

## Representation and Agenda Setting

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*We develop a new approach to the study of representation based on agenda setting and attention allocation. We ask the fundamental question: do the policy priorities of the public and of the government correspond across time? To assess the policy priorities of the mass public, we have coded the Most Important Problem data from Gallup polls across the postwar period into the policy content categories developed by the Policy Agendas Project (Baumgartner & Jones, 2002). Congressional priorities were assessed by the proportion of total hearings in a given year focusing on those same policy categories, also from the Agendas Project. We then conducted similar analyses on public laws and most important laws, similarly coded. Finally we analyzed the spatial structure of public and congressional agendas using the Shepard-Kruskal non-metric multidimensional scaling algorithm. Findings may be summarized as follows:*

First, there is an impressive congruence between the priorities of the public and the priorities of Congress across time. Second, there is substantial evidence of congruence between the priorities of the public and lawmaking in the national government, but the correspondence is attenuated in comparison to agendas. Third, although the priorities of the public and Congress are structurally similar, the location of issues within the structure differs between Congress and the general public. The public “lumps” its evaluation of the nations most important problems into a small number of categories. Congress “splits” issues out, handling multiple issues simultaneously. Finally, the public tends to focus on a very constrained set of issues, but Congress juggles many more issues.

*The article has strong implications for the study of positional representation as well, because for traditional representation to occur, there must be correspondence between the issue-priorities of the public and the government. We find substantial evidence for such attention congruence here.*

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### I. Representation and Attention

Problem solving is a critical component of competent government, and problems cannot be solved without attending to them.<sup>1</sup> But problem solving is not the sole, nor even the most cited, standard for judging democratic government. Much more of the political science literature has centered on representation than on problem solving. Of course, the two need not be at odds; surely the opinions of the public are critical in assessing the nature of problems facing a government. But they need not exactly correspond, either. So in this article we add a new approach to the study of representation with a focus on problem solving. Quite simply, we ask

whether the policy priorities of the public—those issues that members of the public consider to be the most important ones facing the country—are reflected in the activities of Congress.

Our approach to representation, not surprisingly, is based on attention allocation. We ask the fundamental question: Do the policy priorities of the public and of the government correspond across time? Because people attend to issues they think are important, we ask, Do the public and the Congress attend to the same issues at the same time? In this article, we first address the issue of agenda correspondence between the American public and Congress. Later we also address whether the policy outputs of the government correspond to public priorities—but first things first. Policy actions cannot be taken unless attention is directed at the matter, but many policy actions can be blocked by the ponderous operation of U.S. political institutions.

Most scholarship on representation focuses on the correspondence in the policy positions of representatives and the represented—for example, how closely do the liberal to conservative positions (termed “ideal points”) on domestic issues match? This is *positional policy congruence*—it asks only how the policy positions of the government and the governed correspond. Important debates in this field have centered on whether such representation takes place at the individual or the collective level. Of interest here is the question of whether the policy preferences of the public are reflected in the preferences and activities of their representatives, either individually for each constituency or collectively for the nation as a whole. We have no quarrel with this approach, and it has led to important understandings about the democratic process. But this approach is incomplete because it neglects priorities among issues. How representative is a legislative action that matches the policy preferences of the public on a low priority issue but ignores high priority issues? Of course, we don’t mean to criticize the literature on positional representation for overlooking policy priorities; we simply take a complementary approach to the question, providing a fuller picture of the representational process. In fact, readers will see that our findings should be quite reassuring to students of positional representation. For positional representation to occur, logically one would expect that attention should be focused on similar issues. And we find impressive evidence that this does occur over the entire post-1947 period.

The range of issues pressing on government and the public is huge, but the attention capacities of both the general public and government are constrained, and constrained quite severely. The public holds many generalized positions on issues, but only a few of those issues are relevant at any particular time; that is, people will attend to only a limited number of issues. Under the positional approach, representatives can get high marks even while ignoring the priorities of the public if they act on issues on which the general public has positions but ranks them of low priority. Failure to act on those issues seen by the public as most important should be reflected in our models of representation, but it is typically absent from traditional approaches.

Although our focus on the question of allocation of attention is new, several studies have traced public and government concerns over time or at the macro level

as we will do here. Jim Stimson's (1999) focus on the national mood, Carmines and Stimson's (1989) discussion of the evolution of racial attitudes, Page and Shapiro's (1992) discussion of the rational public, Erikson, Wright, and McIver's (1993) focus on representation at the state level, and, most recently, Erikson, MacKuen, and Stimson's (2002) discussion of the Macro Polity have all taken steps towards a larger scale and macro-level attention to the issue of representation. Although none of these works have dealt specifically with issue attention as we will do here, readers will see that our findings lend more credence to these works because we find that Congress and the public do, in fact, show impressive correspondence in their issue priorities. With this congruence of attention in place, conditions are ripe for positional representation to occur. If we had found the opposite, no attention congruence, then findings about positional congruence would be somewhat diluted. (We should also note that we rely on the established literature for evidence about positional congruence, and we do not address that issue here. Our findings, alone, would tell us nothing about whether the government is moving in the same direction as the public on a given policy issue or away from the preferences of the public—see Erikson et al., 2002, on that issue. Rather, we focus only on whether the public and the government are attending to the same issues.)

Our article does not present a full model of the representational process. But it attacks a new piece of the puzzle, and it adds substantially to the literature's previous focus on positional congruence. No theory of theory of democratic representation can be complete without attention to the relative priorities of the public and the government, and yet little empirical work has focused on this until now. So we propose here to open a second line of inquiry on the topic, a line based in an information-processing understanding of the process of representation. The key is whether policymakers attend to the same set of issues as does the mass public. Because attention allocation is a direct indicator of priorities, in essence we examine the correspondence between the policy priorities of the mass public and of the legislature.

## II. The Public Agenda

By "the public agenda" we mean the set of policy issues to which the public attends. We do not include the policy solutions that may be entertained by political elites or by segments of the mass public. Public opinion tends to be vague when it comes to technical issues or complex solutions, but there is little doubt that people have a strong sense of what issues the government ought to be addressing (or to quit addressing, because public opinion in the United States includes a fine sensitivity to being overgoverned).

To assess the policy priorities of the mass public, we have coded the Most Important Problem (MIP) polls conducted by the George Gallup organization into the policy content categories developed by the Policy Agendas Project (Baumgartner & Jones, 2002). We are fortunate that for many years the Gallup organization has asked the same or a very similar question of the American public: "What is the most important problem facing the nation today?" This question addresses

the public's issue priorities, ignoring policy positions and preferences for solutions. As such, it is ideal for studying agenda correspondence. However, there are a number of potential pitfalls in using this data as a temporal measure of policy attention by the public. These include variability in question wording, in the number of respondents per poll, and in the tabulation of the answers on this open-ended question (Soroka, 2001). Also problematic is the variability in coverage of polls across the years. Perhaps more problematic are interpretative issues. As Wlezien (2003) has emphasized, the concepts of "salience" and "importance" are not equivalent. Demanding a response on the single most important problem when problems are few and minor (the late 1990s?) and when they are numerous and intense (the late 1970s?) always yields a ranking, but these may not be equivalent. (And in fact we will see that the public's focus is considerably more focused than that of Congress, but our measure of congressional attention is not limited only to the single most important problem, because Congress is divided into committees and each can pay attention to different problems simultaneously.)

