INTEREST GROUPS AND IDEAS: THE BATTLE OVER HOUSING FINANCE IN THE RUN-UP TO THE FINANCIAL CRISIS

by

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A Dissertation Submitted to the Graduate Faculty of George Mason University in Partial Fulfillment of The Requirements for the Degree of Doctor of Philosophy Public Policy

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DEDICATION

To my mother and Anya. It’s the little things that have always counted.

And to Uncle Ellsworth.
ACKNOWLEDGEMENTS

Though it had been understood by a great many scholars before him, Ralph Ellison eloquently wrote that “education is about building bridges.” Like jazz musicians, we build something new when our own styles come into contact with the styles of those around us. The research that follows acknowledges this truth. I would like to thank Stephen Fuller, Laurie Schintler, and Jeremy Mayer for their consistent feedback on a project that straddled several disciplines in terms of methodology, substance, and style. I would also offer my utmost gratitude to James Fowler, who graciously agreed to serve as external reader. James is everything one could ask for in a leader of an academic field.

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ABSTRACT

INTEREST GROUPS AND IDEAS: THE BATTLE OVER HOUSING FINANCE IN THE RUN-UP TO THE FINANCIAL CRISIS

Maurice B. Champagne, PhD

George Mason University, 2015

Dissertation Director: Dr. Stephen S. Fuller

This dissertation examines the relationship between interest group access and American policymaking in three papers. Paper 1 suggests a key mechanism for interest group influence is in the opportunity for campaign contributors to frame information and dominate the belief diffusion process in congressional committees. The paper proposes hypotheses around the impact of interest group access on belief diffusion in a committee-level social network. It then employs social network analysis and Correlated Topic Modeling to determine whether members of Congress with the same interest group donors develop statistically similar cognitive maps with respect to a complex policy issue.

Paper 2 examines the relationship between the complexity of the industries the Congress must regulate and the demand for lobbyist expertise in the Congress. Paper 3 focuses on
the causal mechanism that translates campaign contributions into public policy. It tests theories of vote-buying against access-based theories head-to-head. The common thread between these three papers is the evidence that interest group influence is, in fact, a socio-psychological process in which interest groups shape the intellectual environment that acts upon members of Congress and their staffs. These findings are in conflict with strong versions of the theory of legislative subsidy and theories of vote-buying.

Papers 1 and 3 draw their content from Congressional hearings on the structure of the American housing finance system prior to the Financial Crisis of 2008. This debate occurred as underwriting standards were declining across the mortgage finance industry and credit risk was accumulating at Fannie Mae and Freddie Mac. The result was a $189 billion bailout of Fannie Mae and Freddie Mac, which was one of the largest bailouts associated with the Financial Crisis. Paper 2 focuses on lobbying activity across thirty-two industries. This dissertation is slated to serve as a scholarly contribution as well as a reference for Congressional staff, members of Congress, and registered lobbyists.

Keywords: Interest Groups; Congress; congressional committees; legislative subsidy; vote-buying; Government Sponsored Enterprises; Financial Crisis; elite theory; social network analysis; Topic Modeling
CHAPTER I

Introduction\footnote{This dissertation received the Fisher Award for best dissertation in Public Policy.}

The foundation of America’s federal system is rooted in resolving the problem of the way groups organize to achieve their interests. By most accounts, Madison was the chief architect of the U.S. Constitution (Library of Congress, 2005) and his main concern with democracy was that the tendency of citizens to form factions could lead to rule by force in a manner that was inconsistent with the rights of other citizens. Madison argued that factions naturally use the long arm of the law to shift resources into industries and economic units that are advantageous to the faction. As such, the way groups organize to achieve their interests loomed large in Madison’s writings. Madison wrote:

“Those who hold and those who are without property have ever formed distinct interests in society. Those who are creditors and those who are debtors fall under a like discrimination. A landed interest, a manufacturing interest, a mercantile interest, a moneyed interest, with many lesser interests, grow up of necessity in civilized nations, and divide them into different classes actuated by different sentiments and views. The regulation of these various and interfering interests forms the principal task of modern legislation, and involves the spirit of party and faction in the necessary and ordinary operations of the government” (Madison, 1787).
In fact, one of the main arguments for creating the republic itself was that a nationally centralized, yet federated institutional design had some utility as a safeguard against factionalism (Ibid., para. 1). The logic was simple. Madison believed groups would have to build larger, more representative coalitions in a system with a unified national government than in a system of autonomous, loosely confederated states.

Of course, 501(c) 4 organizations did not exist in 1790, but Madison’s own description of industry factions and minority factions is strikingly similar to the modern conception of the interest group, broadly defined. The interest group is no less than the organized advocate for the interest. If this is true, then interest group politics cuts to the core of what American politics is about. It is not a subfield of American politics. Rather, the American political system might be seen as a means of coping with different variants of organized interests. A tremendous literature, wedged between political science, economics, and law attests to the centrality of interest group politics among prominent thinkers about American politics since Madison’s time.
Majority Factions

The founding fathers were preoccupied with the negative aspects of majority factions, particularly state and local majority factions. The main idea was that majority factions have an incentive to siphon off resources from minority factions:

“Every shilling with which they overburden the inferior number is a shilling saved to their own pockets” (Ibid., para. 8).

However, the founding fathers did not conceive of scenarios in which narrow interests, or minority factions, could use the state to reallocate resources to their own, smaller factions:

“If a faction consists of less than a majority, relief is supplied by the Republican principle. . . It will be unable to execute and mask its violence under the form of the Constitution” (Ibid., para. 11).

From the perspective of modern political science, this latter view is problematic. It suggests those who design democratic governments need not concern themselves with distributive reallocation by narrow interests because those scenarios cannot occur. But what if we were to relax this assumption? What would that mean for the types of outcomes we might expect from democratic governments? Chapter II of this dissertation examines classic literature to establish a more realistic range of possibilities supported by existing research.
However, the chief contribution of this dissertation is in Chapters III, IV, and V. These chapters examine the why and the how regarding the way interest group influence operates, with a focus on resolving conflicts in the modern empirical literature, investigating claims that have been neglected in quantitative studies, and updating theoretical claims with more nuanced causal claims supported by rigorous methods.

**Research Questions**

Chapter II surveys existing knowledge on the following questions and subquestions. This literature informed the research design for this dissertation:

- Which types of interests are most likely to effectively organize? How do distributional incentives affect which types of interest groups are able to effectively organize? Do these incentives favor diffuse interests or narrow interests? How might interest group access lead to government failure?
- Why has interest group influence grown in recent years?
- What are the roles of interest groups in legislative politics?
- Where are the opportunities for interest groups to affect legislative politics? At which stage of the legislative process are interest groups most effective?
Chapters III, IV, and V answer novel research questions through examining political contributions data, hearing transcripts, industry-level economic data, and lobbying data:

- Does interest group access affect the mental maps members of Congress use to understand and interpret policy problems?
- Why do interest groups in some industries have a more prominent role in legislative politics than interest groups in other industries? How does the complexity of the policy content influence the demand for interest group advice within the Congress?
- Is interest group influence the result of monetary exchange, access, or both? Is one of these channels more effective than the other as a persuasive tool?

This dissertation exclusively examines interest groups that represent industries, with in-depth analysis of interest groups in the finance, insurance, and real-estate (F.I.R.E.) sector, drawing on the case of Government-Sponsored Enterprise (GSE) Reform from 2000-2008.
CHAPTER II

Classic Studies on Interest Group Politics

Classic studies on interest group politics are useful for answering the following research questions:

- Which types of interests are most likely to effectively organize? How do distributional incentives affect which types of interest groups are able to effectively organize? Do these incentives favor diffuse interests or narrow interests? How might interest group access lead to government failure?

Pluralism vs. Elite Theory

The first studies of interest group politics in modern political science came out of the pluralist school. Led by Dahl (1961; 2005), the pluralist school emerged in large part as a challenge to different forms of elite theory that dominated sociological assessments of politics in the early 20th century. Elite theory had its origins in the Italian School of Elitism, with seminal contributions from Gaetano Mosca, Vilfredo Pareto, and Robert Michels. Central to the Italian School was the
notion that superior organization is the basis of power in any society and elites will use their ability to organize to rise to power under any form of government (Mosca, 1939).

Many of the key ideas emerging out of the Italian School were deterministic and universal. Michels’s “Iron Law of Oligarchy” posited that all forms of democratic organization evolve into oligarchy because of the necessity for some degree of centralization and specialization in any decisionmaking body (Michels, 1915). The “Pareto Principle” (named posthumously) was based on Pareto’s observation that 80 percent of the land in Italy was owned by 20 percent of the population (Pareto, 2014), and Pareto’s cross-national research suggested the wealth distribution of other societies also followed this pattern. Grounding oligarchy in natural asymmetries of organizational skill and resources seemed to imply that achieving the democratic ideal was impossible under any ostensibly democratic form of government. Indeed, Michels famously wrote “It is organization which gives birth to the dominion of the elected over the electors, of the mandataries over the mandators, of the delegates over the delegators. Who says organization, says oligarchy” (Michels, 1915, p. 400). Then in 1956, C. Wright Mills published *The Power Elite*, which identified in the United States an
elite comprised of corporate, military, and political interests. Mills’s work was neither deterministic nor universal. Much of his contribution was descriptive. Mills saw the basis for elites’ power in their formal positions of authority and their social relationships rather than an inevitable superiority in the ability to organize. Mills’s work was characterized by statements far less ambitious than those of the Italian School, such as “the powers of ordinary men are circumscribed by the everyday worlds in which they live,” an assertion which would seem difficult for any reasonable social scientist to argue with.

Dahl recognized that at least inequalities of resources were prevalent in the United States, and was concerned that, if those inequalities did in fact translate into political inequalities, they would undermine the view that the United States could live up to its own ideals (Dahl, 2005). The motivation for Dahl’s research was in this potential inconsistency between the “American Creed” and the potential for intractable political inequalities to materialize from economic inequalities (Ibid., p.1; Myrdal, 1996). Dahl’s primary research question was thus: “In a political system where nearly every adult may vote but where knowledge, wealth, social position, access to officials, and other resources are unequally distributed, who actually governs?” The question itself was an affront to elite
theorists, who argued such inequalities of resources necessarily translate into power for those who hold them. However, Dahl made an important contribution to political science by differentiating between the types of interests that different elites represented and drawing distinctions between the types of resources each group held. In this manner, Dahl was able to shift the debate about democracy from somewhat amorphous class interests to the observable behavior of clearly organized units focused on achieving specific policy goals. In Democracy: Who Governs? Dahl saw interest group politics as part of a constant shifting of the centers of power that prevented any single class from controlling public policy. In this case study of local governance in New Haven, Connecticut, Dahl observed a shifting of the levers of power, first from wealthy families to entrepreneurs, then from entrepreneurs to immigrant minority groups that were able to provide votes for local politicians. Dahl attributed this shift to an inexorable decline in cumulative inequalities, a dispersal of resources in which groups obtain a variety of political assets that enable them to compete in politics. Resources such as money, votes, ethnic solidarity, and positions of influence become fragmented between different interests. In Dahl’s account, the proliferation of interest groups in America was considered evidence of this dispersion of inequalities. A leveling of the playing field. A shift from oligarchy to pluralism. The pluralist view
eventually became associated with the Madisonian idea that federalism, by multiplying the centers of power, would engender balance in the political system (Madison, 1787). However, in the pluralist account, the benefit would come from increasing the number of groups in the system rather than increasing the number of levels of government in which they would have to compete (Polsby, 1980). Another assertion in Dahl that would become important much later (Hall and Wayman 1990; Hall and Deardorff, 2006) was that politicians, rather than serving as agents for existing groups, were ideologically entrepreneurial themselves and sometimes provided the initiative for stagnant groups to focus on specific policy problems (Dahl, 2005, p. 130-140).

The next generation of political scientists viewed the pluralist argument as naïve. They challenged Dahl’s methods on the basis that his case study design failed to consider the “second face of power,” in which elites determine that the preferred policies of some groups are simply off the agenda (Bachrach and Baratz, 1962; Berry, 1984; Logon and Molotch, 1987). In this account, broad redistribution policies, universal single-payer healthcare, etc. are rarely given a serious hearing in the public sphere in the first place. These decisions go unobserved in a case study design in which the researcher is simply following the action. On the basis
of both the methodological limitations of the pluralist literature and the historical
development of post-1960s politics, it is probably fair to say that pluralist theory
has been discredited. However, some of Dahl’s insights still seem to ring true
today. No single category of elites has the time and attention span to control
decisions on the full slate of policy issues. Within the context of limited
resources, different groups selectively participate on issues that affect them
directly.

Olson: Interest Groups and Collective Action

If Dahl provided the case for optimism about the effect of interest group politics
on American democracy, Olson (1965; 1982) provided the case for despair. In The
Rise and Decline of Nations, Olson attributed the economic demise of previously
productive societies the world over and throughout history to a dismal causal
chain underlying the way collective action tends to materialize. Olson turned
Madisonian factionalism upside-down, suggesting it was not majority factions,
but narrow interests, that best achieve their policy goals in democratic societies.
The implications were worse than any Madison had anticipated. The net effect
was that the political activity of interest groups had a deleterious effect on
economic growth over the long haul.
Olson began with the observation that small groups tend to take directed action more effectively than large groups. Here, he drew upon research by John James (1951) that investigated the effect of group size on action-taking in public institutions, private institutions, and national and local institutions. He also drew upon controlled experiments among young boys (Hare, 1952), sociological essays (Simmel, 1950), and historical studies (Homans, 1950). In each study, the smaller the group, the more effectively the group would take coordinated action and utilize the resources at their disposal. Applied to politics, this literature implied that the odds might tilt in favor of small groups when they come into contact with large groups in democratic systems.

Olson was the first to explain these sociological observations through a theory of economic incentives. At the center was the problem of non-excludable goods. In public policy, the theory went, the benefits of collective action were goods provided by the state that could be consumed by actors outside of the coalitions that lobbied for them. Furthermore, the larger the interest, and the greater the proportion of the population the interest represented, the more broadly the benefits would have to be distributed, and the smaller the benefit received by
any individual member. This reality made it difficult for majority interests to organize because the incentive was always to free-ride, and the size of the individual benefit did not justify the opportunity cost of participating. Thus, the power of majority interests was only potential power. Most potential recruits would find it economically irrational to participate in the effort to organize. Olson presented this utilitarian calculation as the foundation of all interest group organization. Economists later incorporated this logic as the first leg of the theory of “government failure,” which establishes the conditions under which governments allocate resources inefficiently.

