

Organized Interests and Agenda Setting

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Abstract

In this paper we examine whether and how the attention given by the news media, Congress, and the president to seven types of disease over the period 1980 to 1998 is shaped by the communities of advocacy organizations that take an interest in public policies associated with each disease. We argue that groups can affect the agendas of decision makers and members of the news media by subsidizing their costs of acquiring information and becoming informed (Gandy 1982; Hall 2000); by signaling the salience of problems they care about (Caldeira and Wright 1988; Kollman 1998); and by transmitting information between the media and actors in government. Results from a preliminary analysis of our data, a test of the signaling hypothesis only, illustrate partial support for that hypothesis. Specifically, we find that larger communities of organized interests bring more presidential and congressional attention to that disease.

[T]he recognition by a society of its social problems is a highly selective process, with many harmful social conditions and arrangements not even making a bid for attention and with others falling by the wayside in what is frequently a fierce competitive struggle (Blumer 1971:302).

Researchers who study the processes of problem definition and agenda setting increasingly have been attentive to the competition and selectivity that Blumer describes. From Downs' (1972) "issue-attention cycle," to the "public arenas" model of Hilgartner and Bosk (1988), to the process of "punctuated equilibrium" described by Baumgartner and Jones (1993), agenda access has been characterized as a scarce and thus highly valued commodity. Researchers readily acknowledge that those who play a role in determining what is (and is not) placed on the public agenda also have power over policy outcomes (Bachrach and Baratz 1962; Baumgartner 1989; Baumgartner and Jones 1993; Cobb and Ross 1997; Kingdon 1995; Riker 1986).

But despite the acknowledged power of successful agenda setters, researchers tend to focus solely on the media and on government institutions when they study who sets and affects the public agenda. That interest groups have been the focus of relatively few studies of agenda setting is surprising given that groups are already understood as acting to contact members of Congress and the executive branch not only to affect the outcomes of decisions but also to get their allies to "move" an issue on their behalf (Hall and Wayman 1990; Hojnacki and Kimball 1998). In addition, there is considerable evidence that interest groups attempt to draw the media's attention to issues they care about. A number of recent surveys indicate that between 72 and 86 percent of organizations report "talking to" or "using" the mass media as part of their advocacy efforts (Nownes and Freeman 1998; Schlozman and Tierney 1986; Walker 1991).¹

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¹ Whether these media interactions refer to contacts with reporters or the purchase of advertisements is not always clear. Moreover, there may be tremendous variation in "media use," however it is defined, across different issues.

Perhaps more important, learning whether, and how, organizations effectively draw attention to issues they care about will provide a richer understanding of the degree and type of bias in the advocacy process, and will help show whether and how present biases are likely to shift or be maintained over time. Moreover, knowledge of the forces that contribute to successful agenda setting will allow researchers to assess how the success of some advocates at drawing attention to problems affects the subsequent priorities and actions of those advocates, as well as of advocates who are less successful agenda setters. Indeed, in studies of organizational advocacy, researchers have not been attentive to the potential advantages enjoyed by groups that were instrumental in determining the issues discussed by decision makers relative to those enjoyed by the advocates who find themselves reacting to an agenda they played no role in constructing.

In this paper we outline a study of organized interests' efforts to affect the agendas of the media and government. In particular, we offer a conceptual view of how organizations can impact agendas and we describe an approach to examine whether and how the attention given by the news media, Congress, and the president to seven types of disease is shaped by the communities of advocacy organizations that take an interest in public policies associated with each disease. Results from a preliminary analysis of our data illustrate support for our hypothesis that groups communicate to decision makers the salience of a disease. Specifically, we find that larger communities of organized interests bring more presidential, and potentially congressional, attention to that disease.

Organized Interests and Agenda Setting

One of the most important things organized interests try to do is draw attention to the issues and problems they care about. If the policy concerns of an organization are not on the agenda of issues that decision makers attend to or that the media take up, then groups are likely to have little opportunity of seeing any of their policy preferences take root.

But how effective are groups in drawing attention to the issues they care about? And to what extent do they participate in shaping the public agenda? Studies that investigate who is involved in setting political or media agendas do not give systematic attention to groups. These studies instead focus on whether the president is the primary agenda setter, whether Congress responds to the president, and whether the media shapes or merely reports on the problems and issues that are given attention by government officials (see Edwards and Wood 1999; Flemming, Bothe, and Wood 1997). In contrast, interest group and policy scholars have made some efforts to understand groups' abilities to draw attention to problems. However, this strand of research provides no clear picture of whether organizations successfully attract attention to issues or effectively set the public agenda.

Much of the work that offers support for the idea that groups are effective agenda-setters focuses individually on a number of different agendas. For instance, Caldeira and Wright (1988) demonstrate that groups, acting as *amicus curiae*, have a considerable impact on the likelihood that a case is granted certiorari. Indeed, the mere presence of a brief rather than the position it espouses increases the probability that certiorari will be granted (see also McGuire and Caldeira 1993). More recently, Berry (1999) has shown that liberal-oriented citizen groups have since the 1960s been successful at placing their postmaterialist issues on the congressional agenda. On a more macro level, Baumgartner and Jones (1993) argue that periods of policy change and policy stability mirror the mobilization of bias that exists in organizational communities over time. That is, “[T]he mobilization of interests changes over time, and with these changes come differences in the likelihood of certain issues to hit the public agenda” (190).

But other researchers suggest that interest groups are largely ineffective in setting the agenda. Kingdon (1995) argues that interest groups, in contrast to members of the administration and Congress, play no role in determining the subjects of decision makers' attention.² Cook

² Kingdon's work suggests that groups participate in defining alternatives for issues *after* other actors have placed those issues on the agenda. Although alternative definition is an important activity, Kingdon distinguishes it from identifying the issues that get attention from decision makers.