Despite these issues, the data are the sole source for assessing the attention of the public to issues that we have. Potential gains far outweigh the pitfalls, so we proceed. To translate the raw totals of Gallup's polling into our policy content system, we took two steps. First, we noted the percentage of total responses in a single poll indicates that topic as the "most important problem facing the nation." Then we aggregated these polls on an annual basis, taking the average values in those years where multiple polls were conducted.<sup>2</sup>

Figure 1 shows the most important issues as seen by the public in the postwar period. The figure is a stacked-area graph, so that the total area of the graph represents the total public agenda space during the period (or 100% of the responses). Similarly, the region for each policy area represents the proportion of the public rating that issue as the most important problem over time. We have combined our defense and international affairs categories, because these matters, as important as they are to government, tend to blur in the public's mind.

Two things stand out from the figure. First, it is clear that the particulars of attention vary considerably over the postwar period. Civil rights occupied a prominent place in the priorities of the general public during the 1950s and 1960s but dropped from the agenda in the 1970s. Crime was prominent in the 1970s and again in the 1990s. Economic concerns were paramount in the 1980s.

Second, it is evident from the figure that the public agenda is dominated by concerns of national and economic security. In some years, these two issues so dominate the public agenda that there would seem to be no room for public discussion of anything else. In 1948, 78% of all responses fell into these two categories, and in 1983 the total was 83%. The low point was in 2000, with only 20% of the public concerned about one or the other of these issues as the most important problem facing the nation. The events of September 11, 2001, and the economic malaise beginning that year has transformed the graph, but our analysis stops with the turn of the 21st century (on January 1, 2001!).

The public agenda space is constrained and is dominated by national and economic security. Occasionally other issues will displace these two major concerns of

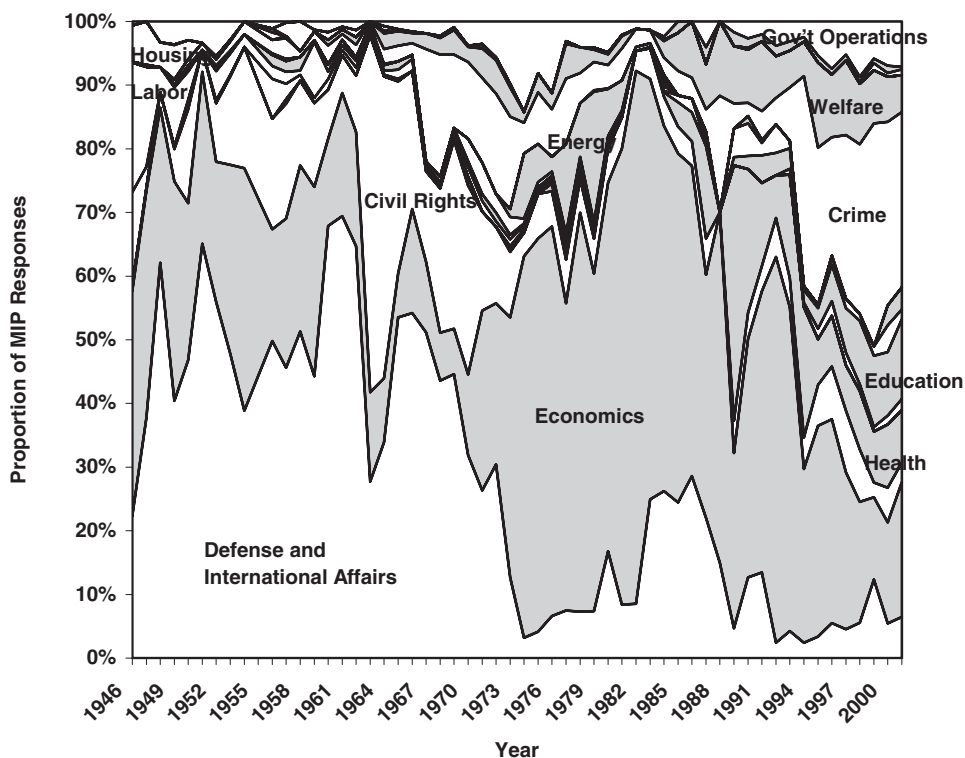


Figure 1. Policy Issues on the Public Agenda.

the public, but with the exception of civil rights in the 1960s, clusters of issues tend to displace the “big two.” The impression one gets from Figure 1 is the solid dominance of international and economic security as the key priorities of the general public, with an occasional “spike” of other concerns. These other concerns tend to occur together, because the absence of economics and defense opens somewhat of a “window of opportunity” for these other concerns to move up in the collective attention of Americans. It is worth noting that these windows are relatively rare.

### III. The Congressional Agenda

What is the shape of the congressional agenda, and how do we assess it? We use the Policy Agendas Project, which provides evidence on every congressional hearing since 1947. Figure 2 shows the proportion of hearings in each of the 19 major topics as defined in the Agendas Project (these include defense and international affairs separately; they were combined in Figure 1).

Figure 2 shows that the congressional agenda is much more diverse, at any given time, than the public agenda. This is partly an artifact of the measures, so let us be clear about that at the outset. The public agenda, as we have noted, is meas-

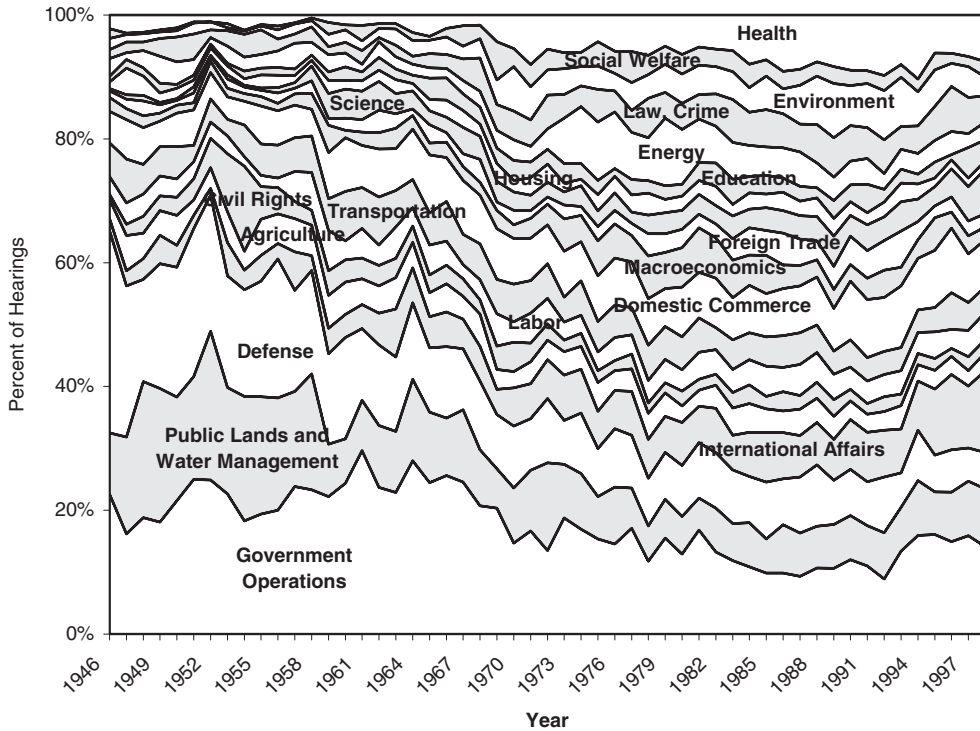


Figure 2. Policy Issues on the Congressional Agenda.

ured by the answer to a question about “the most important problem” facing the nation, whereas the congressional agenda is based on hearings activity. As there are scores of committees in Congress and each can hold hearings simultaneously, it is normal that the congressional agenda should be more diverse than the public’s response to the Gallup question. Still, there are reasons to compare the two series. First, different members of the public can have diverse opinions about the most important problem. Figure 1 shows that at many times there are a number of issues that gain considerable mention by different respondents as the most important problem; there need be no consensus on this. Second, congressional committee chairs are able to see important issues rising in public concern, and the jurisdictions of their committees are not so rigid that they have no flexibility to address issues that they see on the horizon. Agriculture Committee hearings can focus on foreign trade issues, worker safety, unemployment and poverty, or the environment, because all of these may affect farmers; the Commerce Committee can hold hearings on a wide range of topics affecting business. In short, although the congressional data show much greater diversity in attention because of the division of labor and the organizational structures of Congress, we can nonetheless evaluate changes in the relative priorities of the public and Congress through a focus on these two measures of attention.