According to Olson, groups that could overcome the free-rider problem had one of four characteristics, all of which tend to favor narrow interests. First, the group might be small enough that each member could receive a substantial portion of the total gain from organizing (Olson, 1971). This was Olson’s simplest proposition, but it also had the broadest implications for interest group politics. It suggested that, before we consider any caveats, we should expect interest group politics in representative democracies to be generally dominated by small groups with narrow interests.
Second, the group might be able to dole out “selective incentives.” Selective incentives were rewards and punishments that could be applied “selectively,” meaning those outside the group could be excluded from consuming them. Olson provided the example of union insurance benefits that were important for establishing labor unions in the early years of union formation in the United States (Ibid., p. 71). Subsequently, labor unions transitioned to relying on seniority rights in their contracts with employers and handling grievances for union members (Ibid., p. 73). Once the unions had established a significant presence, they were able to use violence, coercion, and labor strikes to attain exclusive jurisdiction rights and “closed shop” agreements with employers that prevented them from hiring any worker outside the union. Olson argued in 1965 that the growth of right-to-work laws and the introduction of broad social insurance programs such as Social Security and Medicare would make it increasingly difficult for labor unions to organize, an observation that seems prophetic today. Olson argued that the reason these developments would harm labor unions’ ability to organize was because they would undermine their ability to dole out selective incentives.
Third, interest groups might succeed in organizing if they could provide “social selective incentives.” Social selective incentives were social rewards and punishments such as recognition, respect, ostracism, and retaliation. Olson argued that only small or federated groups could utilize social selective incentives because individuals only value the companionship and respect of those with whom they are socially interactive (Ibid., p. 23). Another factor which favored small groups in this regard was that the larger the group, the more difficult it becomes to monitor members’ contributions because their actions become less perceptible with group size. Finally, small groups were favored in the deployment of social selective incentives because large groups have to form from populations that are more socially heterogeneous. Olson argued that social interaction tends to be much higher among socially homogenous groups, which ties back into his causal mechanism in the social interaction of small groups. He observed that political entrepreneurs will often use indoctrination or selective recruitment to maintain this homogeneity.

Fourth, there were interests in which the potential benefits of organizing to one or more potential members were so great that they would justify underwriting the entire coordination effort. These groups would form because it would be in
that organization’s interest to form the group, regardless of whether other members might free-ride. Olson referred to these types of interest groups as “privileged groups.”

Finally, Olson suggested the advantages of small groups play out within the context of the “rational ignorance” of the majority, a concept he borrowed from Downs (1957). The theory suggested that for the typical citizen, the costs of acquiring sufficient information about public affairs typically exceeds the benefit one would receive from supporting the optimal policy. Here, the benefit was measured as the difference between the optimal outcome and a suboptimal outcome, multiplied by the probability that one’s vote would be the decisive vote in an election. Since this value would typically be infinitesimal, the average citizen would choose not to expend the time and effort to educate himself on specific policy areas and would therefore be easily swayed by the persuasion tactics of interest groups. The net result of this effect was that democracies would implement policies in which the benefits were concentrated among narrow interests and the costs were dispersed across the broad public.
In many ways, Olson’s focus on the organizational capabilities of narrow interests echoed Mosca. For example, the following Mosca quote reads like an epitaph for Olson:

“A hundred men acting in concert, with a common understanding, will triumph over a thousand men who are not in accord, and can therefore be dealt with one by one” (Mosca, 1939).

However, in contrast to Mosca, Olson grounded this advantage in the size of the group rather than the characteristics of the individuals that make up the group.

The reason Olson is worth a deep dive in any discussion of interest group politics is because his theory has two serious implications for the rational operation of democracy. First, since narrow interests have disproportionate organizational power for collective action, interest group lobbying would on balance reduce efficiency and aggregate income in the societies in which they operate (Olson, 1982). Here, Olson provided statistical evidence from regression results that indicated U.S. states that were more heavily unionized in 1964 and 1970 tended to have lower economic growth rates than other states between 1965 and 1980. Second, since interest groups tend to protect the spoils they have worked for, they “slow down a society’s capacity to adopt new technologies and to reallocate resources in response to changing conditions, and thereby reduce the rate of
economic growth” (Ibid., p. 74). Here, Olson provides the example of corporate bailouts, which prevent the shifting of resources into more productive sectors.

Although The Logic of Collective Action has some truth to it, in The Rise and Decline of Nations, Olson did not accomplish what he set out to do. Here, he sought to establish that the dynamics of interest group politics were responsible for the decline of productive societies worldwide. However, the cross-national portion of Olson’s evidence basically consists of speculation on a case-by-case basis as to why some countries have grown faster than others. One claim that seems to be supported by the evidence is that countries such as Germany and Japan, which were defeated in World War II, experienced “economic miracles” after their distributional coalitions had been emasculated by totalitarian governments or foreign occupation (Ibid., p. 75). But this was far from sufficient to prove Olson’s cross-national argument. Moreover, the statistical evidence on the domestic side was not as generalizable as Olson wanted. His best econometric model used only labor unions as the independent variable, and he hoped the result for the effect of labor unions on economic growth would be generalizable to all types of interest groups. In addition, in his time-series regression results, Olson assumed the ages of cities and metropolitan areas could be used as a valid indicator of the amount
of time they have had to accumulate interest groups. Today, we would assume that the age variable would reflect many other factors and this would confound any geographic time-series results.

Theoretically, Olson’s main weakness was that he made extreme assumptions about the economic rationality of individuals and assumed utilitarian calculations were necessarily driving the differences he saw in the organizational capabilities of small groups compared to large ones. The possibility remained that purely social factors might have driven some of the differences here, though it is not necessary to accept Olson’s utilitarian causal mechanism to accept the negative implications of small groups’ superior organizational capabilities for the efficient functioning of democracy.

Still, in hindsight, there are a few implications of Olson’s work that would seem unassailable. First, although there may be considerable variation in the extent to which individuals respond to economic incentives versus social factors, the more closely the actors resemble *homo economicus*, the more Olson’s theory should predict their behavior.
Second, although the assumption in Olson’s theory that narrow interests will always rent-seek is based on extreme assumptions about economic rationality, the hypothesized effect size is so large that the theory only requires a small amount of economic rationality to work. The following example is illustrative:

“Suppose, for the sake of illustration, that an organization represents workers or firms that have 1 percent of the income-earning capacity in the country. This organization will have to bear the cost of whatever campaign it mounts to make the society more efficient, but its members will tend, on average, to get only about 1 percent of the resulting gain to the society. The organization’s members would, on average, profit from devoting their resources to making the society more efficient only if those resources produced social gains one hundred times or more larger than the cost of obtaining those gains. . . Now suppose that our illustrative organization . . . attempts to serve its members by seizing a larger slice of the social pie . . . This will reduce social output to some extent. More important, the pattern of incentives in the society will be changed by the redistribution, and . . . in ways that can vastly reduce the level of production” (Ibid., p. 43).

Other implications would seem to ring true in what would have been a lively debate between Olson and Madison. Minority factions can be just as effective as majority factions, and when they are, relief is not necessarily supplied by the republican principle, as Madison suggested. And there is, in fact, an intellectually sound theory that suggests we should not expect majoritarian principles to predominate over the incentives that structure the way people organize (or choose not to organize) to achieve their interests.
For the purpose of guiding modern research in public policy, Olson’s work might suggest that when government fails to address the public interest in any policy area, we might be able to trace the problem back to narrow interests that have coordinated well; and when the data indicate that narrow interests have outsized influence, rational behavior among actors at the micro-level may explain that influence.

Berry and Wilcox: The Rise of Modern Interest Groups

Berry and Wilcox’s seminal work on modern interest groups is useful for answering the following research questions:

- Why has interest group influence grown in recent years?
- What are the roles of interest groups in legislative politics?
- Where are the opportunities for interest groups to affect legislative politics? At which stage of the legislative process are interest groups most effective?

Berry (1984) and Berry and Wilcox (2009) produced the first comprehensive accounts of the way interest groups operate in American society. They wrote during the tail end of an explosion in the number of interest groups and the front end of a dramatic increase in the total amount of Political Action Committee
(PAC) contributions (Ibid., p. 17; Ibid., p. 76). From 1955 to 1984 the total number of U.S. associations increased by over 400 percent, and from 1984 to 2006 the total amount of annual PAC contributions to party committees increased from about $5 million to $47 million (Ibid. p. 18; Baumgartner, 2005).

Berry provided an explanation for the rising significance of interest groups that was grounded in history and changes in law. He saw the proliferation of interest groups as endemic to two-party systems (Berry, 1984). In Berry’s account, in two-party systems, each political party has a constituency so broad that it has to move on hundreds of issues. Relatively few issues will be assigned priority by party leaders and policymakers will act in a superficial or symbolic way on the issues that are not assigned priority (Ibid., p. 56). In single-member districts without proportional representation, it is inevitable that the system will end up with two parties covering broad ideological ground. Political parties must be “vote maximizers.” They must dilute many policy stances to win elections. Interest groups, on the other hand, are “policy maximizers.” They offer a commitment to narrow interests that people cannot get from political parties. Further, interest groups can be effective to the degree that they maintain that narrow
commitment. They are a better investment than political parties for organizations with narrow interests that are focused on specific policy outcomes.

Berry suggests this effect of two-party systems was further exacerbated by the decline of party organizations in the late 1960s and the early 1970s, when political primaries displaced party organizations in determining the two parties’ presidential nominees. Between 1968 and 1972, the percentage of delegates to the Democratic National Convention determined through primaries rose from 42 percent to 65 percent. By 1976, primaries determined over 70 percent of convention delegates for both parties (Ibid., p. 52; Ceasar, 1979). In Berry’s account, the combination of the two party system and the decline in party organizations improved the ability of interest groups to attract members, and ultimately made the political parties more dependent on interest groups for support. Changes in election law in 1974 (The Federal Election Campaign Act of 1974) exacerbated the problem by creating PACs, and widespread manipulation of section 527 of the Internal Revenue Code (26 U.S.C. § 527) decreased the transparency of the campaign finance system by enabling organizations to shift donations from “hard money” contributions to “soft money” contributions that were not regulated by the Federal Election Commission.
The evidence in Berry and Wilcox provided perhaps the most stinging indictment of the pluralists, as it suggested the proliferation of interest groups could not be attributed to any equilibrating force brought about by a dispersion of inequalities. Moreover, the data were supported by first-hand eyewitness accounts from interviews with lobbyists and members of Congress, which brought many of the abstract arguments of elite theorists and public choice scholars down to earth. Broadly, this perspective viewed the rise of interest groups as the product of specific historical circumstances that tended to favor industry players. There was no invisible hand in politics that would save the system from itself.

The Roles of Interest Groups

The obvious roles of interest groups are to represent their members and to influence public policy. However, the means they use to fulfill these roles are less obvious. The literature indicates that one critical area in which interest groups exercise their influence is in agenda-building (Berry, 1984; Berry and Wilcox, 2009; Kingdon, 2003). That is, they influence which policy issues receive serious attention from policymakers. Kingdon described this process as a “narrowing” of
“the set of all conceivable subjects or problems to which officials could be paying attention” to “the set that actually becomes the focus of attention.” Berry and Wilcox more forcefully describe the process of agenda-building as “bringing the issue to light in the first place,” and turning problems into “the body of policy questions that government feels it must deal with” (Berry and Wilcox, 2009, p. 8). Broadly speaking, the main idea in this literature is that at any given time, far too many policy problems exist than can be addressed by policymakers. Therefore, interest groups place pressure on policymakers to prioritize the issues that are important to them, or demonstrate how addressing the problem can be beneficial to a member’s constituents.

Victor (2007) draws a distinction between different types of lobbying tactics that is useful for thinking about the role of interest groups in agenda-building: “Direct lobbying” consists of “one-on-one contact and the provision of information to try to influence legislators.” However, “indirect lobbying” consists of “influencing the views of the general public, which will in turn affect the preferences of legislators” (Victor, 2007, p. 827). The distinction suggests interest groups have tactics at their disposal to not only persuade legislators to move policy in their preferred direction, but also to place pressure on legislators
to address the issue in the first place. This ability to utilize outside pressure in the agenda-building process can make interest groups more formidable than other types of Washington insiders that do not have a public audience, such as bureaucrats. In support of the view that indirect lobbying alters the playing field, Victor’s research included empirical results from a negative binomial regression that indicated interest groups use indirect lobbying to “expand the scope of conflict” when procedural obstacles make legislative success a heavier lift. For example, interest groups have a higher probability of using indirect lobbying on bills that are considered under suspension of the rules or that have received veto threats, and are less likely to use indirect lobbying on bills that have been referred to multiple committees (Victor, 2007, p. 839).

Overall, research on agenda-building suggests interest groups exert influence much earlier in the policy process than a casual review of the behavior of legislators would indicate. At the same time, interest groups’ agenda-building activity can complicate efforts to model interest group influence at other stages of the policy process. For example, when an interest group is the primary actor responsible for placing a policy issue on the public agenda, it can be difficult to pinpoint just when the group began to exert influence on a particular member of
Congress or a political party. This problem might make pre-post-test quasi-experimental designs methodologically infeasible in some studies of interest group influence.

Framing

One of the most important means interest groups use to carry out their functions is framing. Framing is addressed extensively in paper 1, so this section merely introduces the concept as it pertains to the roles of interest groups.

To understand what framing is, consider that on any policy issue, members of Congress and their staffs have an endless stream of policy arguments and information competing for their attention at any given time. They cannot buy into all of them because each assertion can lend itself to a different policy prescription. An interest group might attempt to persuade a member about which value choices are at stake in the policy debate (Berry and Wilcox, 2009). For example, does the key value choice on a financial regulatory reform bill involve market egalitarianism, macroeconomic stability, or social justice? The direction in which the member is guided regarding which value choices are at
stake might affect which policy arguments and information sources will hold currency with him or her.

An interest group might also persuade a member regarding which model of the way a market works or the way a particular aspect of the market works is correct or applicable to the policy issue under consideration. The answer might affect which policy predictions seem convincing to a member. The answer might also affect which data the member’s staff deem relevant or which assumptions they are willing to accept.

Smith (1984) suggests the interest groups that are the most experienced with framing will try to fit their assessment of policy consequences into interpretations that are appealing to the member’s value system, or they might try to understand that member’s mental model to learn how to make a convincing argument to that member.

This literature suggests framing enables interest groups to structure how members search for, process, and interpret information (Smith, 1984, p. 47).
Interest Groups in Committees

Where are the opportunities for interest groups to influence legislative politics? There are three major access points for any bill: in committee, on the floor, and in conference committee. The literature indicates that of the three, interest groups have the most influence in committee. Part of the reason is because the smaller sizes of committees enable interest groups to focus their efforts on a smaller number of legislators and staff (Berry and Wilcox, 2009). The amount of time and regular contact they can establish with committee members facilitates building personal relationships involving mutual trust, credibility, and information exchange (Ibid., p. 138). Berry and Wilcox suggest that after a bill comes out of committee, interest groups must deal with a wider range of legislators they may be unfamiliar with, and with whom they have not established trust or credibility. Further, interest groups are less likely to encounter opposition from the party leadership in committee because the party-line is less likely to have been established.

Another reason interest groups are effective in committee is because the effect of convincing committee members can reverberate throughout the Congress. Smith

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2 Some interest groups are able to author the original bills, but this activity falls into the committee stage.
(1984) suggests committee members serve as cue-givers to other members who are less informed. If interest groups can affect the way committee members interpret information, this influence will affect the decisions of many cue-takers with whom the interest group may not have direct relationships. This ability to influence the way committee members interpret information is therefore at the center of interest group influence. In support of this view, a committee staffer recently stated:

“When he was chair, members relied heavily on Barney [Frank]. They got used to relying on him.”

These factors suggest the best place to examine interest group influence would be in committee hearings. We would expect members to be more open-minded at this stage of the policy process, as they are less likely to have been whipped into a position by the party leadership. They are also less likely to be inhibited by the prospect of national media attention in committee than in floor debates. And the interest groups are more likely to be working with members and staff they know. Furthermore, the stakes are lower in committee hearings than they are on the floor or in conference committee, which enables members to be more fluid about

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3 Interview with Congressional aide, September 24, 2014.
their policy positions as they take in information and think through policy problems.