(1998) is also skeptical of the agenda-setting effectiveness of groups. He argues that “unofficial activists” have difficulty serving as “authoritative sources” for the media so that even those groups with the resources to have a designated media contact “...may simply elect to take their message directly to the people via advertisements rather than depend on the unpredictable news” (1998: 95).

Even if there were no disagreement about the effectiveness of groups as agenda setters, the research on agenda setting and organizations would still leave a host of questions unanswered. These studies offer no information about whether organizational impact varies across branches of government, whether groups may effectively shape the agenda of the media, whether their impact is sustained across a range of issues, or whether and how their agenda-setting capabilities change over time. In short, the extant literature offers no general framework for understanding why groups might be effective at drawing attention to their concerns or how this effectiveness varies across groups and issues. We take up the task of developing such a framework (albeit in a preliminary way) in the section that follows.

A Conceptual Framework for Organizational Agenda Setting: Information Subsidies, Issue Salience, and Information Sharing

The provision of various types of costly information has been recognized as an important means by which groups try to draw attention to issues they care about and otherwise draw support for their policy preferences. For instance, according to Berry (1999), liberal citizen groups have been increasingly effective in shaping the congressional agenda because they have developed a resource base that they invested strategically in building a staff of policy experts who serve as credible sources of information for the media and Congress. Caldeira and Wright (1988) argue that amicus briefs provide justices with cues about the practical significance of cases brought before the Court by indicating the level of demand for adjudication among interested parties. Specifically, “amicus curiae participation by organized interests provides information, or signals - otherwise largely unavailable – about the political, social, and economic significance of

cases...and justices make inferences about the potential impact of their decisions by observing the extent of amicus activity” (1112).

Consistent with this work, we contend that information is a key element underlying groups’ roles as agenda setters. Specifically, the information that groups provide comes in the form of a subsidy to decision makers and the media (see Gandy 1982 and Hall 2000). As sources of expert information, interested organizations subsidize the costs of search for reporters writing and producing stories and for members of Congress. Both policy makers and members of the media operate under tight time schedules and are called upon to make decisions based on minimal information. As a result, the expertise, data, and intelligence available from organizations can fulfill an important need and make it easier for reporters and political decision makers to be attentive to groups’ concerns. Consistent with Gandy’s (1982) arguments, we expect that organizations with the skills and resources to disseminate otherwise scarce information are likely to make frequent attempts to communicate what they know about an issue and subsidize the efforts of reporters and legislators to give more attention to their concerns. Indeed, just as members of Congress grant access to organized interests who have an information provision advantage relative to their competitors (Hansen 1991), groups may serve as “authoritative sources” about issues, enhancing the likelihood that “their” problems and concerns become part of the political and media agendas (Cook 1998; Gans 1979). Importantly, the benefits groups derive from their efforts include more than the attention that political decision makers and reporters devote to issues groups care about. As Gandy (1982) emphasizes, the information subsidy reduces the cost not of all information but only that information that benefits the policy preferences of the source. In this way, organizations that effectively provide subsidies to reporters and government decision makers determine the way these problems are understood and discussed. Organizations with more financial resources, and with public relations offices to advertise their expertise to the press and policymakers, will be better able to establish and maintain useful relationships with these actors.

But we also have reason to expect that groups can affect agendas through mechanisms other than the information subsidies they provide. Caldeira and Wright's (1988) signaling model suggests that groups, through their organization and general advocacy activity, communicate a capacity to stir up public attention and interest, signaling that a problem is salient (see also Kollman 1998). That is, through their claimsmaking activities (Spector and Kitsuse 1973) organized interests signal to members of Congress and members of the media the salience of an issue. A single group that cares about an issue may effectively gain access to members of Congress and the media over time and enjoy a successful relationship rooted in the provision of an information subsidy. However, success at signaling salience may be dependent not on the efforts of any individual group but on the collective character of the organizational communities that develop around problems and issues. Relatively large and visible communities are likely to draw more attention to specific issues by creating an impression that these issues are of concern to a large segment of the public. Differences in issue-specific organizational communities are expected to produce differences in attention, and changes in organizational communities are expected to affect the variation in attention to any one issue over time.

Finally, we believe that groups draw attention to problems and issues by facilitating information sharing among political actors and members of the media. That is, as actors who have access to individuals in and out of government, groups may inform members of Congress about issues that the media will be attentive to, they may serve as a bridge of communication between White House staff and Congress, and they can readily inform members of the media about issues that are being discussed (and by whom) in Congress and the administration. In this way, the impact of organizations' agenda setting efforts might be magnified as decision makers and members of the media react to and encourage attention in one another's agendas. We recognize that this transmission of information by groups across institutional boundaries is only

one mechanism through which Congress and the media may become attentive to the same issues.³ Indeed, researchers have documented variation across issues in terms of who among the media, the president, and Congress takes the lead on issues or responds to the agenda setting efforts of others (Edwards and Wood 1999). We embrace this notion of inter-institutional responsiveness in setting agendas, adding only a rationale for how this process is facilitated by interested organizations.

This brings us, then, to three hypotheses about the agenda setting efforts of organized interests:

- *Hypothesis 1, Organized Interests Subsidize the Costs of Search for Reporters and Decision Makers:* Communities of organized interests that are more politically active and have a relatively greater capacity for public advocacy (e.g., research expertise, media relations units) are more likely than communities of organizations that are less active politically and have a lesser capacity for public advocacy to attract attention to the problems and issues they care about.
- *Hypothesis 2, Organized Interests Signal Salience:* Communities of organized interests that are relatively large are more likely than smaller communities of organizations to attract attention to the problems and issues they care about.
- *Hypothesis 3, Organized Interests Act as Transmitters of Information Between the Media and Actors in Government:* Communities of organizations that have a relatively greater capacity for public advocacy will affect the agendas of government and the media not only directly but also indirectly by serving as transmitters of information between these institutions.

