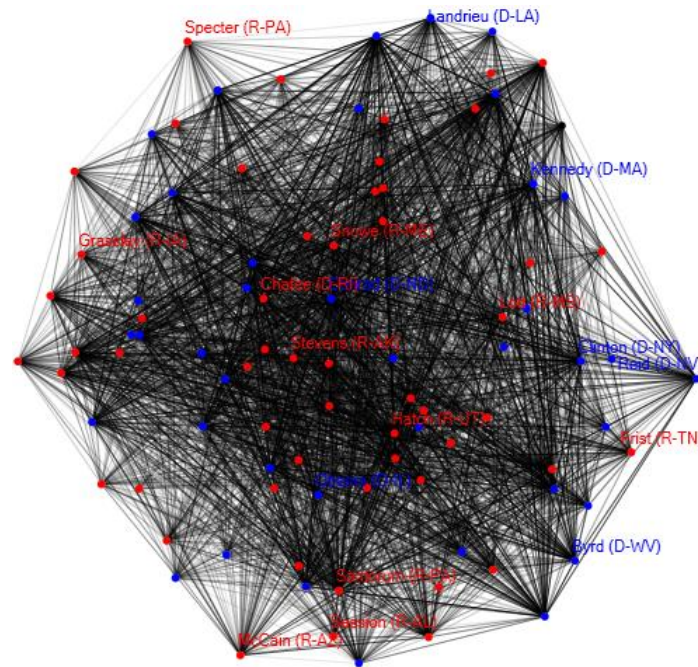


Actual Data: The opacity of an edge indicates the number of common lobbyist-donors.

Figure 2 The Senate Lobbyist-Donor Network

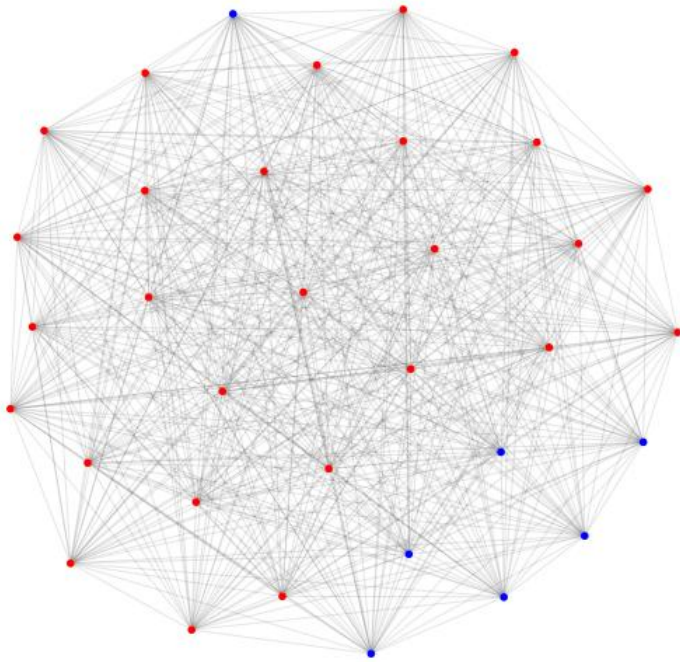


Hypothetical Data: Average number of donors between legislators.