#### IV. Agenda Congruence

We know that the agenda space of government is constrained, and we know that many forces other than public opinion clamor for space on the governmental agenda. Just how do the concerns of the American public match the governmental policy agenda across the postwar period? If the represented and their representatives prioritize national problems differently, then representation cannot occur. It may not occur even where such correspondence exists, because serious policy action can be blocked by the complexities of the U.S. political system or by the case in which leaders held views opposite to those of the public. But congruence between the public and the governmental agendas is an unavoidable precondition without which representation cannot be said to occur.

Table 1 is a first step, and we believe a major first step, in the study of the congruence between public and government agendas. It matches the policy priorities of the American public with the congressional policy agenda. Congressional attention to a policy area is the proportion of total hearings in a given year that centered on that policy category. For both sets of data we have combined defense and international affairs and dropped government operations and public lands from consideration, because so much of congressional consideration of these topics is housekeeping in nature. The table covers the years 1946–98.

Hearings activity is a “front end” component of the policymaking process. That is, it responds more easily to changing information flows than do the later stages of the policymaking process. As a consequence, it is reasonable to expect a reasonably rapid response in hearings activity to citizen concerns, and we matched public opinion and hearings for the same year. So we adopted a stringent standard: to count as agenda congruence, we demanded that public and congressional attention occur at the same time. If hearings are scheduled a year after an increase in public attention to a topic, we will not count it.<sup>3</sup> Table 1 shows the simultaneous correlations between public and congressional attention across the 19 topics listed in the rows and columns.

In Table 1, the rows are the MIP categories and the columns are the corresponding Hearings categories. Listed along any row are the correlations between an MIP topic and the hearings on the various major topic categories. Listed down any column are the correlations between a hearing topic and the various categories of MIP responses. Along the diagonal are the correlations among the same policy topics: the congruence scores.

For those accustomed to standard correlation matrices, the matrix of Table 1 may initially be confusing, because the cells above and below the diagonal are not equivalent. The diagonal cells represent the correspondence of public and congressional attention. These are the correlations between public and congressional attention *to the same topic*. Cells above and below the diagonal show the correlation between the proportion of hearings on the topic listed in the column heading and the proportion of the public saying that a given problem is the most important one facing the nation, as indicated in the row headers. In short, by looking along the



**Table 1.** Correlations Between the Proportion of MIP Responses on a Topic and the Proportion of Congressional Hearings on the Topic 1996–1998\*

MIP Proportion	Proportion of Congressional Hearings by Major Topic															
	Econ	CRts	Heal	Agri	Labr	Educ	Envir	Ener	Iran	Crim	Welf	Hous	Com	Def&lr	Scien	FgnT
Economics	<b>0.81</b>	-0.23	<b>0.45</b>	-0.18	-0.02	0.20	0.33	<b>0.75</b>	-0.25	<b>0.41</b>	<b>0.39</b>	0.29	0.06	-0.29	0.02	<b>0.32</b>
Civil rights	-0.29	<b>0.27</b>	-0.39	0.23	0.07	-0.03	-0.23	-0.36	0.20	-0.32	-0.11	-0.18	-0.02	-0.01	-0.09	-0.30
Health	-0.02	-0.18	<b>0.59</b>	-0.29	0.10	0.24	<b>0.62</b>	-0.04	-0.36	<b>0.38</b>	0.12	0.13	<b>0.35</b>	-0.28	<b>0.42</b>	<b>0.51</b>
Agriculture	-0.22	-0.09	-0.28	<b>0.15</b>	-0.22	-0.30	-0.30	-0.15	0.21	-0.35	-0.22	-0.17	-0.28	<b>0.68</b>	-0.35	-0.23
Labor	-0.27	-0.04	-0.34	0.17	<b>-0.11</b>	-0.35	-0.38	-0.23	0.18	-0.43	-0.33	-0.04	-0.37	<b>0.74</b>	-0.45	-0.39
Education	-0.13	-0.20	<b>0.34</b>	-0.34	0.12	<b>0.35</b>	0.25	-0.19	-0.18	0.25	0.03	-0.23	<b>0.38</b>	-0.14	<b>0.55</b>	0.16
Environment	0.12	-0.15	<b>0.57</b>	-0.39	0.04	0.33	<b>0.63</b>	0.08	-0.20	<b>0.41</b>	<b>0.35</b>	0.15	0.27	-0.36	0.23	0.26
Energy	<b>0.49</b>	-0.19	0.13	-0.09	-0.10	0.06	0.10	<b>0.76</b>	0.05	0.09	<b>0.36</b>	0.12	-0.03	-0.28	-0.00	0.04
Transportation	-0.22	0.22	-0.31	0.16	-0.35	-0.42	-0.31	-0.04	<b>-0.15</b>	-0.25	-0.32	-0.24	-0.39	<b>0.32</b>	-0.42	-0.32
Crime	0.07	-0.21	<b>0.39</b>	-0.42	0.04	0.36	<b>0.35</b>	0.01	-0.18	<b>0.41</b>	<b>0.38</b>	0.00	<b>0.41</b>	-0.35	<b>0.46</b>	0.03
Welfare	0.21	-0.33	<b>0.75</b>	-0.50	0.21	<b>0.51</b>	<b>0.72</b>	0.08	-0.31	<b>0.62</b>	<b>0.41</b>	0.12	<b>0.61</b>	-0.48	<b>0.59</b>	<b>0.47</b>
Housing	-0.30	-0.13	-0.27	0.18	-0.21	-0.31	-0.35	-0.16	0.18	-0.35	-0.32	<b>0.13</b>	-0.39	<b>0.67</b>	-0.53	-0.31
Commerce	-0.27	0.09	-0.13	0.19	-0.39	-0.17	-0.15	-0.14	-0.02	-0.13	0.22	-0.08	<b>-0.07</b>	0.24	-0.24	-0.10
Defense & inter	-0.62	<b>0.39</b>	-0.78	<b>0.44</b>	-0.08	-0.35	-0.69	-0.59	<b>0.38</b>	-0.63	-0.49	-0.22	-0.39	<b>0.40</b>	-0.36	-0.39
Science & tech	-0.18	-0.02	-0.35	<b>0.32</b>	<b>0.37</b>	-0.23	-0.29	-0.19	0.29	-0.34	-0.29	-0.35	-0.22	0.10	<b>-0.00</b>	-0.14
Foreign trade	0.10	-0.21	<b>0.63</b>	-0.25	0.21	0.30	<b>0.66</b>	-0.03	-0.34	<b>0.44</b>	0.14	0.08	<b>0.40</b>	-0.27	<b>0.44</b>	<b>0.61</b>

\*Correlations in **bold type** are significant at 0.05 for a one-tailed test for diagonal elements, and a two-tailed test for off-diagonal elements (N = 52). Those in *italics* are significant at 0.10. Defense and International affairs are combined. Government operations and Public lands are omitted.



diagonal we can see the correspondence in public and congressional attention. Looking in the cells off the diagonal, we see spillover effects and trade-offs. Spillovers are positive correlations: when public attention focuses on health care, for example we see that Congress pays increased attention not only to health care but also significantly more to environment, crime, science, and foreign trade. Trade-offs are negative: Looking again at the health care example, more public concern for health care is statistically related with *less* congressional attention to agriculture, transportation, and defense.