Studying Organizational Agenda Setting

Our hypotheses about organizations' agenda setting efforts require that we choose a context for our study that allows us to focus on a set of issues or problems for each of which we can identify a set of interested groups. Moreover, because we want to make comparisons across different communities and groups, we need to study how government and media attention vary across a number of issues. These issues should be sufficiently different so that the organizational communities associated with them are distinctive. At the same time, however, we need to select a set of issues that are not so heterogeneous that they confound comparison. For these and other

³ The media are, of course, attentive to the “newsworthy” actions of Congress and the administration. In addition, there is evidence that members of Congress attend to what the media is covering when they decide how they should be allocating their time (Cook 1989).

reasons, we study whether and how groups affect the agendas of government and the media in the context of seven diseases: heart disease, lung cancer, cerebrovascular disease (i.e., stroke), chronic obstructive pulmonary disease (i.e., bronchitis, emphysema, and asthma), diabetes, HIV/AIDS, and Alzheimer's disease. These diseases have been among the leading causes of mortality in the U.S. for the last two decades for the population as a whole as well as for each of several distinctive age, race, and gender groups.⁴ Although there are myriad diseases that we could study, we begin with these seven because while they are all leading causes of mortality, they vary in terms of the way they are perceived and understood by the public, the extent to which they are politicized, and the degree to which they attract the interest of various organizations.⁵ Disease, and health problems in general, have been a growing part of the governmental and media agendas over time but, as we will demonstrate, there is considerable variation in the amount of attention given to individual diseases.

For the purposes of our study, we assume that organizations prefer more attention to less attention because more attention raises public awareness of a disease and affects the perception of that disease's impact on society. To be sure, there are qualitative differences in the coverage of a disease that mean organizations may prefer only some forms of coverage (e.g., stories that evoke sympathy or concern for those afflicted with a disease, stories that contain positive narratives about providers of treatment). We plan to investigate qualitative differences in coverage at a later date but for the near future we assume that more often than not, more attention by government decision makers and the news media is preferred to less.

Another key aspect of our research approach is its longitudinal focus. Problems and issues may cycle in and out of attention (Downs 1972) so that at any one time, some subset of

⁴ The age and race groups are: white, Black, Hispanic, Asian, and Native American; and pediatric (<18), young adult (18-44), middle adult (45-64), and elderly (65+). Combining the age and race groupings and further subdividing by gender forms the subgroups.

⁵ We restrict our analysis solely to lung cancer, which is the leading cause of cancer mortality rather than focus on cancer of all types, which is a leading cause of death. We disaggregated lung cancer from all cancers in this analysis because in future work we may examine separately other forms of cancer.

issues may garner the attention of the media and decision makers in government, only to have the composition of that subset change somewhat as time goes on. As we describe in more detail below, we examine the attention given to each of our seven diseases by Congress, the president, and the media across the 19-year period extending from 1980 to 1998.

Data

We are in the process of collecting a diverse array data in order to test our hypotheses about organizations' impact on the agendas of the media and government.

Measures of attention. To begin, we currently are gathering five sets of indicators of attention to disease. First, we measure congressional attention to a disease by whether there are any disease-related hearings held by the House or Senate each week from 1980 to 1998, and also by the number and length (in days) of those disease-related hearings.⁶ These data were obtained from abstracts of congressional hearings in the *Congressional Information Service Abstracts* for each week and year of the time period covered by our study.⁷ The presence, number, and days of hearings exclude appropriations hearings and other routine hearings (e.g., reauthorization hearings). We eventually will have separate hearings indicators for the House and Senate, and we will distinguish between hearings in which a disease was mentioned, and those that are disease-focused (i.e., where the disease is the topic of the hearing).⁸ Second, we measure presidential attention to each disease by indicating the presence of disease-focused entries each week in the *Public Papers of the President*, and also by counting the number of those entries. We also are identifying the number of times a disease is mentioned in the *Public Papers* entries each week.

⁶ We examine attention weekly because we are interested not only in how groups affect the media and governmental agendas, but also how the media, Congress, and the president respond to one another's attention to an issue. If we aggregate to a larger time period it would likely be more difficult to isolate the effects of attention in one arena on the attention level in others.

⁷ The first congressional hearings about AIDS occurred in 1983 so the series for that disease is shorter than are the series for the six other diseases.

⁸ That is, we make a distinction between hearings that address specifically a disease (e.g., Alzheimer's), and those in which the disease may be mentioned in the context of some other topic (e.g., regulation of nursing homes).

Third, to measure broadcast media attention we indicate the existence of both disease-related and disease-focused stories appearing on the ABC, CBS, or NBC early evening news broadcasts each week from 1980 to 1998. In addition, we count the number of these stories, and their length (in seconds).⁹ Although we focus in the short term on aggregate weekly coverage given to each disease, we also have obtained these data for each network. Broadcast attention data were obtained from the *Vanderbilt Television News Abstracts and Indices*. Fourth, attention from the print media will be measured through the presence of disease-focused national newspaper stories in each week of each year from 1980 through 1998, as well as through the number of stories and a count of the number of words in those stories.¹⁰ At present we are working through data gathered from the electronic archives of *The Washington Post*, and we also will gather data from the U.S. newspapers appearing in the *General News, Major Newspaper* section of Lexis-Nexis. Major U.S. newspapers are those U.S. newspapers in the top-50 circulation list in *Editor and Publisher International Year Book* (*The Washington Post* is part of this archive). Finally, we currently are gathering scientific attention to each disease by indicating the presence of articles about each disease appearing each week in the *New England Journal of Medicine (NEJM)*, the *Journal of the American Medical Association (JAMA)*, or the *Annals of Internal Medicine (AIM)*.¹¹ The entries in this series are coded to reflect whether the primary focus of the article is about changes in prevalence, incidence, or severity of the disease, a new treatment or cure for the disease (pharmacological or surgical), or prevention of the disease (including screening and diagnostic technologies).