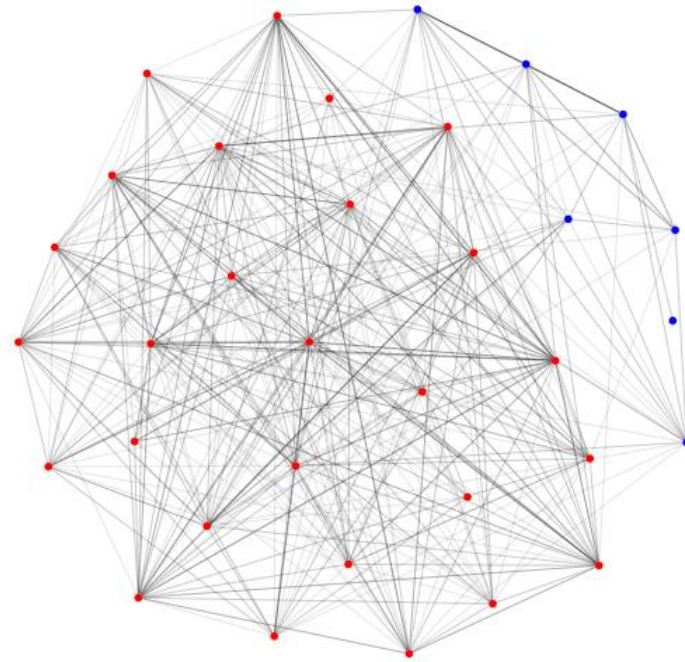


Actual Data: The opacity of an edge indicates the number of common lobbyist-donors.

Figure 3 House Members in Competitive Seats

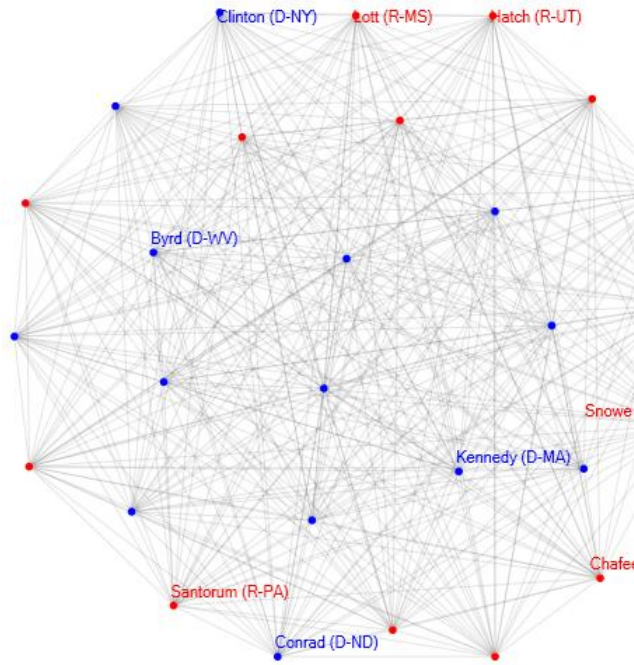


Hypothetical Data: Average number of donors between legislators

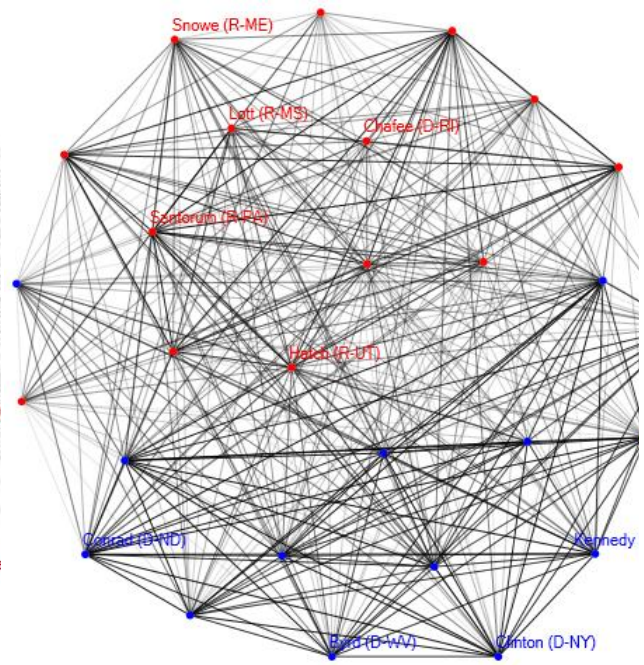


Actual Data: Opacity of edges indicates the number of common lobbyist donors.

Figure 4 Senators in Cycle



Hypothetical Data: Average number of donors between legislators



Actual Data: Opacity of edges indicates the number of common lobbyist donors.