To explain how to read Table 1 further, the cell in the third row and first column of the table is the correlation between proportion of MIP responses indicating health as “the most important problem facing the nation” and the proportion of congressional hearings on the topic of macroeconomics; the value is  $-0.02$ . The cell in the first row and third column is the correlation between the MIP responses on economics and hearings on health; the value is  $0.45$ . So hearings on health are related to public concern about the state of the economy, but hearings on macroeconomics are not related to public concern about health.

The diagonal entries are most critical: They are the relationships between similar MIP and hearing categories; hence they most directly indicate representational behavior. Of course, we cannot say *why* the correlation occurs. The correlation could be a result of responsive behavior on the part of representatives; it could result from people becoming attuned to governmental activity and responding to it; or it could be the case that both the citizenry and its representatives are reacting to a similar empirical set of circumstances. Only the detailed case analyses can indicate that. Nor can we say whether the policy outputs of government match citizen priorities. As we shall see, the second issue is enormously complicated because of the operation of American institutions—they act to deter a seamless match between citizen preferences and policy outputs. But we can say that, whatever the mechanism, the diagonal entries in Table 1 indicate the extent to which the representatives and the representatives have similar policy priorities. And in general, the entries along the diagonal of Table 1 show that they do share priorities.

In Table 1, note the agenda correspondences for economics and national security (defense and international affairs) are both robust, as are the cases for the less publicly dominant issues of health, education, the environment, energy, and foreign trade. Notable for their absence in agenda correspondence are the classic policy subsystem issues of agriculture, transportation, labor relations, commerce (including regulation), housing, and science and technology: Congressional hearings in these areas apparently are not in response to broad public concern in these lower-salience issue areas. The modest correlations for civil rights, crime, and welfare are surprising, given the media play that they have received. The case of civil rights is interesting, because during the McCarthy era Congress devoted considerable hearings energy to suppressing people’s civil rights and liberties: an important reminder that attention congruence does not guarantee positional agreement.

*The Agenda Correspondence Matrix*

Table 1 is a matrix of elements in which each cell entry assesses the correspondence between a potential policy priority of the public and the appearance of that item on the governmental agenda. As such, it can be an important theoretical tool in the study of policy dynamics. We term it the *agenda correspondence matrix*.

Correspondence is not the same as congruence. Congruence occurs when Congress and the public attend to the same issue at the same time. Correspondence occurs when Congress and the public attend to any two issue-pairs simultaneously. So congruence is a subset of correspondence.

Any particular diagonal element is when an issue priority of the public matches the identical element on the governmental agenda. The size of the correlation indicates the magnitude of the correspondence. For example, the correlation between the public's concern for economics as the most important problem facing the nation and the hearings Congress conducts on the state of the economy is 0.80. There is a very high correspondence between the two priorities, public and governmental, across time. Thus these diagonal elements assess raw *agenda congruence*.

What about the other elements in the matrix, for example, when the public is prioritizing "health" and the government is focusing on "welfare"? These off-diagonal elements have different interpretations depending on whether they are positive or negative in sign. A negative coefficient indicates an *agenda trade-off*. Because the agenda spaces of the government and the public are constrained, admitting one issue to the agenda necessarily means that there is less room for other issues. Of course, the system of committees in Congress allows the parallel processing of multiple issues, but this system is not infinitely expandable.

Agenda trade-offs are entirely consistent with policy congruence. Indeed, in a system in which the governmental agenda responds only to the concerns of the public, and those concerns shifted in unison, we would find a matrix with only positive elements in the diagonal and only negative or zero elements in the off-diagonal cells.

A positive correlation in off-diagonal elements, on the other hand, indicates *agenda crowding* or *policy spillovers*. Agenda crowding occurs when the public prioritizes one issue, and Congress attends to another. For example, say that public concerns are correlated: As the proportion of the public focusing on crime increases, so does the proportion of Americans with concerns about the economy. Congress may well respond to the economy concern, or the crime concern, but potentially not both. If so, we would see a higher correlation off the diagonal than on the diagonal. Unlike negative correlations, indicating agenda trade-offs, positive correlations are indicative of attenuated responsiveness or of related issue concerns. It is, of course, possible that both the public and governmental agendas juggle multiple issues—as is clearly the case in Figure 1 for the 1990s. But some crowding must occur, and so agenda crowding may be an indication of less responsiveness, or of greater responsiveness to some concerns than others.

All crowding is not the same, however. Some crowding comes as *displacement*: One issue displaces others. Look for a moment at the row in Table 1 for defense and

international affairs. Across that row are a number of significant negative correlations. As defense declines in importance on the public agenda, a cluster of domestic issues have the opportunity to rise on the congressional agenda—economics, health, education, the environment, energy, crime, welfare, domestic commerce, science, and, finally, foreign trade. With so many powerful negative correlations, it is clear that a decline in public concern with international security issues opens up the agenda for much more proactive governmental attention to a great number of domestic policy priorities. Of course, the opposite is also true: Public concern with defense and security issues correlates with much lower levels of congressional activity in these same policy areas.

A second form of crowding comes as *spillovers*. Attacking one issue legislatively may have serious implications for a second. For example, addressing health care may require a reexamination of budget and tax policies. Spillovers also may be a result of political ideology or of the general public mood (Stimson, 1999). Issues may cohere because either elite or mass opinion coheres. Or a general concern of the public—say, on economics—can translate onto the congressional agenda as specific action on energy supply or prices (and, indeed, the correlation between public concern on economics and hearings on energy is 0.75).

The correlations in the diagonal of the matrix presented as Table 1 are the critical elements in assessing agenda congruence. Because these correlations are based on samples, we can use statistical significance as a standard to evaluate their strengths.<sup>4</sup> In 11 of the 16 cases on the diagonal, the connection is positive, and ten of these are statistically significant. Furthermore, none of the significant correlations in the diagonal are negative. On no issues do Congress and the public systematically move in different directions. When the public is very concerned about an issue, Congress generally is discussing it.

V. O. Key (1961) used the analogy of opinion dikes to describe the relationship between public opinion and public policy. Opinion, he thought, did not dictate policy, but it did constrain it. Our finding that congressional attention never moves against public attention is testament to Key's insight.

#### *An Interpretation with a Standard*

The raw measures of agenda congruence—the number of significant correlations in the diagonal of Table 1—will be more meaningful if we can compare them to a standard. We would be unimpressed if all of the correlations in Table 1 displayed the same proportion of significant correlations as the diagonal. We will now develop a way of interpreting the correspondence matrix of Table 1 that allows more meaningful comparisons.