A common set of key words was used to search for the congressional hearings, the presidential mentions, the broadcast and print news stories, and the scientific journals. These terms, which are listed in Table 1, include words used by laypersons as well as medical

⁹ The first nightly news story on AIDS was broadcast in 1982.

¹⁰ Obituaries are excluded from the nightly news and newspaper counts.

¹¹ *AIM* is published semi-monthly so the time unit for collecting these data is semi-monthly as well.

professionals. For example, we not only searched for mentions of “heart disease” and but also for mentions of “myocardial infarction.”

[Table 1 here]

Identifying and measuring organizational communities. In order to test our ideas about whether and how organizations affect the attention given to different diseases by the media and government decision makers, we need to identify the organizations that take an interest in policy decisions made about each disease (e.g., research funding, coverage of diagnostic tests and treatment under Medicare, providers deemed appropriate to treat a disease), as well as groups that are not engaged primarily in political advocacy but are interested in research about, treatment of, and public education about the disease. Some organizations, such as the American Heart Association, American Cancer Society, American Lung Association, American Diabetes Association, Alzheimer’s Association, and the most visible of the organizations that are active on AIDS-related issues (e.g., ACT-UP, AIDS Action, American Foundation for AIDS Research) are relatively easy to identify and place in their respective communities. Beyond these prominent groups, however, it is difficult to locate the other organizations that take an interest in a disease. But because we are interested in the size and character of these communities, and how the size and character of communities vary across diseases, we need to identify as completely as possible the organizations relevant to each disease community. The approach we take to accomplish this task is a multifaceted one. First, we searched the text of entries in the *Associations Unlimited (AU)* database using the same terms we used to locate disease-related news stories, hearings, and presidential mentions (see Table 1). If an organization that was uncovered through a search was deemed relevant to a disease, that organization was classified as national, or regional/state/local depending on the designation in the *AU* database.¹² Relevant organizations were then identified as being either central or tangential to the disease community depending on whether they had,

¹² As an example of when an organization could be irrelevant, consider that the search term “AIDS and disease” turns up several disease groups that assist or aid patients with their ailments.

respectively, a direct interest in some aspect of a given disease (e.g., as treatment providers, patient advocates, or seekers of research funding), or an interest that was orthogonal to their primary organizational objectives (e.g., a local Elks chapter sponsoring a dinner to raise money for Alzheimer's patients in the same local area). We also gathered information on the year the organization formed, and recorded its annual budget when these data were available. The founding year, of course, is critical to documenting the change over time in the size and character of each disease community.¹³ If the founding year is not available in *AU*, we try to locate it from another source (e.g., a website for the group). In Table 2 we present the number of national central organizations in existence at the start and end of our time series as documented in the *AU* database. Not surprisingly, as Table 2 illustrates, the growth in AIDS-related groups has been most pronounced, increasing from one group in 1983 to 32 national organizations in 1998. While the numbers of organizations with an interest in heart disease and those with an interest in diabetes also are large and are growing, neither community experienced the degree of expansion that occurred in the AIDS organizational community during the same period. The communities for the remaining four diseases are much smaller, and have experienced little, if any, change over time.¹⁴

[Table 2 here]

In addition to searching the *AU* database, we also are in the process of checking two other sources to ensure that our measure of the size and composition of disease communities is complete, and to obtain additional data about the political activity and advocacy capacities of

¹³ There are 23 organizations that came into being before AIDS was recognized as a disease that mention an interest in HIV/AIDS and AIDS-related policy issues. These groups -- all of which would be considered central to the organizational community -- include Association of Reproductive Health Professionals (founded in 1963) and National Women's Health Network (founded in 1972). At present, we do not include these 23 organizations in our count of associations because when they added AIDS to their areas of concern and interest is not clear. In the future, we plan to check earlier versions of *AU* (known previously as *The Encyclopedia of Associations*) to see when AIDS is added to the organizational entries.

¹⁴ We also will be characterizing communities of organizations with an interest in each disease in terms of whether there is one organization that acts as a single-spokesperson/advocate for the community, or whether there are a number of predominant spokespersons/advocates (see Salisbury, et al. 1987).

each community. The first of these sources is *Washington Representatives* (1999). Specifically, we are compiling lists of organizations appearing under the subject heading “health” that could have an interest in one or more of our seven diseases. The second additional source is the database created from the Lobby Disclosure Reports for 1996 that were filed with the Secretary of the Senate (see Baumgartner and Leech 1999). The representatives of lobbying firms and organizations who file these reports (as required by the Lobby Disclosure Act of 1995) are asked to specify the issues they lobby on within broad policy categories (e.g., Medicare/Medicaid, tax). We are currently gathering the names of organizations that registered to lobby under the category “medical/disease research/clinical labs” that could have an interest in one or more of our seven diseases. Once the lists of organizations are completed, we will compare the lists from the Disclosure Reports and *Washington Representatives* with the lists of organizations obtained through the *AU* database for each disease. Any organizations unique to the two former sources will be added to the relevant disease communities if their names convey unambiguously an interest in a given disease (only groups appearing in *AU* have an entry describing their interests). We will attempt to locate websites for any remaining groups that could potentially be part of a disease community (e.g., those with ambiguous names) in order to assess whether they should be added to a particular disease community.

The presence of groups in either (or both) *Washington Representatives* or the Disclosure database provides us not only with a more exhaustive count of the groups in each community but also with a way of distinguishing politically active groups from those for whom political activity is not a central mission. It is unlikely that a group would be active politically on the national scene and not appear in *Washington Representatives* or have registered lobbyists.

Once the organizational communities are identified for each disease, we will search the political action committee (PAC) registration data available from the Federal Election Commission to determine the number of organizations present in each disease community that maintains a PAC. The PAC data will provide us with one indicator of the advocacy capacity of

the organizations that take an interest in each disease. We also will search the congressional hearings for each disease, as well as a sample of the news stories in order to obtain counts of organizations' appearances in each venue. These data will allow us not only to compare the breadth of representation of the organizations in each community, but also determine whether the number and type of organizations that are prominent in the media differ from those that are prominent in Congress.