Although the period of study for Papers 1 and 3 of this dissertation ends in 2008, the advantage of examining interest groups at the committee stage may have increased in recent years, as Congress has increasingly departed from regular order. This would be expected to increase the influence of interest groups that are able to participate at the committee stage, and decrease the influence of interest groups that become involved once a bill has proceeded to the floor or conference committee stages.
The Impact of Classic Studies on the Design of this Research

What does the classic literature suggest for designing research on interest groups? Insights from the aforementioned studies have been incorporated into this dissertation in the following ways.

First, the dissertation focuses on interest groups as critical loci for idea-generation in American democracy. Following research on framing (Smith, 1984) and agenda-building (Kingdon, 2003; Berry and Wilcox, 2009; Victor, 2007) paper 1 examines a critical policy debate on the American housing finance system prior to the Financial Crisis of 2008 by examining the network of interest groups and House Financial Services Committee members in which legislators were embedded. The study examines the way interest groups affect how members of Congress form mental maps surrounding policy issues, using cutting edge methods in social network analysis and semantic network analysis. The dissertation follows Olson (1982) and Madison (1784) in placing interest group politics at the center of American policymaking. But it attempts to adjudicate between models in which members are “bought” due to campaign contributions, models in which members attract resources from their ideological allies, and
models in which they are persuaded by moneyed interests who tend to have the most access to them.

Second, this dissertation focuses on congressional committees as the key access point for interest groups. This choice is grounded in the assumption that credibility and mutual trust between interest groups and members of Congress are more likely to be apparent in committees than elsewhere in the legislative process (Berry and Wilcox, 2009); and that members of Congress in the full chamber tend to take their cues on specific issues from committee members (Smith, 1984).

Third, the dissertation attempts to control for members’ pre-existing ideologies in measuring interest group influence. This was necessitated by research from the pluralist school that indicates policymakers themselves can sometimes be the mobilizing force for interest group activity, reversing the flow of influence so that it may run from the policymaker to the interest group (Dahl, 2005). Paper 1 attempts to control for this possibility by incorporating an ideological index in a matched-pairs design, and a co-voting index as a regressor in a network regression model.
The units of analysis in paper 1 are individual dyadic relationships between members of Congress and interest groups. Pluralist research and public choice research indicates that much information is lost when we collect data only at the party level, or assume elites operate as a monolith. Collecting data at the dyadic level enables the study to examine variation in the way members of the same political parties interpret policy problems and who they were likely meeting with when they were thinking through the policy problems. Examining the landscape of interest group donors as part of a social network that extends through congressional committees enables the study to measure influence with satisfactory precision, and to examine, to some degree, the question of where policy ideas come from.

Paper 2 focuses on the relationship between industry complexity and the demand for lobbyist expertise, which has implications for understanding the basis of power for the so-called managerial class identified by elite theorists. Ideas regarding the technical complexity of policymaking that are taken for granted by some scholars of interest group politics (Berry and Wilcox, 2009) are empirically tested for the first time, and the first theoretical model of interest group influence that incorporates this factor is proposed.
Finally, Paper 3 tests theories of vote-buying against access-based theories. The research design is similar to that of Paper 1, but the analysis compares large financial contributors to interest groups who achieve access without making significant financial contributions.
CHAPTER III

Paper 1:
Legislative Subsidy or Belief Diffusion? The Battle Over Housing Finance in the run-up to the Financial Crisis

Abstract

In 1989, Berry and Wilcox argued that the combination of America’s two party system, the 1960s decline in party organizations, and the 1974 changes in election law had placed interest group politics at the center of American policymaking. However, the evidence of any causal chain flowing from interest group donations to legislative votes remains enigmatic. Interest groups tend to support members whose roll-call votes are already predictable on the basis of ideology, which we would not expect in vote-buying scenarios. Some of this evidence suggests interest group resources simply provide a legislative subsidy to supportive members. On the other hand, much interest group influence occurs at the committee level, where members may self-select into smaller components of the ideological spectrum. Such scenarios might lead researchers to underestimate interest group influence. On either side, little of the existing literature addresses whether interest groups affect the way members understand and interpret

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4 An earlier version of this paper was prepared for delivery at the 2014 Annual Meeting of the American Political Science Association (APSA).
policy-relevant information; it does not address whether interest groups affect the way members think about policy issues.

This paper suggests a key mechanism for interest group influence is in the opportunity for donors to frame information and dominate the belief diffusion process in congressional committees. I develop hypotheses around the impact of interest group access on belief diffusion in a committee-level social network. I then use social network analysis and semantic network analysis to determine whether members with the same interest group donors develop statistically similar cognitive maps with respect to a complex policy issue. The study focuses on the 2000-2008 debate on reforming the regulatory structure for Fannie Mae and Freddie Mac, which ended in one of the largest financial bailouts in American history.

**Keywords**: interest groups; social network analysis; Government-Sponsored Enterprises; GSEs; Fannie Mae; Freddie Mac; congress; financial crisis
Introduction

This study tests whether interest group access changes the mental maps members of Congress use when they speak. The study examines hearings on the structure of the American housing finance system prior to the Financial Crisis of 2008. It focuses on the debate over the regulatory structure for Fannie Mae and Mac, a movement known as Government-Sponsored Enterprise (GSE) Reform. This debate ended with the passage of the Housing and Economic Recovery Act of 2008 (Pub. L. 111-289). The research question is “Does interest group access alter the ideas that members of Congress connect when they speak?”

The politics of housing finance has been described by former Treasury Secretary Henry Paulson as a “holy war.” The narratives are technically sophisticated. The donation levels are high, but equally important, the level of resources devoted to direct lobbying are usually the highest or second highest among all industries every year (Center for Responsive Politics, 2012). Between 1998 and 2012, lobbying expenditures in the finance, insurance, and real estate sector (F.I.R.E.) totaled $5.1 billion; more than the defense, oil, and telecommunications industries combined (Ibid., p.1). In housing finance, the business of convincing government decision-makers is undertaken with professional caution, and the infighting between institutions is conducted on the grandest of stages.
On GSE Reform, the policy debate in the Congress focused on the GSEs’ retained portfolios and the restrictions surrounding a proposed affordable housing fund. Ironically, the GSEs became undercapitalized shortly thereafter (see Figure 1). The GSEs would require a capital injection from the Treasury of $189 billion, one of the largest bailouts in American history. Moreover, the losses in the GSEs’ portfolio business were marginal ($-3 billion), while the losses in their guarantee business were exorbitant ($-201 billion) (Table 1). They were the result of credit risk, which arises from defaults in the guarantee business, not interest rate risk, which arises from mismatched asset-liability maturities in the portfolio business. In hindsight, the policy debate focused on policy issues that would prove not to be the determinants of the GSEs’ failure.

Figure 1. Stock Price of Fannie Mae
The GSE Reform debate is a fascinating case for the study of interest group influence. Many different types of financial institutions coordinate and compete in the secondary housing market. The types of financial instruments that were implicated in the Financial Crisis of 2008 had their predecessor in mortgage-backed securities that were developed by Fannie Mae and Freddie Mac. And many neighborhood groups and affordable housing organizations have historically participated in GSE Reform debates. Further, the policy problems are just as complex as the political landscape. This complexity of the policy content enables us to examine, to some extent, how members of Congress think through policy problems.
**Interest Group Politics**

Research on interest group politics tends to fall into one of three competing streams. The first stream suggests interest group influence is transactional. According to this stream, interest groups provide campaign contributions in a quid pro quo for votes (Austen-Smith, 1996; Morton and Cameron, 1992). However, the causal mechanism that links campaign contributions to roll-call votes has not been firmly established. If interest groups were simply purchasing votes, we would expect to see them focus their campaign contributions on moderates, using their donations to persuade the most persuadable members on individual pieces of legislation (Koger and Victor, 2009).

The second stream of research focuses on the empirical finding that interest groups tend to funnel their donations to members that already agree with them on an ideological basis, and tend to avoid their political adversaries (Ibid., p. 2; Baumgartner and Leech, 1998; Hojnacki and Kimball, 1998). Some studies in political economy posit that these interest groups are, in fact, subsidizing the legislative and campaign operations of the members that are already their political allies (Hall and Deardorff, 2006; Hall and Wayman, 1990). A member’s staff may be too small or too inexperienced to effectively deal with the full range
of complex issues the member is presented with. He or she can rely on the
interest group’s staff to do the heavy lifting. Providing reinforcements in this
manner is strategically different from using money to sway a member. However,
competing research suggests these studies focus on the wrong level of analysis
because most interest group influence occurs at the committee level, where
members self-select into smaller components of the ideological spectrum. It is
suggested that this self-selection is responsible for the appearance that interest
groups are not supporting “fence-sitters” that we observe in studies that focus on
members’ ideologies relative to the entire chamber. This literature suggests there
are many “fence-sitters” within the different stages of the committee process who
are only loyal partisans relative to the full spectrum of ideological preferences
represented in the chamber (Wright, 1990; Kollman, 1997).

The third stream of research suggests campaign contributions are investments in
long-term relationships, and those relationships are the foundation of lobbying.
Instead of purchasing votes, lobbyists are investing in access, which provides
them the opportunity to provide information, advice, research, and advocacy
(Koger and Victor, 2009). Its chief proponents suggest campaign contributions
are merely concrete manifestations of these multidimensional relationships
(Ibid., p.2). This research stream draws on ideas that were suggested as far back
as Berry and Wilcox (1989), but increasingly draws upon more rigorous methods such as social network analysis and computational science. Evidence in support of this view has been produced during various periods in Truman (1951), Milbraith (1963), Ainsworth (1993), and Browne and Paik (1993). The main idea is that access and information-sharing are at the center of lobbying, and the causal mechanism that links campaign contributions to roll call votes may go through the access and information-sharing channel. Indeed, Berry and Wilcox suggest the power of a lobbyist lies in his ability to create a dependency among members of Congress for the information that he provides (Berry and Wilcox, 2009). The issues that congressmembers are faced with are too technically complex for them to figure out on their own. If a lobbyist provides useful information to a member in one scenario, that member may be likely to tap the lobbyist for information in the future. Along the same lines as this research, Koger, Noell, and Maskett (2009) introduce the concept of extended party networks (EPNs) in which a key function of interest groups is to funnel information toward formal political parties.

Within the three streams, little of the literature addresses whether interest group access changes the way members understand and interpret policy-relevant
information. It does not focus on establishing whether members see policy problems through the frames deployed by interest groups. This paper investigates this question by drawing upon theoretical concepts and research techniques that are prominent in the literature on belief diffusion. Through focusing on the different mental maps members of Congress use, it provides evidence on the intermediate relationship needed for diffusion-based theories of interest group influence to have a convincing causal chain.

Much of the research on belief diffusion is grounded in logical deduction, mathematical sociology, and simulation (Carley, 1991; Chang and Harrington, 2005; Deffaunt et al., 2000; Pfeffer and Carley, 2013). The research focus is usually on identifying algorithms that might guide purposive behavior among individuals, and modeling the outcome as the cumulative result of those individuals interacting. The most rigorous research has used quasi-experiments (Lazer et al. 2010; Schreiber and Carley, 2007), and case studies (Carley, 1990) to empirically validate the models, but some of the empirical studies either place the subjects in trivial decisionmaking contexts, or measure only the variables that are the most conducive to quantification. These characteristics of the data and the research setting place the researcher in a situation that is not ideal. When the decisionmaking context is trivial, the inferences drawn may be ungeneralizable
to everyday contexts. When the studies measure only the data that are most easily quantified, the researcher may be forced to base their conclusions on observations that are several degrees removed from direct observation of the belief diffusion.

This paper uses semantic network analysis of congressional hearing transcripts. Semantic network analysis provides an opportunity to directly observe belief diffusion. The word associations that individuals invoke to explain a policy issue may reveal the causal explanations that are prominent in their minds when they think about the policy issue. In this respect, some researchers view semantic networks as cognitive maps or mental maps (Carley, 1997; Chan et al. 1993; Jones et al., 2011). These mental maps can be compared from person to person to reveal differences in the cognitive frames individuals are using. The advantage over traditional content analysis is that semantic network analysis allows the researcher to measure how closely the subject associates certain terms with each other in their descriptions of causal processes.

The idea of using semantic networks to understand beliefs comes from the notion that individuals “use mental models to make decisions rather than simply evaluating alternatives” (Carley and Palmquist, 1992). This notion comes out of
work in cognitive science and artificial intelligence (Anderson 1996; Newell 1990; McClelland and PDP Research Group 1986), as well as a sociological literature that suggests individuals use “schemata” or “frames” (Goffman 1974; Johnson-Laird 1983; Fiske and Taylor 1984). The link between mental models and semantic networks is in the connection between language and mental models. This connection has been argued in Carley and Palmquist (1992), Vgotsky (1978), and Luria (1978, 1981). The argument is that language mediates the development of mental models, allowing the researcher to study language to build representations of mental models. The network form of language-based representations of mental models is grounded in research on conceptual structures (Sowa, 1984), schemata (Rumelhart and Ortony, 1976), structured frames (Charniak, 1975; Minsky, 1975), decision networks (Axelrod, 1976), and semantic nets (Schank and Colby, 1973). However, semantic networks are not an exact mapping between an individual’s thoughts and the language they use. They provide a sample of an individual’s thinking and enable researchers to compare mental models systematically (Carley and Palmquist, 1992).

Framing
This paper suggests policy beliefs move from interest groups through committees via frames. Goffman describes frames as “schemata of
interpretation.” They are “the means by which we interpret the meaning of events” (Goffman 1974).

In public policy, frames function as mental maps that orient the audience to the policy problem. The simplest policy issues only require an interest group to convince a member of one policy position. However, the most complex policy issues require the penetration of a policy-specific organizing principle so members can take positions on a range of subquestions that arise. For example, if an interest group can convince a member of Congress that interest rate risk is the key risk that government-sponsored financial institutions face, then it becomes easier to nudge that member toward focusing his reform effort on curtailing the GSEs’ retained portfolios.

The most effective frames are grounded in deep narratives that have a basis in lived experience or historical memory (Lakoff, 2009; Vucetic, 2008). Deep narratives are aphoristic truths widely accepted within a society that run deeper than one’s orientation toward any specific policy issue. Lakoff provides the example of “evolutionary competition,” a term that enables human beings to access a narrative associated with natural selection, in which competition driven by self-interest enables the best-adapted species to survive. When this deep
narrative is applied to economic behavior, it suggests a struggle for resources based on self-interest is the natural order. The deployment of that frame inhibits competing frames; it makes arguments based on mutuality and interdependence less accessible. This deep narrative is especially relevant in economic policy discussions. For example, if one were to argue that “a free market approach to housing policy based on private competition would maximize wealth for the society,” the argument would be more accessible than the argument that “the absence of standardization of mortgage products could lead to a decline in home equity.”

The prominence of a deep narrative can make a person predisposed to absorb certain policy-specific frames. They may nudge the person toward developing certain smaller mental maps. If this process is successful, the mental map can be applied to more specific issues, where the conclusions become fait accompli. Along these lines, the legendary lobbyist Jack Abramoff stated the following in an interview.