The correspondence matrix has a natural probability interpretation. If we count the number of statistically significant correlations in the diagonal and divide that count by the total number of diagonal entries, we get an estimate of the probability that a significant correlation occurs. This probability is the probability of actual agenda matches relative to possible matches on the diagonal. The probability of

agenda congruence indicates the extent to which Congress and the public are actually on the same wavelength in regard to policy priorities compared to all potential issue matches. How many times *does* a match between public and governmental agenda items occur out of the potential number of situations in which agenda matches *could* occur?

We use the term *agenda coincidence* to indicate any association between public attention and congressional attention. We can assess agenda coincidence by counting the total number of significant correlations in the entire matrix of Figure 1. How many times does coincidence occur out of the potential number of situations in which coincidence could occur? This will serve as our baseline of comparison for agenda congruence. A significant positive entry on the off-diagonal indicates that when the public has a high priority for an issue, it actually gets something else. Of course the congressional agenda may be more diverse than the public agenda, accounting for the large number of significant correlations. Nevertheless, the congressional agenda space is constrained, and trade-offs are unavoidable. Calculations are presented below:

**Agenda Congruence (Diagonal Entries)**

*Number of cells on diagonal: 16*

*Number of significant correlations: 10*

*Probability of a significant correlation:  $10/16 = 0.625$*

**Agenda Coincidence (Total Matrix)**

*Number of cells: 256.*

*Number of significant correlations: 125.*

*Probability of a significant correlation:  $125/256 = 0.488$*

The unconditional probability of a significant correlation between public and legislative priorities is 0.488. This is the probability of agenda coincidence. This is an important baseline because so long as both the public and Congress have mechanisms for setting priorities, associations between priorities can occur from the operation of purely random processes. Moving from the unconditional probability of agenda coincidence to the conditional probability of agenda congruence (the probability of a significant correlation given that there is a topic match between Congress and the public) yields a difference of  $0.625 - 0.488 = 0.137$ .

This is, however, too stringent a condition, because the agenda space is constrained and requires tradeoffs. If Congress focuses on health, for example, it must sacrifice attention to other issues. Negative correlations in the off-diagonal cells are direct indicators of such trade-offs. If representation is occurring, we actually expect negative correlations in the off-diagonals because of this agenda bottleneck. Of the 125 significant correlations in the matrix, 67 are negative. These negative correlations may indicate the unavoidable trade-offs in the agenda-setting process. There are 56 positive correlations in the matrix, but 10 of these are in the diagonal. So there are only 46 positive correlations in which the agendas of interest groups, specialized publics, or governmental agencies potentially crowd public priorities.

So we can add a final comparison: a measure of agenda crowding. Where correlations are positive and significant, issues are juggling for the same limited governmental agenda space.

### **Agenda Crowding**

*Number of cells: 256.*

*Number of significant positive correlations: 56*

*Probability of a significant positive correlation:  $56/256 = 0.219$*

*Number of significant off-diagonal positive correlations: 46.*

*Probability of significant off-diagonal positive correlation:  $46/256 = 0.180$*

*Now the improvement from the unconditional probability of agenda crowding to the conditional probability of agenda congruence is  $0.625 - 0.219 = 0.406$ .*

The interpretation we give these calculations is as follows. Issues are metaphorically in a struggle for limited agenda space. Given that the public has a high priority for an issue, Congress will as well; there is actual agenda congruence ( $r = 0.625$ ). If the public has a high priority for an issue, Congress will not only prioritize that issue but will also prioritize certain other “spill-over” issues as well, though with a lower probability ( $r = 0.18$ ). The payoff for the somewhat tedious probability calculations is a much richer context for appreciating the extent to which Congress and the public are in synchrony in attending to critical policy issues.

Of course, the fact that a problem reaches both public and governmental consciousness implies little about the nature of the solution, or even whether Congress will enact one at all. Much of the struggle within government can be about solutions as policy entrepreneurs race to take advantage of the “window of opportunity” that presents itself when a problem has reached the public agenda. But an examination of the data presented above suggests strongly that the notion that somehow sinister forces set governmental agendas in opposition to the public is incorrect. The public may or may not be bamboozled and misled, but it seems to be a co-conspirator in the agenda-setting process, not an omitted party.

## **V. Policy Congruence**

Thus far we have examined *agenda congruence* between the American public and the U.S. Congress. We turn now to an examination of *policy congruence* between the priorities of the American public and the actual policy outputs of government. As we have noted, the making of laws is a far more complex process than the setting of agendas because of the operation of American institutions. Moreover, simply because a problem has accessed the governmental agenda does not mean that a ready solution is at hand. So we expect far weaker associations between public priorities and policy outputs, but it would be disappointing indeed if the U.S. policymaking system worked independently of such priorities.

To examine policy congruence, we prepared matrices like that presented in Table 1 for two important output measures: (1) all statutes passed in the United States between 1948 and 1998 and (2) those statutes we rated as the most important

Table 2. Correlations Between MIP and Governmental Activity, 1946–98\*

Major topic	Hearings-MIP	MIP-all statutes	MIP-major statutes**	Hearings-all statutes	Hearings-major statutes**
Economics	<b>0.81</b>	<b>0.30</b>	<b>0.49</b>	<b>0.44</b>	<b>0.45</b>
Civil Rights	<b>0.27</b>	-0.20	<b>0.26</b>	-0.29	-0.07
Health	<b>0.59</b>	<b>0.36</b>	0.22	<b>0.64</b>	<b>0.34</b>
Agriculture	0.15	0.06	-0.13	0.13	-0.04
Labor & employment	-0.11	-0.18	<b>0.45</b>	0.20	0.15
Education	<b>0.35</b>	<b>0.26</b>	0.11	<b>0.52</b>	-0.01
Environment	<b>0.63</b>	<b>0.28</b>	0.06	<b>0.55</b>	0.04
Energy	<b>0.76</b>	<b>0.38</b>	<b>0.25</b>	<b>0.43</b>	0.14
Transportation	-0.15	0.10	-0.11	<b>0.38</b>	-0.07
Law and Crime	<b>0.41</b>	0.22	<b>0.24</b>	<b>0.31</b>	<b>0.19</b>
Welfare	<b>0.41</b>	<b>0.30</b>	-0.11	<b>0.51</b>	0.11
Housing	0.13	0.07	<b>0.59</b>	0.22	-0.08
Commerce & finance	-0.07	-0.16	-0.15	<b>0.53</b>	0.13
Science & technology	0.00	-0.09	0.09	<b>0.42</b>	<b>0.28</b>
Foreign trade	<b>0.61</b>	-0.18	-0.04	-0.19	-0.11
Defense & international	<b>0.40</b>	<b>0.53</b>	<b>0.27</b>	<b>[0.46]</b>	<b>[0.28]</b>
Defense				<b>0.69</b>	<b>0.38</b>
International				<b>0.48</b>	-0.05
Government operations				<b>0.43</b>	0.08
Public lands				<b>0.39</b>	0.01

\*Correlations in **bold** are significant at 0.05 for a one-tailed test, **bold and italics** for significance at the 0.01 level (N = 52).

\*\*General appropriations laws from Topic 20, government operations, have been added to Topic 1, macroeconomics.

statutes (1948–98). The list tabulates the most important 576 statutes as determined by discussion of the statutes in the *Congressional Quarterly*; the method used to isolate these statutes is described in Appendix 1.