Burden. Another set of exogenous variables we are collecting is designed to tap the burden of each disease in the population. To date, for each disease we have obtained yearly mortality rates (per 100,000 individuals). These are non-age-adjusted rates that are designed to reflect the likelihood of dying from a disease in a given year for the general population. We also obtained these mortality data separately for males and females, whites, African Americans, Hispanics, Asian/Pacific Islanders, and Native Americans, and for children (aged <18 years), young adults (18-44), middle adults (45-64), and the elderly (65+).¹⁵ These data are drawn from the compressed mortality file available through a Centers for Disease Control and Prevention website called *CDC Wonder*. We include indicators of disease burden in our analysis to control for the possibility that more attention will be given to more burdensome diseases. Whether problem severity or degree of burden have any impact on the levels of attention given to a problem is far from clear. Researchers have shown both for diseases (Adelman and Verbrugge 2000; Cook and Colby 1991:222-23) and for other policy issues (Walker 1977) that trends in congressional attention and media attention depart from trends in problem severity.

Table 3 presents information about the average level of attention given to each of our seven diseases, the average sizes of the organizational communities associated with each disease, and the average mortality rate for each disease across the 1980 to 1989 time period. Of course,

¹⁵ Relative to mortality rates, incidence rates would probably offer a more inclusive measure of the burden of a disease, particularly for chronic diseases like diabetes. With that said, we use mortality rates here because they do reflect disease burden, and they are more readily available than incidence. We are in the process of trying to identify and collect additional measures of burden with an eye toward indicators that distinguish chronic diseases that involve costly treatment over time from diseases that are acute and deadly.

the figures shown in Table 3 mask changes that most certainly have occurred over time in attention, organizational formation, and mortality. But they do illustrate the variation in attention levels across our seven diseases and across the agendas of the media, president, and Congress. In addition, the figures in Table 3 provide a first glimpse at some of the variables most central to our research for each disease. Consider first the variation in attention to different diseases within and across the three institutions we study. Not surprisingly, AIDS attracts more attention, on average, than other diseases in each of the three institutions. What is more surprising, perhaps, is the lack of distinctiveness of AIDS relative to other diseases in Congress. While it is true that Congress devotes more weeks of the year, on average, to hearings on AIDS than it does to hearings on any of the six other diseases we are studying, the number of weeks during which hearings are held is relatively low (on average Congress devotes 10 weeks of the year to hearings on AIDS) and is similar to the number of weeks that Congress devotes to Alzheimer's disease or heart disease (on average about six weeks). The president and the nightly news broadcasts, in contrast, are much more likely to devote attention to AIDS than they are to devote attention to any other disease. According to the figures in Table 3, the nightly news gives some attention to AIDS in more than half of all weeks of the year; the president, on average, mentions AIDS at least once each week about 14 weeks (or one quarter) of the year. Aside from AIDS, the nightly news broadcasts give a substantial amount of attention to heart disease, lung cancer, and Alzheimer's (14 weeks, 5 weeks, and 5 weeks, respectively), whereas the president is most likely (but not highly likely) to talk about heart disease, Alzheimer's, and diabetes.

[Table 3 here]

The second observation that can be made about the data shown in Table 3 is that there appears to be no clear pattern to the relationships between the levels of attention given to a disease, the mortality rates for that disease, and the size of the organizational community associated with a disease. The average over time mortality rates for heart disease, cerebrovascular disease, and lung cancer are more than three times the rates of mortality for

diabetes, AIDS, and Alzheimer's disease but the attention given to diabetes and Alzheimer's on average are not too different from the amount of attention given, on average, to cerebrovascular disease and lung cancer. Moreover, despite the astronomically high average mortality rate for heart disease, the disease receives about as much political attention as Alzheimer's (a disease with a mortality rate that is less than two percent the rate for heart disease), and less than half as much TV news coverage, on average, as AIDS (a disease with a mortality rate that is about three percent the rate for heart disease). Similarly, the linkage between size of organizational community and level of attention is not straightforward. The two largest organizational communities – i.e., those focused on heart disease and AIDS – attract much more nightly news coverage than do the other five diseases but, with the exception of AIDS, the amounts of attention given by the president and Congress to each disease are relatively similar. Indeed, while AIDS is clearly an outlier in TV news coverage and in terms of mentions by the president, it is much less distinctive relative to the other diseases when it comes to congressional attention patterns and organizational community size. Exactly what the relationships are between these variables, and how those relationships can best be uncovered, is the subject to which we turn next.

Analytic Approach

Consistent with extant research, and with our hypothesis about groups as cross-institutional carriers of information, we are interested not only in whether and how organizational communities affect attention to disease but also in the interdependence of government and media attention to problems. Efforts to take this interdependence into account while examining attention paid to seven different diseases across a 19-year period are not straightforward. One option that would allow us to compare attention paid to different diseases over time is a pooled cross sectional approach. However, if we opt for this approach we cannot assess the extent to which there exists feedback between the agendas of the president, Congress, and the broadcast media. A second option would be to use vector autoregression (VAR) to assess the extent to which the agendas of the president, Congress, and the media stimulate and respond to one

another. VAR is ideally suited to the situation we have here in that we lack strong priors about the sequence and nature of feedback between the three agendas (Edwards and Wood 1999). A VAR would not, however, allow us to look simultaneously at how differences in the communities of organizations associated with seven different diseases affect levels of attention. Moreover, a VAR is not well suited to our interest in obtaining relatively precise estimates of the forces affecting each agenda. A third option, a simultaneous equations framework, allows us to assess the interrelatedness of different agendas, to pool diseases (and also to consider the specific effects of diseases), and to make comparisons across disease-specific communities. However, it is difficult in this framework to incorporate temporal aspects of agenda setting, the search for “good” instruments for the endogenous indicators often is difficult, specification errors are magnified in the system, and analysts must impose sometimes arbitrary restrictions on the linkages between the variables in the system in order to estimate the system of equations. Despite the shortcomings associated with a simultaneous equations framework, we focus for now on the leverage it offers in looking simultaneously at the linkages between the agendas and undertake a preliminary test of our second hypothesis (the only hypothesis we have data to test).¹⁶