“…Lobbyist forces come to play in virtually every bill and every little component of the bill… I think in that regard, congressmen are doing things they generally believe in… We try to show them where they are headed in a general direction, move them a little bit, get them to focus more on one aspect… That’s where the real power is” (Abramoff, 2013).
Framing Examples from the GSE Reform Debate

This section provides a few examples that demonstrate the sophistication of the frames interest groups used in the GSE Reform Debate. Some of the groups fell squarely into pro-reform and anti-reform camps. The key anti-reform groups tended to use similar frames. Fannie Mae, Freddie Mac, and the National Association of Homebuilders (NAHB) typically used frames that were family-oriented, drawing a connection between the family, the home, Fannie Mae, and Freddie Mac. For example, the NAHB wrote to its members that its “messaging architecture” was “designed to engage people’s emotional connection to homeownership, drive home the importance of home building as an engine of job growth, and spur positive action to defeat…threats.” (NAHB, 2011). On one hand, this frame invoked a social egalitarian narrative, placing Fannie Mae and Freddie Mac squarely on the side of the middle class and the low-income families that aspire to the middle class. On the other hand, it invoked a familial narrative, associating the companies’ activities with strong family values.

Challenges to the GSEs were framed as a challenge to the 30 year fixed rate mortgage, and Fannie Mae frequently referred to the high number of adjustable-rate loans above the GSEs’ conforming loan limits as evidence that the GSEs were
defending the fixed rate mortgage. The GSEs’ characterization of their critics’
reform efforts conjured up an image of a housing market in which the common
person could not afford a single-family home without the GSEs:

Franklin Raines: “When Fannie Mae was first created in 1938, the 30-year fixed
rate mortgage was little more than an idea...Last year in the United States, 83
percent of residential mortgages had fixed rates...By contrast, in Canada
borrowers can get a fixed rate for only the first one to five years, and face a
prepayment penalty equal to 3 months interest. And in Spain only about 10
percent of the market is fixed rate. In Germany, the typical downpayment is 35 to
40 percent, and in Japan homebuyers have to put down 50 to 60 percent...Why
are low down payment fixed rate prepayable mortgages so common here and a
rarity elsewhere?...The GSE model has succeeded where other nations have
failed...” (Raines, 2002).

Other frames were prominent among pro-reform groups. One of the key frames
pro-reform groups used suggested the interest rate risk of the GSEs’ retained
portfolios was the most important risk they faced, and the credit risk of their
securitization business was not as significant. This frame was grounded in a
narrative that governmental institutions had a poorer management quality
compared with private banks and therefore the GSEs could not handle the
complexity of hedging interest rate risk. Peter Wallison, a former co-director for
the American Enterprise Institute’s Financial Deregulation Project, frequently
deployed this frame:

“The principal risk of the GSEs is what is known as interest rate risk, and comes
from the fact that they have borrowed over a trillion dollars in order to buy and
hold a portfolio of mortgages of roughly the same size. If interest rates rise or fall
sharply, they can suffer huge losses... To be sure, interest rate risk can be hedged—the risk can be shared with or transferred to others through various kinds of derivatives such as interest rate swaps. But swaps and other hedges are expensive, and ... a GSE will not completely hedge its risk... Of the two, interest rate risk is far more significant” (Wallison, 2006).

This frame appeared in several statements from Rep. Richard Baker, the former chairman of the Capital Markets, Insurance, and Government-Sponsored Enterprises Subcommittee.

Baker: “Fannie and Freddie have to make very sure that they hedge against those downturns in interest cost because it has direct impact on their spread... They do this by using derivatives. Also issuing callable bonds that can be bought back before maturity, thus allowing them to pay, freeing them from the higher interest rate exposure and allowing them to issue replacement debt at the lower market rate... However, this means that they have to get their derivatives distribution exactly right... So the point is I think I understand this. There is a subsidy. It is handed off to the corporations in the form of benefits guaranteed by the taxpayer and it’s all just ducky as long as we remain profitable. Get a business reversal, a Jimmy Carter 21-percent interest rate, and hang onto your hat” (Baker, 2001).

The particular form the GSEs’ failure took in 2008 contradicted that frame. The GSEs suffered over $200 billion in credit losses in their Single Family Credit Guarantee Segment and only $3 billion in their Investment and Capital Markets Segment between 2008 and 2Q 2011 (FHFA, 2011). These transcripts elucidate the possible ways in which ideas may flow from interest groups to members of Congress, but a more systematic way of analyzing them is necessary to make empirical statements about the process.
Data

This study used campaign contributions as an indicator of access to members of Congress. This data was collected from the Center for Responsive Politics. Campaign contributions included donations to campaign committees and leadership PACs for each member of the House Financial Services Committee. Links from organizations to members of Congress were drawn if the organization contributed at least 1 percent of the member’s total amount of election cycle fundraising.

Lobbying Disclosure Act (LDA) data were used to determine which organizations lobbied on GSE Reform. This data was collected from the issue field in the organizations’ LDA forms.

Hearing transcripts were used to build semantic networks or “mental maps” for each member. The transcripts were collected from the Government Printing Office’s fdsys online repository. The transcripts were collected for each Financial Services Committee hearing in which the terms “Government-Sponsored Enterprises,” “GSEs,” or “Fannie Mae and Freddie Mac,” and “policy” or

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5 For evidence on the relationship between text and voting records, see Laver, Benoit, & Garry (2013), Grimmer and Stewart (2013), and Beauchamp (2011).
“regulation” or “reform” appeared in the title. Fourteen hearings were held on GSE Reform from 2000 to 2007, when the committee held its final GSE Reform hearing prior to the passage of the Housing and Economic Recovery Act of 2008.

Poole and Rosenthal’s lifetime first-dimension NOMINATE scores were used to match each dyad in the donation networks to a control. This data was taken from the Voteview website (Carroll et al., 2013). NOMINATE scores are discussed in more detail in the methodology section.

This type of data cannot definitively establish a causal relationship, as there was too much attrition on the House Financial Services Committee to conduct a panel study. They can only establish a statistical association, and suggest a theory to explain the association. The methods then control for specific possibilities for endogeneity that are reflected in the members’ voting records.
Methodological Overview

Social networks were constructed for the set of members on the House Financial Services Committee and the organizations that provided campaign contributions to them. Two-mode directed graphs were produced for the percentage of each member’s donations that came from each organization in each election cycle. Figure 1.2 shows a directed graph from the 109th Congress. Here we see the highest outdegree among a set of trade associations: the American Bankers Association, the National Association of Homebuilders, and the National Association of Realtors. This indicates that these three groups had the highest level of weighted contributions to the most members. We also see high outdegree among two individual banks: J.P. Morgan Chase and Bank of America. The J.P. Morgan Chase case is interesting because the bank was a member of FM Watch, a front group for financial services companies that disbanded immediately after the 2008 GSE Reform bill was passed (Story, 2011).
The networks were transformed into one-mode graphs by computing a Pearson Link Correlation between every set of incoming links. The link weight indicates the strength of the correlation between each member’s set of interest group donors (Figure 1.3).
The members’ first dimension NOMINATE scores were included as node attributes in order to develop matched-pairs. This enables us to test our hypothesis (that interest groups influence members’ mental maps) against the claim in the legislative subsidy literature (that the correlation between campaign contributions and voting behavior is due to interest groups channeling resources
to members whose pre-existing ideologies are favorable to the group). Each matched pair was developed by replacing one node in each dyad with the member that had the nearest NOMINATE score among all members present at the hearing. For example, in Figure 1.4 (Next Page), members A and B are linked by a common interest group donor and their NOMINATE scores are shown below the nodes. To determine whether the interest group donor could have influenced these members’ mental maps, we would compare the semantic networks of members A and B, but would need a control. The control could include members A and C, members A and D, or members A and F. Since member F has the closest NOMINATE score to member B, the ideological distance for the A-F pairing is closest to the ideological distance for the A-B pairing. To understand how similar are the mental maps of members A and B, we would compare the similarity between their mental maps to the similarity between the mental maps of members A and F.

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6 Sinclair et al. (2011) dispute the assumption in the NOMINATE methodology that members maximize utility based on pre-existing ideological preferences. However, they concede that NOMINATE scores are “the best means available” for “estimating the ideological predilections of legislators using observable public information” (Ibid., p.4). The methodology incorporated here provides information on the significance of social influences when we control for NOMINATE scores.
This process produced controls for each case in which the ideological distance for the control was as close as possible to the ideological distance in the dyad among all possible combinations of two members. The mean ideological distance for the dyads was 0.54. The mean ideological distance for the controls was 0.53.

A Correlated Topic Model was used to produce topical probability distributions for each member based on word co-occurrence (Blei and Lafferty, 2007). Similarity in the probability distributions was measured by Inverse Hellinger Distance (Ibid., p. 28). These concepts are discussed in more detail in the next section. The similarity metrics for each dyad were compared to the similarity metrics for its matched control. A non-parametric test (Wilcoxon Signed-Rank) was used to test whether the similarity metrics for the dyads were statistically greater than the similarity metrics for the controls. Equation 1 illustrates how the
Wilcoxon Signed-Rank Test is performed. All of the differences between the test dyads and the controls are placed in a single series and ranked by their absolute value. The sign of the difference is multiplied by the rank. The sum is the Wilcoxon statistic ($W$), and $W$ is used to compute a z-score.

Equation 1.

Wilcoxon Signed-Rank Test\textsuperscript{7}

$$W = \sum_{j=1}^{N_r} r_j = (\text{sum of ranks for } + \text{ signs}) - (\text{sum of ranks for } - \text{ signs})$$

Where $W =$ The Wilcoxon Statistic

$N_r =$ Number of Matched Pairs

$r_j =$ the signed rank for each matched pair

for $j = 1, 2, \ldots, n$

The advantage of the Wilcoxon Signed-Rank Test over other tests is that it is robust to non-normal distributions of the similarity metrics and assumes dependency between the test dyads and controls.

Semantic Network Analysis Based on Windowing

This section introduces mental mapping through the concept of windowing to lay the conceptual groundwork for the more advanced techniques used in this study. Windowing is the simplest form of cognitive mapping. In windowing, the links for the semantic network are generated based on word co-occurrence, which indicates how closely different concepts are invoked in the text. This requires the researcher to determine a window for the maximum number of sentences or the maximum distance between words, within which all of the words can potentially be linked. Windowing produces cognitive maps in which the links indicate word co-occurrence, and the edge weights indicate the number of times the word-pair occurred. Figure 1.5 displays a cognitive map developed based on windowing (Next Page). Here, Rep. Richard Baker (R-LA) associates the GSEs with the interest rate risk of their retained portfolios and the capital requirements of the GSEs vs. fully private banks. The word co-occurrence concept inherent in these types of cognitive maps forms the basic premise of more advanced types of cognitive maps.
Figure 1.5. Semantic Network Based on Windowing
Richard Baker (R-LA)
Semantic Network Analysis Based on Correlated Topic Modeling

The Correlated Topic Model (CTM) was developed by Blei and Lafferty (2007) as part of a family of probabilistic models developed to find latent topic structure in texts. In CTM, probability distributions based on word co-occurrence are used to understand the topic structure. CTM models each topic as a distribution over words, and each document as a distribution over topics. Each word is assigned to each topic with a different probability, and each document is assigned a set of topic proportions. The main idea is that latent topics produce a mixture of words that we observe in the text.

Correlated Topic Models were developed to overcome statistical problems with Latent Dirichlet Allocation (Blei, Ng, and Jordan 2003; Blei and Lafferty 2007). The main issue was that LDA assumes statistical independence between topics, which is an unrealistic assumption in most document collections (Ibid., p. 21). In other words, LDA could not cleanly model cases in which the use of one topic was associated with the use of another topic. Blei and Lafferty provide evidence that Correlated Topic Models perform better than LDA-based models with smaller amounts of text.
This study used QuickTopics, a CTM written by Beauchamp (Beauchamp, 2014). Each hearing was modeled as a set of documents, and the words spoken by each member were modeled as the documents. The CTM produced a mental map, a word distribution for each topic, and a set of topic proportions for each word (Figure 1.6). The CTM, as with any form of artificial intelligence, cannot distinguish between cases in which someone’s speech represents what they think...
and cases in which they are managing their image. This could be problematic for modeling legislators, though it is probably a problem for any type of data in which the subjects are legislators. Further, for the CTM to find similar statistical results between legislators, members (or their staffs) would have to understand the arguments they are using rather than merely use words with the same frequency as others. This is because the probability distribution on the entire set of topics has to be similar, and the topics have to be constructed the same.

Each member has a unique topic distribution, and the difference between their topic distributions can be measured by Hellinger Distance (Blei and Lafferty, 2007). Hellinger Distance measures the difference between two probability distributions. For each topic, the square root of the member’s topic proportion is subtracted from the square root of the second member’s topic proportion. The square root of the sum of the squared values is the Hellinger Distance (Equation 2).
Equation 2.

\[ H = \sqrt{\sum_{k=1}^{k} (\sqrt{x_k} - \sqrt{y_k})^2} \]

Where \( H \) = Hellinger Distance

\( x \) = the probability of topic \( k \) for the first member’s probability distribution

\( y \) = the probability of topic \( k \) for the second member’s probability distribution

for \( k = 1, 2, \ldots, n \)

The Hellinger Distance is normalized by dividing by \( \sqrt{2} \), which makes the value fall between 0 and 1 (Mitchell, 2012).

\[ H_{Normalized} = \frac{H}{\sqrt{2}} \]

This value is subtracted from 1 to indicate the level of similarity between the members’ texts.

**Results. Mental Maps Differ by Interest Group Donations**

The Wilcoxon Signed-Rank Test was statistically significant at a significance level of \( p < 0.05 \) (Table 1.2). This indicates that members’ mental maps vary by the
landscape of interest group donations they receive. Put differently, members who receive similar interest group donations have similar mental maps. The similarity metrics also increased over time in years in which multiple hearings were held (Figure 1.8). The match-paired design indicates this pattern is not an artifact of members with similar NOMINATE scores attracting similar donors as the legislative subsidy literature suggests.

Table 1.2.
Wilcoxon Signed Rank Test on Inverse Hellinger Distance Test Dyads vs. Controls

<table>
<thead>
<tr>
<th></th>
<th>Sum for Positive Ranks</th>
<th>Sum for Negative Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>1,710**</td>
<td>4,730</td>
</tr>
<tr>
<td>z</td>
<td>2.13</td>
<td></td>
</tr>
<tr>
<td>Nr</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td>σ_w</td>
<td>802</td>
<td></td>
</tr>
</tbody>
</table>

Note: *p < 0.1, **p < 0.05, ***p<0.01

Figure 1.7 displays an example of the pattern (p. 68). The icons represent the members’ topic distributions and the link weights indicate the correlation in their interest group donations. The link IDs indicate the set of interest group donors the pair of members has in common. We see that Baker and Oxley have the most similar set of interest group donors and similar mental maps. They both have a probability of about 0.4 on topic 2, which connects “portfolio” with “risk.” This
topic identifies the interest rate risk of the GSEs’ retained portfolios as their principal risk, invoking the same argument used by Wallison (p. 50). Baker and Oxley also have similar probabilities on topics 3 and 5. We also see that the members who are not linked by interest groups tend to have different mental maps. Here, the similarity between mental maps is increasing with the donation link weight for several of the dyads.
Figure 1.7.
Donation Network and Members’ Probability Distributions by Topic
April 13, 2005 Hearing
One might be interested in whether the results are sensitive to methodology. An alternative model was produced in which Agreement scores (Victor, 2013) were used instead of NOMINATE scores. A same-state adjacency matrix was used to control for the possibility that members were simply advocating for their districts. And the members’ link patterns (non-zero and zero links) were used instead of the Pearson Correlation. As an alternative to the matched-pairs design, a Multiple Regression Quadratic Assignment Procedures Test (MRQAP) was used. MRQAP uses permutation sampling to conduct hypothesis tests that hold up under the assumption of network interdependence. At each permutation, the node positions are shuffled to provide the complete distribution of possible test statistics for the association between the set of dependent and independent networks under the null hypothesis that the links in the dependent network had appeared randomly in the independent networks. That null distribution accurately represents any form of interdependence inherent to the network (Mantel, 1967; Krackhardt, 1988; Dekker et al., 2007).