In Table 2, we present correlations between the most important problem series and two types of statutes: (1) all statutes (not counting commemorative laws) and (2) those rated as the most important statutes of the postwar period. In addition, we show the correlations between public opinion and hearings (from Table 1, for comparative purposes), and between hearings and our two measures of statutory activity. Essentially, the columns in table 2 are similar to the diagonals in Table 1: They represent congruence, not spillovers or trade-offs.

The data show strong associations between statutory output measures and the priorities of the public. In column 2, we present the correlations between MIP responses and all noncommemorative statutes, and in column 3, the correlations between MIP responses and major statutes.

For all noncommemorative statutes, in column 2, 7 of the 16 issues reach statistical significance (at the appropriate one-tailed test; we reject policy congruence for a negative correlation). For major statutes, in column 3, 7 of 16 do so, against the 10 for the hearings. However, the correlations for the two output measures are much smaller in magnitude than the impressive correlations for hearings.



Lawmaking is considerably “downstream” from the priorities of the public. Hearings are relatively easy to schedule. Laws are not passed without hearings; so accessing the governmental agenda is a precursor to lawmaking. But of course it could be easy to dismiss hearings as simple exercises in symbolic politics—much sound and fury, signifying nothing. The relationship between hearings and laws is complex, but it is very easy to send the simplistic version “hearings as symbolic politics alone” to the waste bin.

The last two columns in Table 2 do exactly that. Columns 4 and 5 tabulate the correlations between congressional hearings and our two measures of lawmaking: noncommemorative statutes, and major statutes. We introduce none of the complexities of lawmaking, ignoring for the moment not only the “stickiness” of U.S. political institutions, the clear tendency of Congress to pass more laws in the second session of any given congress, and the oft-noted need for policy entrepreneurs to “soften up” the system for a new policy idea. Nevertheless, the connection between hearings and statutes is impressive indeed. Of the 19 correlations of issue topics between hearings and statutes, (here we expand coverage to our full major topic coding system), 14 are statistically significant. If Congress investigates, Congress legislates. Of course much of this hearing–statute connection takes place in the continual adjustment process that characterizes much lawmaking. Hearings are often held because of the prior existence of statutes. Nevertheless, the connections between public attention and hearings, and between hearings and statutes, strongly suggest the general sensitivity of the lawmaking process to public priorities.

The connections between major statutes and hearings are, however, considerably attenuated. Although there are convincing connections between public attention and congressional hearing activity, and between public attention and major statutory activity, there are fewer convincing associations between hearings and major statutory activity. This may well be because of threshold effects—extraordinary events, partisan majorities, or mobilizations are necessary to gain passage of major acts. Clearly, public opinion is not the only thing that explains the passage of major legislation. But our look at the linkages between public priorities and congressional responses shows some clear linkages.

### *Representational Agenda Spaces*

Both the public and congressional agenda spaces act as severe constraints on representational behavior, because both are limited in their carrying capacities. We generally have argued that the congressional agenda space has a larger carrying capacity for issues, because the committee structure allows specialization. On the other hand, as Page and Shapiro (1992) have pointed out, there may not be a single public opinion on any given issue. Rather, “parallel publics” may have different priorities at the same time, carrying these priorities through time.

This leads to a key question: Are the structures of the public agenda and the legislative agenda congruent? Or are they so different that comparisons across them are meaningless? In particular, can the two disparate sets of data be represented in spaces of similar dimensions? If so, are the issues located in similar positions, rela-



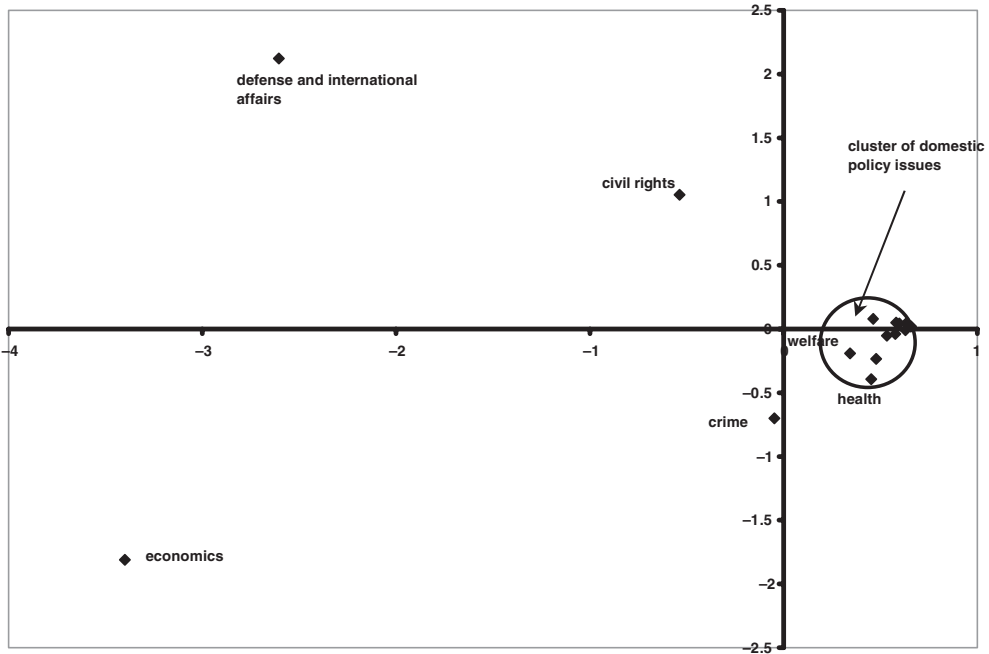


Figure 3. Public Agenda Space.

tively, in the two spaces? If the spaces are not congruent, then it could very well be the case that governmental and public attention allocation mechanisms proceed according to quite different mechanisms, and we ought not be comparing them.

To address this question, we have conducted similar multidimensional scaling procedures on both sets of data. Multidimensional scaling is a technique that allows us to study the entire set of correlations among issues and recover the simplest structure that can account for those issues. We treated the correlations among issues as related to Euclidian distances and recovered an issue space in the subsequent analysis for both the public and legislative agendas. Details of the analysis can be found in Appendix 2.

The public and legislative agenda spaces exhibit key similarities, but critical differences also exist. Both scale exceptionally well in two dimensions, but the congressional data exhibit slightly better fit. Moreover, the locations of issues in each space is roughly similar but with some major differences on very important issues.

Looking first at the public agenda space, depicted in Figure 3, note that there is a tight cluster of almost exclusively domestic policy issues at the right side of the space. In public priorities, these issues are barely distinguished from one another. Naturally specialized publics distinguish among these issues, but the general public barely does—in the sense of allocating attention to them.

Only four issues “break out” of the tight domestic policy cluster, but they are the “big four,” the issues most dominant on the public agenda—economics, defense and foreign affairs, civil rights, and crime. In ranking the importance of issues, the public strongly distinguishes between economics and defense from the domestic

policy cluster and from each other, but it only weakly distinguishes crime and civil rights from the cluster.

It is highly consequential that economics and defense occupy different poles of the y-axis. Because the agenda space is constrained, this means that defense concerns crowd out economic worries, and vice versa. When neither is primary in the priorities of the public, then a panoply of domestic issues has the opportunity to access the agenda. As is evident in Figure 1, these issues tended to “spike,” rising quickly on the public agenda and not infrequently falling as rapidly. They also tend to emerge on both public agendas simultaneously, accounting for the clustering in Figure 3. This is not the case for defense and economics, which are enduring, and to a lesser extent civil rights and crime, which stayed on the public agenda longer and have emerged at different times than other domestic policy issues.