Specifically, we use three stage least squares (3SLS) to estimate the following system of equations:

$$Y_{1(it)} = \gamma_{12}Y_2 + \gamma_{13}Y_3 + \mathbf{B}'X + \Gamma_1'Z_1 + \varepsilon_1 \quad (1)$$

$$Y_{2(it)} = \gamma_{21}Y_1 + \gamma_{23}Y_3 + \mathbf{B}'X + \Gamma_2'Z_2 + \varepsilon_2 \quad (2)$$

$$Y_{3(it)} = \gamma_{31}Y_1 + \gamma_{32}Y_2 + \mathbf{B}'X + \Gamma_3'Z_3 + \varepsilon_3 \quad (3)$$

¹⁶ There is at least one other issue that further complicates our empirical assessment of groups’ effects on the media and governmental agendas: the attention data are characterized by many zeroes. Ideally, we would like to use a method of estimation (such as tobit or zero-inflated Poisson regression) better suited to this feature of our data. The difficulty here is that adjustments for zero-inflation in addition to our efforts to account for interdependence across institutions and time dependence within the same model will be mathematically and computationally difficult.

In equations (1)-(3), the Y 's represent the three endogenous measures of attention for which we currently have data – the number of disease-related, non-routine hearings in Congress each week, the number of disease mentions made by the president each week, and the number of seconds of disease-related nightly news coverage each week. Each Y is a function of all of the other Y 's, a set of independent variables (\mathbf{X}) that we expect will affect the amount of attention given to a disease by the TV news media, the president, and Congress, and a set of instruments that is unique to each equation (\mathbf{Z}_1 through \mathbf{Z}_3) that allows us to identify the system. The vector \mathbf{B} contains the coefficients for the variables contained in matrix \mathbf{X} that are common to each equation (mortality and organization community size); the coefficient vectors Γ_1 , Γ_2 , and Γ_3 correspond to each unique matrix of instruments \mathbf{Z}_1 , \mathbf{Z}_2 , and \mathbf{Z}_3 , respectively; γ_1 , γ_2 , and γ_3 comprise a vector of coefficients for the endogenous variables in the system, each for equation $i = 1, 2$, and 3 ; and ε_1 , ε_2 , ε_3 are equation-specific stochastic disturbance terms. The principal distinction between 3SLS and that of two-stage least squares is that in 3SLS, the errors of each equation are assumed to be systematically related to the errors in the other equations. An unpredicted rise in the nightly news coverage of diabetes should generate an unpredicted rise in mentions made by the president about diabetes; both will be “errors” in our system of equations, but they will be related.

There are nine variables that we use as instruments in this preliminary analysis to identify our system of equations. For congressional hearings devoted to disease, we include a dichotomous indicator of congressional election years. On the one hand, we might expect Congress to hold more disease-related hearings in the year of an election because such hearings demonstrate attention to salient domestic concerns of constituents. On the other hand, members of Congress might hold fewer hearings overall in election years in order to concentrate their time and energy on interacting with constituents in their home districts or states. In addition, we use inflation-adjusted ADA scores (Groseclose, Levitt and Snyder 1999) to measure the ideology of both the House and the Senate over time. More positive scores indicate a more liberal chamber. We also include dichotomous variables representing Democratic majority control in each

chamber. We are agnostic on whether more liberal or Democratic Congresses are likely to pay more or less attention to disease.

The equation representing presidential mentions of disease contains a dichotomous indicator of presidential election years, and another dichotomous indicator of whether the president is a Democrat (the first four years of the presidential series represent the Bush administration, and the six remaining years represent the first term and a half of the Clinton presidency). Like the Congress, the president could be expected to speak more about disease-related issues in presidential election years as part of his effort to discuss health care in general. However, one could also imagine fewer specific diseases being mentioned by the president in this context. Our expectation for the party of the president – for our series a dichotomous indicator of the Clinton years – is clearer: health and health care were touchstone issues for Clinton, so we have every reason to anticipate more diseases being mentioned by Clinton than mentioned by either Reagan or Bush.

Finally, the nightly news equation includes two variables that we expect to affect the attention given by the nightly news to disease. The first indicator is the standard deviation of the annual average Nielson ratings for the ABC, CBS, and NBC early evening news broadcasts. This indicator measures the degree to which the three networks are close to one another in the ratings game. The greater this standard deviation, the more one network has an upper hand over the others (or two of the networks are competitive with one another but not with the third), and the less competitive the ratings game. We hypothesize that media organizations will give more attention to diseases in the context of a general focus on health issues when they are facing more challenging competition. Put differently, media organizations will back away from “luxury” subjects such as foreign affairs and attend more to “human interest” stories that can increase ratings and secure a viewer base. Similarly, our second ratings variable, the sum of the ratings shares of the three networks combined, measures the degree to which all three nightly newscasts are losing viewers to other television shows or news programs. We expect that as the newscasts

lose viewers, they will turn to disease-related stories and other “human interest” concerns to gain it back; observers of broadcast news have noted just such a trend over the past twenty years, as greater competition from non-network news sources has coincided with a growing emphasis on health-related issues.

Preliminary Results

Table 4 presents results from our analysis of congressional, presidential, and broadcast media attention to disease.¹⁷ These results, which are spread across two pages, show some support for our hypothesis about the effects of organized interests on agenda setting. Specifically, the results in Table 4 show that larger communities of organized interests with an interest in a disease bring more congressional and presidential attention to that disease. Thus, diseases that experience growth in their organizational communities over time, as well as those diseases that have relatively large numbers of interested organizations, will be the subject of more congressional hearings and comments by the president than will diseases that do not experience a growth in the number of interested organizations and those that draw fewer organized interests. That the size of disease-interested organizational communities has a positive and statistically significant impact on congressional and presidential attention levels lends support to the idea that organized interests signal salience. However, in contrast to expectations, groups do not have a statistically significant impact on the attention paid to disease by the broadcast media.