The results show that in the GSE Reform Debate, the Interest Group Link Pattern is a significant predictor of Hellinger Similarity, at a significance level of <0.001 (Table 1.3). The Agreement Score was also significant. Same state is initially
significant in the QAP correlation, but drops out when we control for the Interest Group Link Pattern and the Agreement Score. The R-squared value for the model is 0.59. This suggests that when we approach the question with a different methodology, committee members’ mental maps still differ by the landscape of interest groups that donate to them. We see robustness in the data to methodological triangulation.

Table 1.3.

<table>
<thead>
<tr>
<th>Dependent Variable: 1-Hellinger Distance</th>
</tr>
</thead>
</table>

**QAP**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Coefficient</th>
<th>Sig. Y-Perm</th>
<th>Sig. Dekker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Group Link Pattern</td>
<td>0.633***</td>
<td>0.149</td>
<td>0.000</td>
</tr>
<tr>
<td>Agreement Score</td>
<td>0.766***</td>
<td>0.656</td>
<td>0.002</td>
</tr>
<tr>
<td>State</td>
<td>-0.035***</td>
<td>-0.004</td>
<td>0.378</td>
</tr>
</tbody>
</table>

**MRQAP**

<table>
<thead>
<tr>
<th>R-sq. = 0.597</th>
<th>Standardized Coefficients</th>
<th>Sig. Y-Perm</th>
<th>Sig. Dekker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.008***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Group Link Pattern</td>
<td>0.004***</td>
<td>0.149</td>
<td>0.000</td>
</tr>
<tr>
<td>Agreement Score</td>
<td>0.403***</td>
<td>0.656</td>
<td>0.002</td>
</tr>
<tr>
<td>State</td>
<td>-0.008</td>
<td>-0.004</td>
<td>0.378</td>
</tr>
</tbody>
</table>

Y Permutations = 1000

Note: *p<0.05, **p<0.01, ***p<0.001
Ideally, the similarity metrics for each dyad would have also been tracked longitudinally over the entire period of study. However, there was too much attrition on the Financial Services Committee to produce complete longitudinal similarity metrics for the dyads. In some years, the Financial Services Committee held multiple hearings on GSE Reform. Similarity metrics by trend were produced for those years. In three of the four years, there was an upward trend (Figure 1.8).

![Graphs showing Median Inverse Hellinger Distance by Date Years with Multiple Hearings](image-url)
Mental map similarity may also reveal something about the relevant conceptual framework for understanding this network. Figure 1.9 displays a social network from June 25, 2003 in which the members are linked by mental map similarity. We see a core group of members who had a higher number of strong semantic links to other members than the rest of the network. Within this core, Baker, Oxley, and Ney are Republicans; Kanjorski, Clay, and Maloney are Democrats. With the exception of Chairman Oxley, all of these members scored highly in information centrality. Information centrality extends the concept of betweenness centrality on geodesics to all possible paths, weighting according to the information the paths contain (Wasserman and Faust, 1994). This metric captures the reality that information often travels on more circuitous routes than shortest paths. If those in the core of a semantic similarity network tend to score highly in information centrality, this may mean these nodes contain more information than others and that information enables them to affect which topics other members discuss. This may reinforce the view that information and belief diffusion is the relevant conceptual framework for understanding this network.\(^8\)

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\(^8\) See Wasserman and Faust (1994) pp. 194 for a discussion of the mathematics underlying information centrality.
Figure 1.9.  
Social Network of Inverse Hellinger Distances  
June 25, 2003  
Cutpoint < 0.3

Table 1.4.  
Top 10 Members in Information Centrality  
June 25, 2003

<table>
<thead>
<tr>
<th></th>
<th>Scaled</th>
<th>Unscaled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baker</td>
<td>0.074</td>
<td>1.718</td>
</tr>
<tr>
<td>Clay</td>
<td>0.074</td>
<td>1.710</td>
</tr>
<tr>
<td>Castle</td>
<td>0.069</td>
<td>1.589</td>
</tr>
<tr>
<td>Kanjorski</td>
<td>0.068</td>
<td>1.580</td>
</tr>
<tr>
<td>Bachus</td>
<td>0.066</td>
<td>1.516</td>
</tr>
<tr>
<td>Miller</td>
<td>0.065</td>
<td>1.504</td>
</tr>
<tr>
<td>Maloney</td>
<td>0.065</td>
<td>1.492</td>
</tr>
<tr>
<td>Ney</td>
<td>0.062</td>
<td>1.428</td>
</tr>
<tr>
<td>Harris</td>
<td>0.061</td>
<td>1.418</td>
</tr>
<tr>
<td>Ose</td>
<td>0.054</td>
<td>1.255</td>
</tr>
</tbody>
</table>
Conclusion

These findings likely indicate that one channel through which interest group influence operates is through affecting the mental maps committee members use to understand policy problems. Though they cannot definitively establish causality, they are suggestive. Congressmembers tend to share mental maps with other members who have a similar landscape of interest group donors. This pattern holds when we control for their personal ideological preferences, to the extent we can. We do not know if these results are generalizable to other policy issues. However, the theory suggests this pattern would be expected in scenarios in which the policy issue is complex. One direction for future research might focus on investigating the generalizability of the findings. Future research might also focus on the next link in the causal chain: the link between mental maps and votes.
CHAPTER IV

Paper 2:
Explaining Variation in the Demand for Interest Group Information in the Congress: The Effects of Industry Complexity and Cognitive Demand

Abstract

The legendary lobbyist Thomas Boggs, Jr. passed away in 2014. Boggs famously argued that congressional staffs are overworked and underpaid, suggesting their inability to provide important policy information to their members creates an environment in which “facts are the first source of a lobbyist’s power.”

Research on interest group influence tends to focus either on the impact of their campaign contributions, the resources they provide to supportive members, or the persuasive power of the information they provide. Within this literature, few studies have investigated the factors that generate the demand for interest group information, and even fewer have provided any empirical evidence on the matter.

This study examines lobbying activity across thirty-two industries using OLS and negative binomial models. The results suggest the complexity of the industries the
Congress must regulate is a key determinant of congressmembers’ demand for interest group information and expertise.

To date, complexity has only been formally addressed through the lens of disturbance theory. However, while disturbance theory posits that complexity is part of the answer as to why groups form, this literature does not address the impact of complexity on why members of Congress turn to interest groups for information. Further, the definition of complexity used by Truman and others focuses on the growth of new interests created by the division of labor. This definition does not capture important features of the “complicatedness” of an industry, or the cognitive demand involved in understanding the industry. When complexity is defined as cognitive demand, a strong relationship is observed between complexity and the number of lobbyists who gain access to the Congress. This relationship holds when we control for industry size in terms of gross output and total employees.

I propose that complexity is one of the key factors that creates the opportunity for interest groups to frame policy problems and influence the policy beliefs of members of Congress. I observe the highest levels of complexity in the healthcare, finance, and communications & electronics sectors.

**Keywords:** Congress; interest groups; complexity; cognitive demand; belief diffusion; lobbying
Introduction⁹

On April 27, 2010, the Senate Homeland Security and Governmental Affairs Committee held a hearing on investment banks and the Financial Crisis of 2008. The Committee had summoned one of the biggest fish in the investment-banking industry, Goldman Sachs Chairman and CEO Lloyd Blankfein. After a profanity-laden diatribe by Sen. Carl Levin (D-MI), Sen. John McCain (R-AZ) attempted to question Blankfein on his firm’s role in the now-infamous ABACUS CDO deal. Toward the end of his time, it became clear that Sen. McCain did not understand the subject of the SEC’s investigation of the deal. McCain thought the problem was the fact that Goldman did not disclose to a client who took a long position (IKB Deutsche Industriebank) that another client (John Paulson) had taken a short position on the ABACUS CDO; but the subject of the investigation was that Goldman did not disclose that Paulson had played a role in selecting which mortgages would serve as the reference security to determine the CDO’s value. Then, the Senator confused the role of the portfolio selection agent with the role of a credit rating agency. McCain was flummoxed:

McCain: “Well, a lot of these things are fairly complicated, Mr. Blankfein, and a lot of Americans don’t understand what happened.” ¹⁰

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⁹ Portions of this paper were prepared for delivery at the 2015 Annual Meeting of the American Political Science Association (APSA).
McCain’s confusion illustrates one of the paradoxes of modern policymaking: those with the authority to legislate typically know less about the industries they are legislating for than the organizations they are tasked with overseeing. Paper 1 of this dissertation established that members of Congress subject themselves to interest group influence via frames that change the mental maps they use and set off belief diffusion processes. What is unknown are the factors that open them up to this influence. Campaign contributions play a role. However, if members of Congress wanted to continue to receive campaign contributions, they could receive them without changing the mental maps they use. This paper suggests the complexity of the industries the Congress must manage, and the cognitive demand involved in understanding them, is one factor that opens up members of Congress to interest group influence.11

Industries vary widely in the amount of focus and attention it takes to understand them. The concept of cognitive demand captures the mental strain


11 This study uses the common definition of complexity, Oxford Online Dictionary, http://www.oxforddictionaries.com (accessed Oct. 30, 2014) (defining complexity as “the state or quality of being intricate or complicated”).
placed on an individual engaged in monitoring or problem-solving. The most rigorous studies on cognitive demand come from applied psychology, organizational psychology, and neuroscience. Jackson et al. (1993) split the concept of cognitive demand into two components: *monitoring demand*, which refers to passive monitoring, and *problem-solving demand*, which refers to active cognitive processing. In a study of shopfloor employees in a chemical process manufacturing plant and a micro-electronics plant, Jackson and his colleagues measured cognitive demand through factor analysis of employee responses to survey questions. The questions that were statistically significant with regard to the two cognitive demand factors were:

- Does your work need your undivided attention?
- Do you have to keep track of more than one process at once?
- Do you have to concentrate all the time to watch for things going wrong?
- Do you have to react quickly to prevent problems arising?
- Do you have to solve problems which have no obvious correct answer?
- Do the problems you deal with require a thorough knowledge of the production process in your area?
- Do you come across problems in your job you have not met before?
Wall et al. (1996) found that occupations that placed a higher cognitive demand on the subject were associated with increased anxiety, a relationship which could be moderated by other factors such as decision latitude and timing control. Similarly, Humphrey et al. (2007) conducted a meta-analysis of 259 studies on work design, finding that most studies indicate high-complexity jobs tax the subject’s cognitive resources, resulting in overload. Miller and Cohen (2001) present a theory in neuroscience in which the part of the brain that is primarily engaged in these tasks is the Prefrontal Cortex (PFC). They mention that “[the PFC’s] wide-ranging inputs and intrinsic connections. . . provide a substrate suitable for synthesizing and representing diverse forms of information needed to guide performance in complex tasks,” an observation that was confirmed by previous brain-imaging studies involving subjects performing complex card-sorting and selective attention-based tasks (MacDonald et al., 2000). Nisbett (2009) also suggests high-complexity tasks are most likely to engage the PFC.

It is difficult to grasp just how complex some industries are. The typical financial institution has a team of specialists whose sole purpose is to manage credit risk, another whose focus is interest rate risk, another which manages counterparty risk, agency risk, and so on. Another team exists to execute their transactions.
Explaining something as ostensibly simple as how a dollar has been spent is not always a trivial matter. Even with all of this expertise, many of these institutions still failed in 2008.

It is almost facile to believe the average congressional committee member could come up with a bill regulating a product as complex as financial derivatives or health insurance on his own. At best, his staff will piece together components of several ideas originating from a combination of interest groups, committee staff, and regulatory agencies. At worst, he will let an interest group write the bill. Extant research indicates that members of Congress frequently do not read the bills that are passed (Curry, 2011). With small office staffs and committee staffs bolstered by a supply of interns, it seems unlikely that members of Congress could complete the work that needs to be done in complex industries without the assistance of interest groups.

Berry and Wilcox (2009) and Cigler (1985) mention the importance of complexity in understanding interest group influence, but the evidence presented in these and other studies amounts to an educated hunch. Building on the intuition
introduced in these studies, this paper suggests complexity is not peripheral, but central to understanding interest group influence.

**Theory**

The theory presented here begins with the understanding that the policy issues members of Congress are confronted with have varying levels of complexity. The higher the complexity, the higher is the cognitive demand placed on members of Congress and their staffs. The cognitive demand involved in lawmaking for any industry is, in part, a reflection of the cognitive demand involved in understanding that industry. Similarly, when we look at the work that an industry does, if industries that are more complex require more focus and information processing to understand them, then they will require employees that can handle higher levels of cognitive demand. As such, the cognitive demand involved in understanding any industry should be reflected in the intellectual backgrounds of its employees, on average. Industries with a higher percentage of employees with college and graduate level degrees would be expected to place a higher cognitive demand on their employees. Thus, we would expect the intellectual backgrounds of the employees in an industry to make the cognitive demand of policymaking in that industry discernible.
Within this context, this study imagines the proverbial “lobby,” where members of Congress and interest groups meet, as a marketplace of ideas. In this marketplace, members of Congress need more information and outside expertise when they are lawmaking in the most complex industries. As the cognitive demand increases, the demand for lobbyists should increase. We would expect to see this in the number of lobbyists per industry, conditional on the cognitive demand of policymaking in each industry.

The theory suggests interest group influence on the most complex policy issues operates through a different causal process than interest group influence on the simplest policy issues. On simple policy issues, legislative subsidy can predominate. Lawmakers can develop positions based on ideology and constituency preferences, and interest groups can provide resources to reinforce the legislative and campaign operations of supportive legislators (Figure 2.1).
Access plays a role in this model, but it is not central. It is the end result of a process set-off by the legislator’s characteristics.

In contrast, on complex policy issues, access is at the center of the influence process. The cognitive demand involved in understanding the policy issue sets off a search for information and expertise (Figure 2.2).
This search creates an opportunity for interest group access prior to the member’s development of a policy position. The mix of groups that obtain access is determined by a combination of campaign contributions, the member’s ideology, and constituency preferences. This access provides the opportunity to frame policy issues: to communicate which value choices are at stake; to determine which assumptions regarding the way the industry works are correct or applicable to a given situation; to determine which policy predictions are convincing, which data are relevant, and how the member can best achieve his or her own policy goals. Once the issue has been successfully framed, the member develops beliefs that structure how they make decisions and interpret
information on that policy issue. Lobbying is much more central to the influence process in the “complex issue” model. Therefore, we would expect to see a greater amount of professional lobbyists in complex industries than in simple industries.