The clustering of issues is most critical in understanding the public agenda space, but interpreting the dimensions that order the space can also be useful. We suggest that the x-axis sets priorities, with defense and economics of critical concern, and the other issues less so. The y-axis distinguishes domestic from international issues, but it also carries a “new versus old” component that corresponds to our earlier work with the hearings (see Baumgartner, Jones, & MacLeod, 2000). The older issues of defense and civil rights are distinguished from the newer ones of economics, crime, and the domestic policy cluster. This does not mean that economics is a new concern, just that it occupied a less prominent position in public priorities before the 1970s.

The legislative agenda space, depicted in Figure 4, is similar in dimensional structure and in the location of defense and international affairs. Domestic policy issues all fall in a limited range on the x-axis, as is the case for the public space, but they scatter impressively on the y-axis. Whereas the public lumps the domestic issues together, Congress splits them apart. The big difference between the public and legislative agenda spaces, however, comes from the location of economics. In the legislative space, economics is indistinguishable from the other domestic policy issues. Although we found that variation in the conduct of hearings on economics across time were extraordinarily sensitive to public reports labeling economics as the critical problem facing the nation, nevertheless, the proportion of hearings on economics is not particularly impressive. As a consequence, economics falls with the other domestic policy issues.

We can see in Figure 4 that the x-axis distinguishes between defense and international affairs hearings, on the one hand, and hearings on domestic policy matters, on the other. The y-axis clearly and unambiguously distinguishes between new and old issues, with the older issues having higher values (and hence located toward the top of the axis). Most particularly, the newer issues of health, energy, and the environment are distinguished from the older issues of civil rights, agriculture, transportation, labor, and housing.

In summary, the public and congressional agenda spaces, although displaying similarly low dimensionality, have critical differences with important policy consequences. During the last half of the twentieth century, the general public has cared primarily about international and economic security, placing lesser priority on other

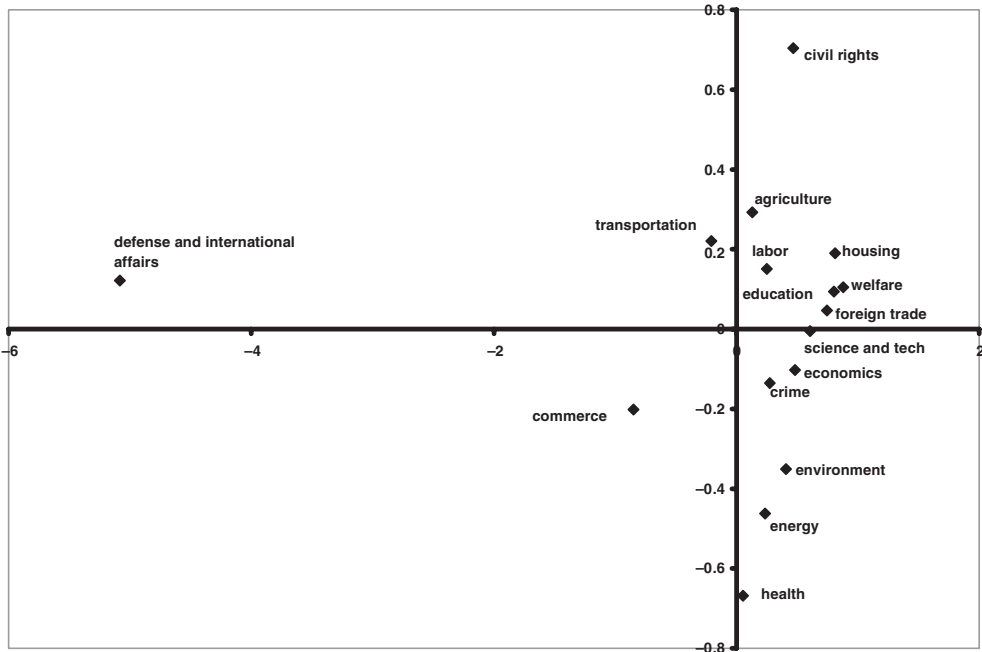


Figure 4. Congressional Issue Space.

domestic policy issues. The legislative issue space is as simple dimensionally as the public issue space but is more complex in areas where issues are located in the space. Whereas the public “lumps,” Congress “splits.”

The low dimensionality and the relative similarities of the two data series are worth consideration. Given the importance of economic and international security in the public agenda, it is clear that all other issues take a back seat, emerging only if and when these two primary concerns are low among the public. Congress, with its greater carrying capacity, can be attuned to more than a few issues, so it shows two more distinct dimensions of choice, though defense and economics remain on a different dimension. As we saw, congressional organization also allows for continued attention to issues even when there is little public clamor over them. Our theories of government responsiveness clearly must work differently in the low-salience issues of housing, agriculture, and so on as compared with the higher salience areas such as health, energy, and others in which public concerns more clearly make themselves heard. In any case, the diverse issues of the public and congressional agendas cluster into a small number of comprehensible dimensions, according to this analysis.

One important difference between the public and congressional agendas is in their respective “carrying capacities.” It is true that the phenomenon of “parallel publics” means that the public agenda can include multiple topics—in the sense of different people having different priorities. But in reality oftentimes the public agenda is much simpler—it tends to collapse on one to three basic concerns at any

one time. Congressional attention is directed at the same problems as the public, as we have shown, but the legislature, as a formal institution with division of labor, has a greater capacity to process more issues simultaneously. This, in turn, means that other factors can affect congressional attention to issues. Interest groups, specialized publics, and policy analysts in and out of government can serve as information-conduits to Congress.

## VI. Relative Carrying Capacities

The greater carrying capacity of Congress to process issues is important to understanding representation. Congress seems extraordinarily responsive to the concerns of the public, and as it hones in on these concerns, it tends to drop consideration of other issues; there are trade-offs. Nevertheless, Congress can crowd more issues onto its agenda than the public. The right image here is to think of two time traces for each issue. For example, in economics, the two traces ebb and flow together, but one at a much higher level than the other, and one with much greater volatility. The proportion of the public who cite the economy as the nation's most important problem varies from 6.4% in 1965 to 78.7% in 1982. The proportion of hearings that Congress conducted on the economy (by the Policy Agendas tabulation) varied from 1.7% in 1951 to 7.2% in 1981.