[Table 4 here]

The results shown in Table 4 also lend support to the idea that decision makers and the media react to and stimulate one another’s attention to problems. Indeed, while Congress allocates attention to disease independent of the president and the president makes fewer references to diseases that are the subject of congressional hearings, both Congress and the

¹⁷ With perfectly complete data we would have 6,937 disease-weeks of observations (seven diseases, 19 years, with three leap years included). However, the death rate measures for AIDS so not exist before 1987 so that we have 12 years of data for that disease series, reducing our disease-weeks to 6,572. That somewhat fewer observations are used to estimate our three equation system is due to the presence of lagged variables in the system.

president are responsive to diseases being discussed on the nightly news. Indeed, the president is likely to mention a disease when the nightly network news is devoting attention to that disease. Similarly, Congress is more likely to schedule hearings relevant to a disease when that same disease has been the focus of the nightly news broadcasts in the past three months.¹⁸ In turn, the broadcast news media are significantly more likely to give attention to a disease if that disease has been the focus of a congressional hearing or been mentioned by the president. In this way, each government institution is responsive to the other indirectly through its responsiveness to the broadcast news media.

Our preliminary analysis of attention to disease also suggests that diseases imposing a significant burden on the general population (measured here by death rates) increase the attention given to that disease by the media and Congress. In the case of the president, however, the relationship between mortality and attention is negative, indicating that the president is more attentive to diseases that result in fewer deaths per 100,000 than he is to diseases that result in more deaths. This result is not too surprising when one recalls the attention given by the president to AIDS relative to other diseases shown above in Table 3.

In addition to the burden of disease in the general population, our analysis also suggests that attention patterns in the media and in government are affected by the racial and gender groups most affected by a disease. Specifically, diseases that affect whites relatively more than African Americans (i.e., heart disease, Alzheimer's) are more likely to get attention through congressional hearings. In addition, diseases that disproportionately affect males relative to females (i.e., AIDS, lung cancer, and prior to the mid-1990s bronchitis, emphysema, and asthma) get more coverage by the media, Congress, and the president. These estimates suggest that

¹⁸ The measure of nightly news coverage in the congressional attention equation is not contemporaneous. Rather the measure represents the average amount of attention given by the nightly news broadcasts to a disease in the past three months. The use of this measure as opposed to current news coverage reflects our belief that Congress typically plans hearings in advance to address some recurring problem. Unlike Congress, the president can react immediately (or not) to issues and problems that are given attention by the media. The measure of presidential attention in the congressional attention equation is similarly an average of the mentions made in the past month.

congressional attention patterns are least “representative” of racial minorities, and that all three of the institutions we consider here give much more attention to diseases that disproportionately affect males relative to females.

The 3SLS results in Table 4 also suggest that each institution’s attention patterns reflect a certain amount of inertia. That is, news stories and hearings about a disease and mentions of that disease are more likely if a story, hearing or presidential mention occurred in the preceding week. In addition, the broadcast media tends to give less attention to the topic of disease when the ratings shares of the three networks are relatively high, and Congress appears to hold significantly fewer hearings relevant to disease in election years. Not surprisingly, former President Clinton gave more attention to disease and health problems than did either of his Republican predecessors.

Where Do We Stand and Where Do We Go From Here?

What, then, should we conclude about the role of organized interests as agenda setters from the results we just presented in Table 4? One reaction is that we should conclude very little in the way of firm evidence one way or another. This reaction makes sense when we highlight the preliminary nature of the analysis presented. We are in the process of collecting data, so that there will be much more information we can bring to bear to address our hypotheses. Indeed, we have yet to gather the data needed to test our full set of hypotheses about the impact of groups on agenda setting, we have yet to obtain separate counts of the number of days of non-routine hearings held by the House and Senate and we are collecting information about attention in the print media, we have not yet incorporated the impact of scientific attention on government institutions and the mainstream media, and we surely can gather better instruments than we currently have to identify our system of equations. Moreover, if we take as rough approximations of variance explained the R-square coefficients shown in Table 4, our model explains about nine percent of the variation in congressional attention to the seven diseases we study, about eight percent of the variation in presidential attention, and roughly 13 percent of the variation in nightly

news attention to the seven diseases.¹⁹ Careful and cautious interpretation of results from a work in progress is wise. Of course, when one's results provide mixed support for one's hypotheses – as we find here – such advice is easier to heed.

But we are encouraged by the results from this analysis and believe there is much to be drawn from them to assist our research into the role of organized interests as agenda setters. For one, our subsequent analyses will need to be especially attentive to parsing out the interplay and independence between the institutions we study. Certainly whatever approach we take to estimate the relationships of interest must be attentive to the linkages between the congressional, presidential, and media agendas.

In addition, we find immensely encouraging and interesting the fact that the size of organizational communities that take an interest in a disease has a significant effect on the attention given to that disease by the president and by Congress. The signaling hypothesis we test in this analysis suggests a very simple relationship between organized communities and the agendas of media and government. That is, we test whether communities of organized interests, through their size, signal the salience of a disease. However, for the media, the number of interested organizations may be insufficient to draw attention to a problem. Instead, it may be that active disease communities with information expertise will have a more substantial impact on the attention levels of the media. The president responds to a national constituency and without much effort or technical knowledge can talk – briefly or at length – about particular problems like disease. Congress similarly may respond to the signal sent by large organizations that some diseases merit their attention (and their participation and expert witnesses). However, for the evening news to give attention to a problem, there often needs to be more information provided. We expect that our subsequent research will allow us to show that communities of organized interests with a greater capacity for advocacy and political activity may play a greater role in setting the agenda of the media as well as the agendas of the president and Congress.