This model suggests that at each level of complexity, there is a certain degree of reliance on interest groups that is intrinsic to the policy topic. If correct, this would not mean complexity is responsible for the dramatic rise in interest group influence in the United States over time; changes in campaign finance law have clearly been more consequential in that regard (Baumgartner, 2005; Berry and Wilcox, 2009). However, it might mean that the effects of proposals for campaign finance reform would be more consequential in determining the mix of interest groups that are granted access or the distribution of members’ time across interest groups than they would be in determining the aggregate extent to which congressmembers rely on interest groups on policy.
Data

Lobbying data for 2013 were taken from the Center for Responsive Politics. The Center for Responsive Politics collects the number of registered lobbyists by sector, the number of lobbyists by industry within each sector, and the number of revolving door lobbyists. The sample size (N=32) was toward the lower end of what is sufficient to assume a normal distribution of sample means in scenarios that rely on asymptotic theory. However, several diagnostic tests indicated the variable was distributed normally, which obviated this concern.\(^\text{12}\)

Educational data for each industry were taken from the Current Population Survey’s (CPS) Integrated Public Use Microdata Samples (iPUMS) Database. Education was used as a proxy for the cognitive demand of the work in each industry. The iPUMS Database tabulates the percentage of workers in each industry with 4 or more years of college, and the percentage with 5 or more years of college. This study focused on the percentage of workers with 5 or more years of college because this cutoff enables us to distinguish, to some degree, between workers with some graduate level training and those who only have undergraduate degrees. This distinction is particularly important for capturing

\(^{12}\) The sample size was based on the number of industries that could be crosswalked to their industry sectors in the Center for Responsive Politics data.
the cognitive demand in the medical professions, where a disproportionate percentage of the workers have graduate training (such as doctors and dentists), even though the percentage of workers with 4 years of college is unremarkable compared to other industries. The iPUMS Database was also used to capture industry size in terms of employees, and median income by industry.

Industry size was also measured in terms of gross output. This enabled the study to capture industry size in terms of how much revenue each industry produced. Gross output statistics by industry were taken from the Bureau of Economic Analysis (BEA) GDP by Industry Accounts, released on January 23, 2014. Gross output is defined as the sum of sales or receipts and other operating income, commodity taxes, and inventory change.¹³

The Center for Responsive Politics industry categories were matched to their corresponding Census Industry Codes to crosswalk between the iPUMS Database and the Center for Responsive Politics Database. The Census Industry Codes were then matched to their corresponding North American Industry

¹³ For the defense industry, total outlays from the U.S. Census were used because the BEA data does not make a clear distinction between defense and non-defense industries.
Classification System (NAICS) Codes to crosswalk between the BEA data and the Center for Responsive Politics Data.

Methodology

This study used Ordinary Least Squares (OLS) regression. The regression model type was selected based on the distribution of the lobbyists variable and the spread of residuals. Normal quantile plots (q-norm) and a standardized normal probability plot (p-norm) were used to visually inspect the degree of deviation from a normal distribution. In these plots, the degree of deviation from the reference line indicates the degree of deviation from a normal distribution.

A Shapiro-Wilk test and a Skewness-Kurtosis Test were used to determine the distribution of residuals. Based on the results, Ordinary Least Squares (OLS) regression was used. Results are also reported for a negative binomial regression (Appendix C), though this model was not selected, based on the diagnostics.

A variance-inflation factor (VIF) test was used to test for multicollinearity, as we might expect several variables to increase with dependent variables that are correlated with industry size.
A Breusch-Pagan/Cook-Weisberg test and visual inspection of the residuals were used to detect heteroskedasticity. A Ramsey Regression Equation Specification Error Test (RESET) was then used to detect omitted variable bias. The RESET test creates new variables using powers of the fitted y-values, and tests the resulting variables for statistical significance. When the right-hand side option is used, RESET tests nonlinear models using powers of the explanatory variables.

**Results**

The VIF test indicated that there was not multicollinearity in the model. The variance inflation factors ranged between 1.00 and 1.39, and the tolerances ranged between 0.71 and 1.00.

There was some initial uncertainty as to whether the lobbyists variable should have been modeled via OLS vs. one of the models from the Poisson/Negative Binomial family. This was because the lobbyist variable could be considered a count variable based on the fact that the values are integers and cannot be less than zero. Count variables typically follow Poisson or Negative Binomial distributions, but they also typically measure events, which this study does not. OLS was chosen based on the actual distribution of the lobbyists variable and its
residuals rather than inferring its distribution. When the distribution is normal, OLS is the appropriate model.

Q-norm plots are sensitive to deviations from normality in the tails of a distribution. The dependent variable generally fell along the reference line indicating normality, but a few deviations made this plot inconclusive (Figure 2.3).

Figure 2.3.
Q-norm Plot
P-norm plots are sensitive to non-normality near the center of a distribution. Again, the dependent variable generally fell along the reference line, but a few deviations made this plot inconclusive (Figure 2.4.).

![P-norm Plot](image)

Figure 2.4.
P-norm Plot

Detailed summary statistics indicated that the distribution was only slightly skewed right (Table 2.1.), with the mean (417) fairly close to the 50th percentile. The inconclusiveness of these approaches required relying on the formal tests of non-normality.
Table 2.1.

Detailed Summary Statistics

<table>
<thead>
<tr>
<th>Percentiles</th>
<th>Smallest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>14</td>
</tr>
<tr>
<td>5%</td>
<td>30</td>
</tr>
<tr>
<td>10%</td>
<td>76</td>
</tr>
<tr>
<td>25%</td>
<td>152</td>
</tr>
<tr>
<td>50%</td>
<td>319</td>
</tr>
<tr>
<td>75%</td>
<td>643</td>
</tr>
<tr>
<td>90%</td>
<td>865</td>
</tr>
<tr>
<td>95%</td>
<td>912</td>
</tr>
<tr>
<td>99%</td>
<td>1,444</td>
</tr>
</tbody>
</table>

Mean 417  Std. Dev. 336  Variance 112,593  Skewness 0.949  Kurtosis 3.392

The Shapiro-Wilk test indicated there was not significant deviation in the dependent variable or the residuals from a normal distribution, using a significance level of < 0.05 (p= 0.93). The Skewness-Kurtosis test confirmed this result, using a significance level of < 0.05 (p= 0.87). Because the formal tests confirmed that the distributions were approximately normal, they suggested OLS was the appropriate modeling approach.

The Breusch-Pagan test suggested that there was not significant heteroskedasticity in the spread of residuals (p= 0.10).
The functional forms for the independent variables were determined through LOESS regression (Appendix B). The relationship between cognitive demand and the number of lobbyists by industry was linear; the functional forms of the industry size variables were logarithmic, and the functional form for median income followed a cubic function. Median income showed a decreasing slope up to the middle ranges, and an increasing slope toward the high range.

The Ramsey RESET test was not significant on the left or right-hand sides, using a significance level of < 0.05. This indicates the model passed a minimum threshold for detecting misspecification due to omitted variable bias.
The regression results indicated that the cognitive demand variable (percent of employees with 5 or more years of college) and one of the industry size controls (gross output) were statistically significant predictors of the number of lobbyists across industries (Figures 2.6. & 2.7). Each percentage-point increase in the percentage of industry employees with 5 or more years of college was associated with a 25.7 unit increase in the number of registered lobbyists. Total employees and median income were not significant, so these variables were dropped. The model explained 43 percent of the variation in lobbyists across industries. These results indicate that the cognitive demand of the work in an industry is a strong predictor of the number of lobbyists who get access to the Congress (Figure 2.8).
**Figure 2.6.**

Regression Results for Complexity-Lobbyists Model

<table>
<thead>
<tr>
<th></th>
<th>OLS</th>
<th>Negative Binomial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable:</strong> Number of Lobbyists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5+ years college</td>
<td>31.11***</td>
<td>0.057***</td>
</tr>
<tr>
<td></td>
<td>(6.92)</td>
<td>(0.018)</td>
</tr>
<tr>
<td>LN_Total Employees</td>
<td>-8.15</td>
<td>0.047**</td>
</tr>
<tr>
<td></td>
<td>(49.69)</td>
<td>(0.016)</td>
</tr>
<tr>
<td>LN_Gross Output</td>
<td>108.4*</td>
<td>0.286**</td>
</tr>
<tr>
<td></td>
<td>(50.28)</td>
<td>(0.111)</td>
</tr>
<tr>
<td>Median_Inc^&lt;sup&gt;3&lt;/sup&gt;</td>
<td>0.047**</td>
<td>0.268**</td>
</tr>
<tr>
<td></td>
<td>(0.016)</td>
<td>(0.127)</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Adj-R2</td>
<td>0.38</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>0.43</td>
<td>1.06</td>
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<td></td>
<td>0.40</td>
<td>1.26</td>
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<tr>
<td></td>
<td>0.41</td>
<td>1.39</td>
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<tr>
<td>Shapiro-Wilks, W</td>
<td>0.976</td>
<td>0.940</td>
</tr>
<tr>
<td>p</td>
<td>0.673</td>
<td>0.908</td>
</tr>
<tr>
<td>Skewness/Kurtosis</td>
<td>0.84,0.37</td>
<td>0.94,0.60</td>
</tr>
<tr>
<td></td>
<td>0.94,0.60</td>
<td>0.94,0.99</td>
</tr>
<tr>
<td></td>
<td>0.92,0.56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.68,0.99</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.641</td>
<td>0.868</td>
</tr>
<tr>
<td></td>
<td>0.834</td>
<td>0.917</td>
</tr>
<tr>
<td>Ramsey RESET</td>
<td>0.778</td>
<td>0.471</td>
</tr>
<tr>
<td>p</td>
<td>0.471</td>
<td>0.531</td>
</tr>
<tr>
<td>Breusch-Pagan/C.W.</td>
<td>1.40</td>
<td>2.77</td>
</tr>
<tr>
<td>p</td>
<td>0.24</td>
<td>2.54</td>
</tr>
<tr>
<td>VIF</td>
<td>1.00</td>
<td>2.86</td>
</tr>
<tr>
<td></td>
<td>1.06</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>1.26</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>1.39</td>
<td></td>
</tr>
<tr>
<td>Log-likelihood</td>
<td>-223.6</td>
<td>-207.8</td>
</tr>
<tr>
<td>$\chi^2$(1)</td>
<td>4894</td>
<td>3540</td>
</tr>
<tr>
<td>p, two-tailed</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

*The functional form for median income was determined through LOESS regression as:

\[(4.33 \times 10^{-11})x^3 + (5.53 \times 10^{-6})x^2 + (0.2237)x - 2404\]

**Note:** ***p < 0.001; **p < 0.01; *p < 0.05**
Figure 2.7.
Number of Lobbyists by Percent of Industry Employees with 5 or more Years of College

Figure 2.7 displays the observed linear relationship. As displayed in Figure 2.8, the predicted values were relatively close to the actuals.
The following scatterplots aggregate the industries into their Center for Responsive Politics sectors. Here, we see a fairly clear positive relationship between the percentage of sector employees with 5 years of college and the number of lobbyists. The Finance, Insurance & Real Estate (F.I.R.E.) sector, the Communications & Electronics sector, and the Healthcare sector had high values for the number of lobbyists and among the highest percentages of employees with 5+ years of college. The Construction and Agribusiness sectors had the
lowest numbers of lobbyists and the lowest percentages of employees with 5+ years of college. The Defense/National Security sector seemed to be an outlier, but it would be fair to assume that national security is a unique product.

Figure 2.9.
Number of Lobbyists by Percent of Sector Employees with 5 or more Years of College

Figure 2.10 displays the relationship for the percentage of employees with 4 or more years of college. This ignores the distinction between college graduates
with and without graduate degrees. Here we see a similar relationship, but it is closer to a monotonic relationship. We also see that the F.I.R.E. sector had the highest cognitive demand according to this measure.

Figure 2.10.
Number of Lobbyists by Percent of Sector Employees with 4 or more Years of College
Limitations

The primary limitation of this study is the possibility that an unidentified variable is responsible for the relationship observed between the number of lobbyists and educational attainment across industries. However, the Ramsey RESET test satisfactorily addressed this concern. Furthermore, the sample size (N=32) could introduce the problem of micronumerosity if too many variables are included in the model, reducing the degrees of freedom available to estimate the model. And existing theory on this point did not suggest that any variables were omitted.

Another possible concern could be that educational attainment is an indicator of higher political savvy across an industry, which could translate into a better understanding of the financial return to political engagement, and thereby increase the amount of lobbying in an industry. However, it is unlikely that this possibility could explain the observed relationships because 1.) the impact of favorable public policies is typically widely understood among the management within industries, and 2.) educational attainment is probably a better indicator of the type of work the employees are doing than it is an indicator of their knowledge of politics.
Conclusion

The model presented here is artlessly simple, but it has high explanatory power and about as much theoretical significance as much more sophisticated models. This study provides the first empirical evidence to date on the relationship between industry complexity and interest group access. When the industry is complex, the search for information and expertise becomes more significant, activating a process whereby interest groups are more likely to be able to shape policy views among members of Congress and their staffs. The regression results on the cognitive demand variable evince a pattern that vote-buying theories and theories of legislative subsidy cannot explain. If members of Congress simply behave in response to campaign contributions, as vote-buying theories suggest, we would not expect to see more interest group access in complex industries than simple ones, particularly after we control for the amount of resources the industries have. Likewise, if members of Congress simply receive a legislative subsidy from their allies, we would not expect to see any relationship between complexity and interest group access.
From this study we can infer that the causal chain for persuasion-based theories of interest group politics begins with the complexity of the policy issue. Going back to Paper 1, we know that interest groups are able to use access to frame policy issues and affect the way members of Congress understand and interpret policy-relevant information. In Paper 2, I suggest that complex policy issues place a higher cognitive demand on the legislator, which creates circumstances in which framing and belief diffusion processes can predominate. This theory can account for the result in Paper 1 in which we observe similar mental maps among members of the House Financial Services Committee who have similar donors, controlling for ideology. When this complexity is not present, the circumstances favor the predominance of legislative subsidy.

This study also provides insight into strategic concerns interest groups may have. An interest group may not prefer a legislator, or a congressional office, that is expert in their policy area. They may prefer a legislator who is only knowledgeable enough to understand and recall the interest group’s arguments, but not so knowledgeable that they could challenge them or think of alternative models on their own. In confusion lies the opportunity.
This research opens the door to future studies on complexity and interest group access. For example, future studies might examine the relationship between complexity and rent-seeking. There could be a dangerousness to complexity that renders legislators less effective on policy in the most complex industries, or enables small groups to dominate policy areas in which knowledge is exclusive. In *The Rise and Decline of Nations*, Olson suggested industries that are better able to organize are more successful in extracting rents from their societies. However, if complexity mediates the relationship between collective action, access, and the success of rent-seeking behavior, this would require a revision to Olson’s theory that accounts for differences in the complexity of industries.
CHAPTER V

Paper 3: Congress for Sale? Testing Theories of Vote-buying Against Access-Based Theories on the House Financial Services Committee

Abstract

Americans believe public policymaking has been rigged in favor of moneyed interests. The usual suspect is the link between campaign contributions and media-buys needed to win elections. However, political scientists are in disagreement over the precise causal mechanism that links campaign contributions to legislative outcomes. One of the cleavages is between researchers who find evidence of vote-buying and researchers who find evidence that access mediates the relationship between financial contributions and policy choices among members of Congress. This study examines the causal mechanism using social network analysis, Topic Modeling, and nonparametric tests. I find that access, directly measured, produces results that are not statistically different from large financial contributions. The study focuses on the debate over reform of the regulatory structure for the housing Government-Sponsored Enterprises (GSEs) in the years preceding the Financial Crisis of 2008.