¹⁹ The R-square coefficients are not constrained to lie between zero and one in 3SLS.

Finally, our analysis shows that the institutions of government and the broadcast media show a consistent predilection to ignore, at the margin, those diseases with a higher burden upon females. Moreover, Congress appears to devote significantly less attention to diseases that affect African-Americans more than whites. Whether these findings point to entrenched patterns of bias or neglect of the plight of females (and in the case of Congress, black Americans) is a question beyond the scope of this paper (but see Gilens 1999). Yet it is surely a question that should occasion further research.

The larger theme of this analysis is that media organizations, the administration, and congressional committees operate not as independent fact-seekers and problem-solvers, but as information-hungry and salience-uncertain dependents. In the quest for topics that are worthy of the attention of news media, the president, and Congress, national institutions rely upon one another and upon organized interests for the news and the facts that they generate.

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Table 1

Key Word Search Terms

Diseases of the heart: diseases of the heart; cardiovascular disease; ischemic heart disease; heart attack; myocardial infarction; heart transplant; heart disease; angina; arrhythmia; hypertension; high cholesterol

Lung cancer: lung cancer

Cerebrovascular disease: cerebrovascular disease; stroke AND disease; transient ischemic attack; stroke AND brain; stroke AND thrombosis

Chronic obstructive pulmonary diseases: chronic obstructive pulmonary diseases; bronchitis; emphysema; asthma

Diabetes: diabetes mellitus; diabetes

HIV/AIDS: HIV/AIDS; AIDS AND disease; HIV

Alzheimer's disease: Alzheimer's disease; Alzheimer's; Alzheimers; Alzheimer

Table 2
Size of Organizational Communities
1980 and 1998

Disease	Number of Central, National Organizations	
	1980	1998
Heart disease	21	28
Cerebrovascular Disease	7	10
Lung cancer	2	2
Chronic obstructive pulmonary disease	9	12
Diabetes	14	22
HIV/AIDS	1*	32
Alzheimer's disease	6	6

*The first AIDS-related group emerges in 1983.

Table 3
Attention Levels, Organizational Communities, and Mortality Rates
1980-1998 Average
(diseases are displayed in descending order of average mortality rates)

Disease	Average Number of Weeks With:			Average Size of Org. Community	Average Mortality Rate
	TV News	Hearings	Pres. Mentions		
Heart disease	14.5	6.0	3.4	26.1	301.8
Cerebrovascular disease	2.7	1.5	1.1	8.7	62.2
Lung cancer	5.4	1.9	0.8	2.0	55.9
Chronic obstructive pulmonary disease	3.5	1.2	0.8	10.7	33.9
Diabetes	2.2	3.1	2.7	19.4	18.6
HIV/AIDS*	32.4	9.9	13.8	21.4	10.5
Alzheimer's disease	4.7	6.2	2.4	6.0	4.9

*The first nightly news story about AIDS occurred in the autumn of 1982, the first congressional hearing was held in 1983, and the first mention by the president occurred in 1985. AIDS mortality figures are available beginning in 1987.

Table 4: Three-Stage Least Squares Estimation of Attention to Disease

($N = 6,500$ disease-weeks)

	Seconds in Nightly New Stories	
	Coeff	SE
<u>Endogenous Variables</u>		
Mentions by the President	29.50	13.31
House Hearings	169.34	32.92
<u>Organization of Disease Variables</u>		
National and Central Disease Groups	-0.38	0.59
<u>Instruments – Competition Variables</u>		
Std. Dev. Of Ratings Across 3 Major Networks	-2.54	6.49
Sum of Nielsen Viewing Shares of 3 Networks	-0.78	0.35
<u>Disease Characteristics</u>		
Rate of Death per 100,000	0.10	0.04
White Rate of Death to African American Rate of Death	1.42	2.80
Male Rate of Death to Female Rate of Death	23.37	3.12
<u>Lags</u>		
Seconds in Newscasts (last week)	0.15	0.01
Constant	15.63	19.25
R-squared	.13	
Note: Bold coefficients are statistically distinguishable from zero at $\alpha = 0.05$ level. All tests are two-tailed.		

Table 4 (cont.): Three-Stage Least Squares Estimation of Attention to Disease
($N = 6,500$ disease-weeks)

	Congressional hearings		Mentions by the President	
	Coeff	SE	Coeff	SE
<u>Endogenous Variables</u>				
Congressional hearings this week			-0.80	0.46
Seconds in Newscasts, this week			0.003	0.001
<u>Organization of Disease Variables</u>				
National and Central Disease Groups	0.003	0.001	0.032	0.004
<u>Instruments – Political Variables</u>				
Presidential Election Year			0.04	0.06
Democratic President			0.21	0.06
Congressional Election Year	-0.03	0.01		
Democratic House Majority	0.03	0.05		
Democratic Senate Majority	0.02	0.02		
House Floor Median ADA Score	-0.07	0.27		
Senate Floor Median ADA Score	0.15	0.13		
<u>Disease Characteristics</u>				
Rate of Death per 100,000	<i>0.0001</i>	0.0000	-0.002	0.000
White Rate of Death to African American Rate of Death	0.029	0.005	0.010	0.037
Male Rate of Death to Female Rate of Death	0.018	0.004	0.075	0.035
<u>Lags</u>				
Presidential Mentions (last week)			<i>0.021</i>	0.012
Congressional Hearings (last week)	0.156	0.012		
Seconds in Newscasts (average, past 3 months)	0.0003	0.0001		
Presidential Mentions (average, past month)	-0.002	0.004		
Constant	-0.062	0.046	-0.317	0.106
R-squared	.09		.08	

Note: Bold coefficients are statistically distinguishable from zero at $\alpha = 0.05$ level. Italicized coefficients are statistically distinguishable from zero at $\alpha = 0.10$ level. All tests are two-tailed.