Keywords: vote-buying; exchange theory; Congress; social network analysis; Extended Party Networks; issue networks
Background

Americans believe their Congress is dysfunctional. In 2013, the Congress’s approval rating hit an all-time low of 9 percent (Gallup, 2015). Although partisanship and low legislative productivity explain some of this dissatisfaction, many Americans believe their Congress has been bought. A CBS poll indicated that between 1990 and 2011, 71 to 80 percent of Americans believed their Congress primarily served special interest groups while just 13 to 20 percent believed their Congress primarily served the constituents they represent (CBS, 2011). Recent research suggests there is some truth to that belief (Gilens and Page, 2014).

The question of how financial contributions materialize into policy outcomes has been the subject of debate in the interest group politics literature since the 1990s. The need to answer this question now can be seen in much of the recent data journalism on interest group influence. Data journalists are inferring interest group influence by summing up the amounts corporations are spending on campaign contributions, and summing up the amounts they are receiving through public policy. They divide the amount of spending by the estimated benefits to arrive at a rate of return (Allison and Harkins, 2014). This research
strategy is similar to that of proponents of vote-buying models, who examine the
correlation between campaign contributions and legislative votes, except the
votes have been effectively monetized.

One problem with the data journalists’ approach is that there is no way to
distinguish between the influence of campaign contributions and the results of a
random process in which the corporations sometimes benefit. The counterfactual
to the data journalists’ model could be thought of as analogous to a casino. A
corporation may spend $1000 to participate at the roulette table. The corporation
may receive winnings from time to time, but the winnings would be nothing
more than the result of a random process. However, the data journalists’
approach would compare the amount won and the amount spent, and assume
the return represents the player’s influence on the casino.

A second problem with this approach is that the causal mechanism is imprecise.
Do members of Congress mechanically respond to financial incentives or do they
get comfortable with the policy positions of their financial contributors by
increasing their exposure to them? Assuming members of Congress have some
sort of conscience, what process would they go through to bring themselves to
consistently sell votes from day-to-day? This study suggests theories of vote-buying cannot explain the data on interest group influence without relying on access-based theories.

**Theory**

Theories of vote-buying assume a transactional process in which interest groups purchase votes in exchange for campaign contributions. Theories of legislative subsidy challenge the view that interest groups purchase votes. However, both theoretical streams assume interest group influence processes operate through the rational, purposive action of interest groups and members of Congress.

Most of the empirical literature for and against the vote-buying hypothesis was written before the recent resurgence in Social Network Analysis in political science (Hall and Wayman, 1990; Morton and Cameron, 1992; Austen-Smith, 1995; Kollman, 1997). Indeed, many of the most commonly cited papers were written in the 1990s, while the organized Political Networks Section of the American Political Science Association (APSA) has only been formally recognized since 2009. This is significant because the approach that social network analysts take to understanding social influence goes further than the
assumption of rational action to explain the behavior of members of Congress, and examines relationships of mutual trust, access, and the dynamics of information diffusion. While this approach does assume rational action takes place among interest groups and members of Congress, the approach also assumes something is occurring mentally when a member’s social network acts upon him.

This study tests theories of vote-buying and access-based theories head-to-head. Access-based theories assume financial contributions are important in explaining members’ policy views, but the contributions affect their views predominantly through the access they provide rather than through a direct response to financial incentives. Consistent with Wright (1990), access-based theories predict that there is a relationship between financial contributions and committee-level voting, but this is primarily because members tend to provide more access to interest groups that provide greater financial contributions. As suggested in Papers 1 and 2 and the supporting literature, this access creates the opportunity to provide information, advice, research, and advocacy (Koger and Victor, 2009).
When members of Congress provide a class of interest groups with greater access, they are providing them with the opportunity to shape the intellectual environment operating upon them and their staffs. This environmental change might help explain how members of Congress deal with the cognitive dissonance created in scenarios where their policy positions depart from the interests of their constituents or their *ex ante* personal values. An extension of this literature might suggest members of Congress shape their environments such that it is difficult to think differently from the coalitions of interest groups that lobby them. When members are consistently meeting with the same sets of groups, reading their literature, speaking at their engagements, and socializing with them off-the-clock, they are being socialized to increase their receptivity to certain frames. The outcome could possibly be the result of a member’s rational attempt to bring himself to agree with a policy position that is financially advantageous, but it is not necessary to assume so, and that type of rationality is different from a purely utilitarian, atomistic conception.

This study suggests the causal mechanisms laid out here and introduced in Papers 1 and 2 are, in fact, socio-psychological processes. The study rules out the possibility that the data on interest group influence can be explained by simple
quid pro quo accounts. This study also addresses a limitation in Paper 1, in which access was measured through relatively significant campaign contributions.

Data

This study tests vote-buying theories against access-based theories on the GSE Reform dataset from Paper 1. As discussed there, many different types of financial institutions coordinate and compete in the secondary housing market. Many of the nation’s largest financial institutions and interest groups representing the top tier in terms of financial resources participated vigorously in the GSE Reform Debate. This debate took place within the House Financial Services Committee, whose members attract disproportionately higher donation levels than other committees in the Congress. These factors make the GSE Reform Debate a critical case for testing access-based theories against theories of vote-buying. If access, directly measured, is a necessary part of the causal chain in explaining the relation between financial contributions and policy views on the Financial Services Committee, then one would expect access to have explanatory power on other committees.
This study used hearing transcripts and witness lists from the Government Printing Office’s FDsys online repository. Financial contributions were one factor considered in modeling relationships between interest groups and members of Congress, which is elaborated upon in the methodology section. This study focused on groups that only made small donations, which were generally not covered in the Center for Responsive Politics dataset used in Paper 1. These small contributions were found using Bonica’s Database on Ideology, Money in Politics, and Elections (Bonica, 2013). The Bonica dataset is a compilation of campaign finance data from the Federal Election Commission (FEC), the Internal Revenue Service (IRS) and other sources, linked to commonly used indices and formatted into .csv files that are more accessible and easier to work with than the files on the agency websites. The files include the names, addresses, and employers of all persons who reported campaign contributions to the FEC at the national, state, or local levels. During the period under study here (2000-2008), the number of transactions recorded in the files ranged from 1 million to 16.5 million per year.
Methodology

This study conceives of interest groups and the members of Congress they have access to as a network of directed links between organizations (interest groups) and agents (members of Congress).

The research design draws upon the matched-pairs design used in Paper 1. However, here the interest group-to-member links were separated into two distinct categories: large donor links and access anomalies.

- “Large donor” links were defined as large financial contributions from the interest group to committee members. These links were recorded if the organization provided at least 1 percent of the member’s total campaign committee and leadership PAC donations in an election cycle.

- “Access anomalies” were defined as links in which interest groups were able to gain significant access to committee members without making large financial contributions. These groups represented affordable housing interests, state and local government interests, and consumer interests. Access to the committee was recorded if the organization
testified at any of the GSE Reform Hearings held by the Financial Services Committee. Once this set of organizations was established, small, relatively insignificant donations were used to trace which specific members the organization had access to. The assumption was that the opportunity to testify at a congressional hearing, combined with a small donation, was a reasonably valid indicator of some form of access to a committee member that was occurring behind the scenes. Although campaign contributions were used to trace these relationships, the contributions were small enough that we know campaign contributions were not these groups’ primary means of engaging the Congress. This was how they differed substantively from the “large donor” links.

The cutoff for small donations was established at less than 1 percent of the member’s total financial haul. However, the data indicated that all of these organizations’ contributions constituted less than two-tenths of 1 percent of any member’s total financial haul, all of the contributions were $500 or less, and more than 50 percent of the donations were less than $100.
The contributions from the “access anomaly” groups were far too low to have any impact on an election outcome. In many cases, the groups seemed to donate for no other reason than to leave a trace of a relationship. These groups were anomalous because they were achieving clear access to the House Financial Services Committee without significantly contributing to the members’ financial coffers.

This study’s primary concern was to establish whether theories of vote-buying can explain the relationship between campaign contributions and members’ policy views without relying on access-based theories to provide an intermediate step in the causal chain. In other words, is the dominant process a simple quid pro quo in which money is exchanged for votes, or is it a social influence process in which members take on the views of the organizations they give access to? Vote-buying theories operate through the purse. Access-based theories operate through the mind.

This study adjudicates between the two competing theoretical streams by capturing as much information as possible from the interest groups in the “access anomaly” category. If theories of vote-buying best explain interest group
influence, then we would expect that interest groups that are able to achieve access, but do not do so by way of campaign contributions, will not have more influence than a control group.

$H_0$: Access anomaly groups have greater influence than a set of matched controls.

$H_1$: Access anomaly groups do not have greater influence than a set of matched controls.

If we did not want to be quite as rigid, we might suggest that interest groups which achieve access through non-financial means do have some influence, but when they get that influence, it is not as great as that of a set of interest groups that achieve their access through financial means. Here, we would expect the “access anomaly” organizations to outperform a control group, but to statistically underperform a matched group of organizations whose primary means of engagement is financial.

$H_0$: Access anomaly groups do not have greater influence than a set of matched controls.

$H_1$: Access anomaly groups have greater influence than a set of matched controls.
H0: There is no statistically significant difference between the influence level of access anomaly groups and large donors.

H1: Access anomaly groups have less influence than large donors.

However, if theories of vote-buying are totally inadequate, we would expect to see scenarios more consistent with access-based theories. For example, if the mechanism through which campaign contributions operate is through the access those contributions provide, then we would expect to see that interest groups that achieve access without making significant campaign contributions not only outperform a control group, but they statistically perform just as well as a matched set of interest groups whose primary means of engagement is financial. In other words, there would be a three-part hypothesis that 1.) there is a statistically significant difference between the performance of the “access anomaly” organizations and a control group, 2.) there is also a statistically significant difference between the performance of the “large donor” organizations and a control group, and 3.) there is not a statistically significant difference between the performance of the “access anomaly” organizations and the “large donor” organizations.
H₀: Access anomaly groups do not have greater influence than a set of matched controls.

H₁: Access anomaly groups have greater influence than a set of matched controls.

H₀: Large donors do not have greater influence than a set of matched controls.

H₁: Large donors have greater influence than a set of matched controls.

H₀: Large donor groups have greater influence than access anomaly groups.

H₁: There is no statistically significant difference between the influence level of access anomaly groups and large donors.

This setup was predicated upon the fact that the chances of a combination of hypothesis tests performing as predicted at once, in the absence of a true causal mechanism, are lower than the chances of any one test performing as predicted.

This study measured members’ intellectual approaches to policy problems through a Correlated Topic Model (CTM). CTMs were developed as part of a family of Topic Models in artificial intelligence to find the latent topic structure underlying a text, map the speakers’ mental models, and categorize documents
for information retrieval. Correlated Topic Models are discussed in greater detail in Paper 1 (pp. 61-66), and were formally introduced in Blei and Lafferty (2007).

The key output of a CTM is a probability distribution of the topics invoked by a speaker, and those topics are a probability distribution that reflects the co-occurring words the speaker is linking when they discuss a latent concept. This output is a type of mental map that can be used to compare different texts. Two texts are understood to be similar in terms of the mental map underlying them if their probability distributions for the set of topics are similar. The difference between any two probability distributions is given by the Hellinger Distance (see Paper 1, Eq. 2 of this dissertation (pp.65-66), and Blei and Lafferty (2007). Document Similarity is measured as 1-Hellinger Distance. For simplicity, this paper refers to 1-Hellinger Distance as Hellinger Similarity.

To determine whether any given set of interest groups influenced the mental maps of members of Congress, hearing transcripts for every GSE Reform Hearing between 2000 and 2008 were analyzed in a CTM. Hellinger Similarity was calculated for each dyad of committee members linked by an interest group
in that set. Each member dyad was based on a unipartite agent-by-agent projection of a 2-mode organization-by-agent network (Figure 3.2).

Each of these member dyads were matched to a control, using the exact same matched-pairing methodology introduced in Paper 1 (pp. 57-59). For each dyad, the control was a node pair in which one of the nodes in the dyad was replaced by that member of the committee who was closest ideologically to the replaced member, as measured by the Poole and Rosenthal first-dimension NOMINATE score. This enabled the study to control for each member’s pre-existing ideological tendency when attributing influence to interest groups.\(^{14}\)

The dyad sets were separated into three groups:

- members linked by “access anomaly” groups,
- members linked by “large donor” groups, with a Pearson Link Correlation of 0.5 or more,\(^ {15}\)
- and non-linked controls for each dyad.

\(^{14}\) NOMINATE Scores are not an exact reflection of ideology, but they do measure a latent factor akin to ideology if a member’s voting pattern reflects a general tendency to vote close to the peak of a utility function that is correlated with their ideology. For statistical purposes, NOMINATE scores perform similarly to metrics based solely on co-voting, but they have the advantage that they provide a unique score for each member, they fall upon a unidimensional spectrum, and are the best metric available for measuring the personal ideologies of members of Congress based on publicly available information (Sinclair et al, 2011).

\(^{15}\) The cutpoint of 0.5 was used to ensure this set captured the strongest member-to-member, large donor links.
For each hypothesis test, a one-tailed Wilcoxon Signed Rank Test with respect to Hellinger Similarity was used (See Paper 1, Eq. 1 (pp.60)). This nonparametric alternative ensures the validity of the results regardless of the underlying distribution of the similarity metrics. In Paper 1, we saw that the significance levels for the Wilcoxon Signed Rank Test were larger than the significance levels for MRQAP, which might suggest the Wilcoxon Signed Rank Test was the more demanding of the two in terms of the evidence required to reject the null hypothesis.
Visualization

In the GSE Reform Debate, the most active “access anomaly” organizations were The Consumer Federation of America and Enterprise Community Partners. Other organizations in this category with clear access to committee members included The National Low Income Housing Coalition, The National Association of Affordable Housing Lenders, The Center for Responsible Lending, and CityView, which was run by former U.S. Department of Housing and Urban Development Secretary Henry Cisneros (Figure 3.1).

Figure 3.1.
Graph of “Access Anomaly” Organizations and FS Committee Members
The most vivid illustration of the influence of these groups was the interaction between Enterprise Community Partners and the Financial Services Committee. On September 12, 2000, Kris Siglin, an Enterprise policy staffer, provided a rationale for tying GSE Reform legislation to meeting the nation’s affordable housing needs:

“A point that I think seems to be getting lost in this discussion is, rather than talking about privatizing Fannie and Freddie and taking away their Government benefits, I think you ought to be asking a series of hard questions about what the taxpayers and the public get in exchange for the existence of the GSEs which receive benefits. So, these are a set of questions that go to mission regulation. What are we getting that we wouldn’t otherwise get due to their existence? . . . So we work well with the GSEs because, you know, we are culturally compatible with them. But could they do more? Yes, they could. You should be asking them [to do] more” (Siglin, 2000).
Over the year prior to Siglin’s testimony, an Enterprise board member made small, $500 donations to Reps. Kanjorski, Vento, and Lazio, signaling some form of access to these members of the Committee. By 2005, the Democratic Ranking Member, Barney Frank, was using the same rationale as Enterprise to address affordable housing needs through the GSE Reform legislation:

Rep. Frank: “I agree with those who say that Fannie and Freddie are not spending enough of their resources on affordable housing. . . They get an advantage from the market. . . But there are two approaches to it. There is the administration predilection, and the administration predilection is: ‘Fannie and Freddie get certain advantage because of this market perception, and they can borrow money more cheaply, and they do not do enough for affordable housing, let’s reduce their overall activity, let’s cut down what they do.’ Others of us believe—and I think this is overwhelmingly the case on our side—. . . instead, let’s leave them at the current level, unless safety and soundness dictate otherwise, and have them do more about affordable housing. . . That is the approach that we will be taking, and I think those are the issues that we will be dealing with in the legislative situation” (Frank, 2005).

In this hearing, Rep. Frank asked the Bush Administration’s HUD Secretary, Alphonso Jackson, for the Administration’s views on a potential affordable housing fund. When Jackson attempted to dodge the question, Frank pressed him hard on the issue:

Mr. Frank: . . . So are you in favor of that provision?

Secretary Jackson: My position is, I have, as long as they want to do more, that is fine.

Mr. Frank: Are you in favor of us mandating it? That is English. I am sorry for my diction, but you can understand that.
Secretary Jackson: But you are the Chairman, I am not—I mean, you are the Ranking Member. This is the finance——

Mr. Frank: Yes, I am the Ranking Member asking the—excuse me, Mr. Secretary, but you have come before us to make recommendations about legislation. I asked you about a specific piece, and you act as if somehow I am invading your privacy. The point is this: We have legislation. I do not want to wait for Fannie or Freddie to decide to do it . . .

Are you in favor of an amendment to this bill that would mandate that 5 percent of their profits go into subsidized affordable housing?

Secretary Jackson: That is your decision to make.

The Chairman: The gentleman’s time has [expired] — —

Mr. Frank. Why are you here?

Secretary Jackson: I am here to tell you what our viewpoint is.

Mr. Frank: Well, then tell me your viewpoint on that.

Secretary Jackson: That is my viewpoint.

Mr. Frank: I know it is my decision. What is your viewpoint on our decision?

The Chairman: The gentleman’s time has expired

(The Administrative Perspective on GSE Regulatory Reform, 2005).

The final GSE Reform legislation included the affordable housing fund, and was signed into law on July 30, 2008. Affordable housing organizations, which were not significant financial contributors to the Financial Services Committee, had achieved their goal through access; and they did so on a committee that the vote-buying hypothesis would predict to be dominated by large, financial interests.
Results

The Wilcoxon Signed Rank Test disconfirmed the strong version of the pro vote-buying hypotheses (H₁). Member dyads who were linked by interest groups that were able to achieve access, but did not do so by way of campaign contributions, had higher Hellinger Similarity metrics than a set of control dyads that were matched to the test dyads by the ideological distance reflected in the NOMINATE score. These results were statistically significant, using a significance level of < 0.05.

On the weak version of the pro vote-buying hypothesis, H₂ was confirmed, and H₃ was disconfirmed. Member dyads that were linked by interest groups who achieved their access through non-financial means did have higher Hellinger Similarity metrics than a control group, consistent with H₂, but when they achieved that access, they did not statistically underperform a group of ideologically controlled matched dyads who were linked by large donor organizations, disconfirming H₃. Both of these tests used a significance level of < 0.05, and the results also held up using a significance level of < 0.10. These results were consistent with a scenario in which interest groups who do not make significant campaign contributions, but are able to successfully clear the
access hurdle, have just as much influence as interest groups who tend to make large campaign contributions.

The Wilcoxon Signed Rank Test strongly confirmed the three-part combination of hypotheses consistent with access-based theories (H4, H5, and H6). Members dyads who were linked by organizations that managed to achieve access, but did not make significant financial contributions, had higher similarity metrics than a control group, consistent with H4; member dyads who were linked by large donor organizations also outperformed the control group, consistent with H5; and there was no statistically significant difference between member dyads linked by large donor organizations and member dyads linked by organizations that successfully achieved access through non-financial means. Further reinforcing H6, the results were consistent at both the < 0.05 and < 0.10 significance levels (Table 3.1). The sum of ranks for the access anomaly dyads was actually higher than the sum of ranks for the matched large donor dyads, but the z-score (-1.13) indicated they were not systematically different. The effect-size (r) for the access anomaly dyads was 0.20, which is halfway between the small and medium ranges for the sciences, according to Cohen’s benchmark. The effect-size for the large donor dyads was 0.15.
This combination of results would be difficult to explain if the dominant interest group influence process were a simple quid pro quo. However, they are exactly what we would expect to see in a scenario in which the important variable is access, and campaign contributions are often, but not always, the means through which interest groups obtain access.

Table 3.1.

Wilcoxon Signed Rank Test on Hellinger Similarity
(Access Anomaly Dyads vs. Controls)

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<tr>
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<th>Sum of Positive Ranks</th>
<th>Sum of Negative Ranks</th>
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<tbody>
<tr>
<td>$W$</td>
<td>682**</td>
<td>1381</td>
</tr>
<tr>
<td>$z$</td>
<td>2.28</td>
<td></td>
</tr>
<tr>
<td>$N_r$</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>$\sigma_w$</td>
<td>299</td>
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Note: *p < 0.1, **p < 0.05, ***p<0.01

Wilcoxon Signed Rank Test on Hellinger Similarity
(Large Donor Dyads vs. Controls)

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<th>Sum of Positive Ranks</th>
<th>Sum of Negative Ranks</th>
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<tr>
<td>$W$</td>
<td>502**</td>
<td>1291</td>
</tr>
<tr>
<td>$z$</td>
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<td></td>
</tr>
<tr>
<td>$N_r$</td>
<td>64</td>
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</tr>
<tr>
<td>$\sigma_w$</td>
<td>299</td>
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</tr>
</tbody>
</table>

Note: *p < 0.1, **p < 0.05, ***p<0.01

Wilcoxon Signed Rank Test on Hellinger Similarity
(Large Donor Dyads vs. Access Anomaly Dyads)

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<tr>
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<th>Sum of Positive Ranks</th>
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<tr>
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<td>$N_r$</td>
<td>64</td>
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<tr>
<td>$\sigma_w$</td>
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</table>

Note: *p < 0.1, **p < 0.05, ***p<0.01
This study also demonstrates that there is a lot of information in the “access anomaly groups,” which were able to go against the grain by achieving influence in housing finance policy without the financial resources associated with major industry players. Future studies that map campaign contribution networks should consider the possibility that a complete representation of the influential groups requires supplementing financial data with witness lists.

**Discussion**

This study indicates that money in politics operates through a socio-psychological process in which members’ intellectual approaches to policy problems are shaped by the interest groups they work with. The environments in which members and their staffs form their perceptions are critically influenced by the interest groups they give access to. This conclusion is based on the finding that access, directly measured, and disentangled from significant financial contributions, produces results that are not statistically different from the results on large financial contributions. These results reinforce the findings in Wright (1990).
The results do not suggest access is typically attainable by groups that do not make large financial contributions. Indeed, the data indicated the groups that were in this category were anomalies. However, the causal chain implied by the confirmatory results on access-based models suggests the story on campaign finance does not begin and end at the point at which the donation is made. The point at which access is granted is more significant and could serve as a focus of future campaign finance reform efforts. Moreover, a focus on breaking the link between campaign contributions and access could produce a set of solutions that address the problem without requiring new legislation.
CHAPTER VI

Research Findings

The American body politic cannot be understood without an accurate accounting of the role of interest groups. Since the foundation of the republic, the architects of the state have searched for answers on precisely what it means for the people when organized interests have the freedom to vigorously pursue their interests within the context of a broad populace that is relatively unprepared to step up to the daily grind of navigating legislative politics. As Madison recognized, the behavior of American legislative bodies is inscrutable without an understanding of interest groups. Indeed, the basic logic of the American system of government is predicated upon the understanding that organized interests are the central feature of democratic systems, and that states should be structured to prevent the inevitable consequences of unchecked factionalism.

Political science has been catching up to Madison for quite some time, and campaign contributions are the component of interest group politics that is most
conducive to scientific analysis. This dissertation provides evidence that campaign contributions from interest groups reflect multidimensional relationships that affect the way members of Congress see policy problems. Though previous studies have examined the financial incentives that link legislators to interest groups and how interest groups may subsidize supportive legislators, few have systematically examined how the structure of legislators’ policy arguments come to resemble those of interest groups. Previous studies that found little or no persuasive influence between interest groups and members of Congress were probably tainted by unit of analysis problems. Members of Congress who are ideologues relative to the full chamber self-select into smaller components of the ideological spectrum in their committee assignments, masking the malleability of their views on specific issues (Kollman, 1997). The three papers that comprise this dissertation suggest wars of ideas may emanate from industries, in a government behind the government, that controls much of the information and policy logic legislators are exposed to. Legislators who are situated within different networks of interest groups may live in different worlds.
Paper 1 indicates that when members of congressional committees receive campaign contributions from a similar set of interest groups, they begin to talk about policy issues using similar mental maps, connecting the same ideas with similar probabilities. These results were consistent in a matched-pairs design using nonparametric tests, and MRQAP. This statistical association was evident in the debate over the regulatory structure for Fannie Mae and Freddie Mac. Although the GSEs were under the congressional spotlight several years before the Financial Crisis, they were allowed to plunge into the Alt-A and Interest Only markets in 2005. Declining underwriting standards were spreading from Wall Street to the GSEs. But the policy debate among reformers focused on the GSEs’ retained portfolios and an affordable housing fund; credit risk was absent from the discussion. By 2008, the GSEs needed one of the largest bailouts in American history: 189 billion. More than the next 25 banks combined. The House Financial Services Committee could only conceive of a scenario in which interest rate risk would cause the GSEs to fail. The situation that actually occurred was unthinkable based on the arguments the members were presented with. That is the consequence of belief diffusion. Ideas get traction based on who has access, relationship-building, and superior coordination. The problems are too complex
for members and their staffs to simply draw their own conclusions. The stakes are too high. So they find themselves in a paradox.

Paper 2 indicates that the degree to which members of Congress rely on lobbyists is influenced by the complexity of the policy problems they are tasked with solving. Across 32 industries, the number of lobbyists getting access to the Congress increased with the complexity of the work in the industries. These results suggest members of Congress are not merely taking the legislative pulse of different interest groups, but are actively providing them with the opportunity to shape the way they understand policy problems.

Paper 3 indicates that the influence process through which interest groups affect members of Congress is not a simple quid pro quo in which campaign contributions are exchanged for votes. It is a causal chain in which campaign contributions provide access, and that access provides the opportunity to shape the way members and their staffs see policy problems.

The message connecting these three studies is that the influence process operates through cognitive mechanisms that result from the intellectual environment that
members of Congress and their interest group donors create. Members and their staffs are situated within networks of interest groups that provide much of the information, research, and policy logic they are exposed to. For an interest group, serving as a key member of one of these networks is more consequential than the mere financial incentive for a member to vote in a certain direction that is created by the campaign contribution. Campaign contributions operate through a socio-psychological process in which the access they create results in the diffusion of ideas and information. These studies also indicate that on congressional committees, we see interest groups persuading members rather than simply providing resources to their legislative allies.

One question that arises from these studies is: Is a scenario in which members’ policy views are altered in response to social influence any better than a scenario in which they merely vote in response to financial incentives? The answer is, not necessarily. A member who is deeply embedded in a relatively closed issue network might believe his position to be morally superior to other members’ positions based on his limited information, and he may therefore be less willing to negotiate than a hypothetical member who simply responded to financial incentives. In this sense, social influence can make members feel morally justified
in using Machiavellian tactics or contributing to hyperpartisanship. There are many scenarios in which a Congress that was responsive to social influence processes could produce worse outcomes than a Congress in which vote-buying were the predominant medium of interaction. What we can say is that both processes produce their own sets of unintended consequences.
CHAPTER VII

Policy Implications

The policy implications of these findings are two-fold. First, when members of Congress cluster around similar frames, they are often responding to interest group activity. As such, the distribution of interest group preferences can be just as important as the distribution of public opinion. Second, access-based theories of interest group influence should be an important intellectual anchor of campaign finance reform efforts.

The obvious solution to problems of representation arising from interest group politics is new campaign finance reform legislation. However, new campaign finance reform legislation has not been forthcoming at the national level, and the Supreme Court struck down even some of the modest reforms in McCain-Feingold (Pub. L. 107-155). The findings on access-based theories suggest several options could improve the balance of power between large contributors and the general public. First, modest legislative options could focus reform efforts on the
types of support that go along with a lifestyle of granting well-funded interest groups with continuous access, even if these types of support do not matter for campaigning purposes. These include in-kind contributions, air transportation, and rules surrounding speaking engagements or meeting with interest groups on their turf.

Second, we should expect state and local level reforms that match small campaign contributions with public funding to be effective at improving the diversity of views to which legislators are exposed. New York City matches the first $175 in contributions from any resident at a six-to-one ratio, a strategy that the state of New York considered in 2012 (Genn et al., 2012). Similar state and local level legislation is under consideration in New Mexico, Connecticut, Maine, Buffalo, New York; Howard County, Maryland; and Seattle, Washington (Blumenthal, 2014). State ballot initiatives may advance legislation in a way that circumvents the incentive for both parties to defect on campaign finance reform.

Third, strong candidates should take a hard look at what level of campaign contributions is necessary to run a viable election, given the extent of gerrymandering and ideological sorting taking place across congressional
districts. This is particularly true among incumbents in the House of Representatives, where re-election rates have hovered around 95 percent since the 1990s (Figure 4.1). Some candidates could remain viable while loosening the relationship between money and access in their individual offices. This may be particularly true among members who are skilled campaigners.


Figure 4.1
Finally, members of Congress can address excessive interest group influence through the way they organize and manage their staffs. Even if a member has ambitions that require building relationships with large, national donors, she might consider that the way the member allocates her time across different interest groups affects the entire office. For many staffers, they are working at a life-stage at which their impressions about policy topics are not fully developed and are based on very limited experience. A rolodex of interest group donors that is biased in one direction is likely to have amplified and reinforced effects among young staffers whose job it is to get factual information to the member and make day-to-day decisions. If staff are only familiar with groups that provide large donations, they may develop blind spots in areas in which other types of interest groups are important. This is a significant operational risk.

Members may wish to designate a staffmember to determine which types of groups have access to them, or place existing staff with this responsibility into more senior roles. One way to expand the member’s network would be to manage the schedule with an eye toward increasing the diversity of views to which the member is exposed. For example, meetings with large contributors in the same issue area can be consolidated, freeing up time to meet with interest
groups that are not well-financed. Members may also wish to monitor their own revolving doors, with an eye toward ensuring the office can readily access information from many networks at once.

These solutions are not mutually exclusive, and most of them do not require federal legislation. Neither do they change existing limits on the amounts interest groups may contribute. The premise is that the problem of unequal representation can be addressed through loosening the relationship between campaign contributions and influence.
APPENDIX A: ISOLATES FOR APRIL 13, 2005 HEARING
APPENDIX B: LOESS REGRESSIONS FOR INDEPENDENT VARIABLES
APPENDIX C: PREDICTIONS VS. ACTUALS FOR NEGATIVE BINOMIAL COMPLEXITY-LOBBYSTS MODEL

![Graph showing residuals versus predicted number of events](image-url)
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