Figure 5 displays these differences dramatically. There we ranked the issue priorities for the public (via the MIP data) and Congress (via the proportion of hearings in policy categories) for the year 1981. Congress devoted just over 7% of its total hearings to economic and related matters (and another 7% to domestic

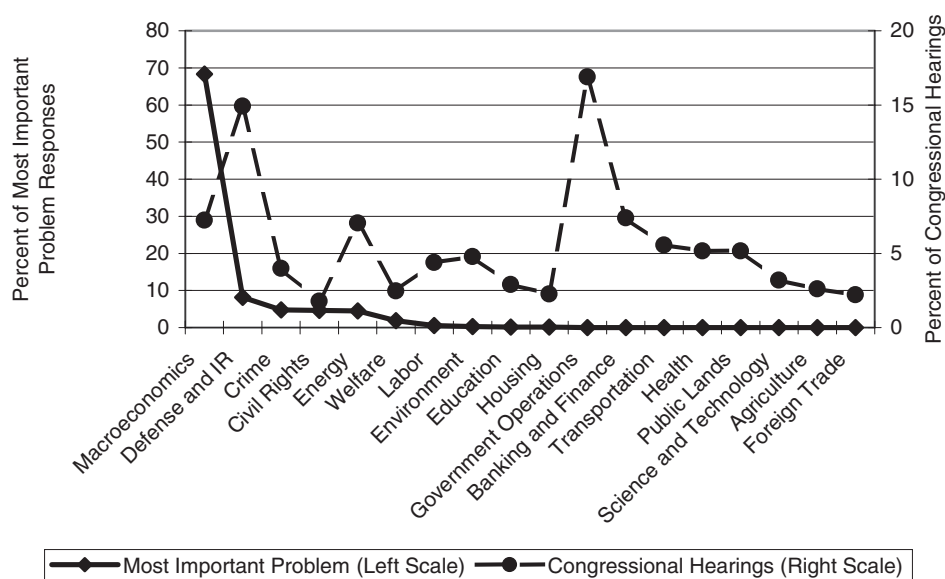


Figure 5. Issue Rankings, Public and Congressional Agendas, 1981.

commerce and finance), but fully 68% of the public saw the economy as the nation's most important problem. Domestic commerce and economics ranked third and fourth respectively in congressional attention (after the ever-present and necessary government operations and defense). The public divided its responses to the most important problem query among only 10 issues (and only on 6 of these issues did more than 1% of the public mention the item), whereas Congress devoted hearing time to all topics.

Congress juggles more issues in its hearing processes than the public does in its attention to public problems. In no year during the postwar period does the public use more than 11 issue categories. Congress almost always employs them all.

Differential carrying capacities resolves the apparent paradox of the high degree of policy congruence reported in Table 1 and the tendency of Congress to split apart domestic policy issues in comparison with the public, as we saw in Figures 3 and 4. Congress is extraordinarily sensitive to public priorities (or perhaps Congress and the public are detecting similar problems in the real world), but Congress has plenty of room for more specialized interests on its agenda.

## VII. Conclusions

Do the public and the Congress attend to the same issues at the same time? Popular government seems to require some degree of agenda congruence between the two. Our results from this paper suggest that the public is seriously involved in the agenda-setting process, not an ignored bystander. We can't say from our analysis here why agenda congruence occurs, but it certainly does occur.

Attention indicates priorities. If we study how people, or a political institution, allocate attention to issues, we are implicitly studying how they prioritize them. Here we have examined the priorities of the public, using the MIP data from the Gallup Polling Organization and the priorities of the legislature and using the data on congressional hearings and statutes from the Policy Agendas Project. The major conclusions from our analyses in this paper may be summarized as follows.

1. *Agenda congruence*: There is an impressive congruence between the priorities of the public and the priorities of Congress across time.
2. *Policy congruence*: There is substantial evidence of congruence between the priorities of the public and lawmaking activities in the national government.
3. *Issue structure*: Although the priorities of the public and Congress are structurally similar, the location of issues within that structure differs between Congress and the general public in a manner that suggests multiple entry points for influencing the legislative agenda. The public "lumps" its evaluation of the nation's most important problems into a small number of categories. Congress "splits" issues out, handling multiple issues simultaneously.
4. *Differential carrying capacities*. The public tends to focus on a very constrained set of issues, but Congress juggles many more issues.

Our findings have many implications for the study of representation. It is hard to imagine a mechanism by which positional representation could occur if we had not found that Congress and the public typically have corresponding priorities. Agenda congruence would seem to be a necessary, though not a sufficient, condition for positional policy representation. Our finding that substantial agenda congruence does occur and that there are both important trade-off effects as well as spillovers to related policy areas gives us a greater understanding of the dynamics of representation in the United States.

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### Notes

1. We are pleased to acknowledge the support of the National Science Foundation through grants # SBR-0111611 and SBR-9320922 and the University of Washington and Penn State University. Chris Wlezien, Jim Stimson, Robert Shapiro, David Lowery, and Hank Jenkins-Smith also provided useful comments. Data are available through the Policy Agendas Web site: <http://www.policyagendas.org>.
2. There are a number of technical issues we had to address in constructing this dataset, including the handling of multiple responses, variability in question wording, and the sampling density of polls across the years. See Feeley, Jones, and Larsen, 2003. Most problematic is the absence of polls in 1953 and 1955; we interpolated data for these years.
3. More sophisticated modeling is possible, but right now we concentrate only on the yearly agenda correspondences between the public and Congress. We use correlations because it is not possible to presume directionality. Correlations can be affected by differential variances or trends (nonstationarity); the use of proportions for each variable guards against both.
4. This is not so straightforward. We use the number of years, 52, as the operative estimate for degrees of freedom, but we aggregated hundreds of Gallup polls and over 60,000 hearings in preparing Table 1.

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### Appendix A. Constructing the List of Major Statutes

Our system relies on content coding of *Congressional Quarterly* stories and of statutes passed in its annual review volume. We noted whether CQ covered the act in the body of its annual volume. For those included, we weighted the statutes by the amount of CQ coverage on the major topic area of the statute. We did this on available data, which was for 1948–1994 at the time the work was done. This procedure rank ordered the 5,026 statutes that were covered but cannot, of course, distinguish among those that received no coverage. Of the 5,026 statutes with coverage, 2,719 received 100 lines of coverage or more; 1,045 received 500 or more, and 432 received 1,000 or more. Somewhat arbitrarily, we chose the top 500 laws enacted between 1948 and 1994, inclusive, as “most important.” This included all statutes receiving more than 800 lines of coverage.

The CQ clearly had lower capacity to cover legislation before 1961. In that year, the CQ reached a capacity that has remained reasonably stable. So we adjusted for variation in the capacity of CQ by using weights that adjusted the capacity of earlier volumes to that of the 1961 volume, and inflated the major statute count in earlier years to reflect the 1961 volume. This yielded 536 laws for the period.

When new data became available, we updated by noting the cut-off point used to rank the 536 statutes (800 lines of coverage) and applied the same standard to the laws passed in the 1995–98 period. This yielded 576 laws for the period 1948–98. This procedure will allow easy updating in the future.

#### *A Review of Our Steps*

Step 1: Use 500 Laws ranked based on CQ lines of coverage, 1948–94 (the available data at the time). This included all laws with more than 800 lines of coverage.

Step 2: Make adjustments based on CQ under-coverage 1948–61.

Step 3: Determine minimum lines of coverage associated with Step 1 (= 800)

Step 4: Apply to the laws 1995–98.

Total = 576 laws.

Table A gives some particulars of lawmaking in the US.



Table A. Laws Passed, 1948–98

Category	Number of Laws
All statutes	17,044
Statutes with some CQ coverage	5,255
Statutes with 100 lines of coverage	2,858
Major statutes	567

## Appendix B. Multidimensional Scaling Results

We used a metric version of Shepard-Kruskal multidimensional scaling (Shepard, 1962a, 1962b; Kruskal, 1964), which basically treated the correlations among issues across time as interval data, but we also analyzed the data assuming only an ordinal relationship between the correlations and recovered distances with no important differences. The multidimensional scaling algorithm compares the distance values from a hypothesized space with the empirical correlations among issues, using a measure termed “stress” to compare the two. The algorithm ceases searching (basically adding dimensions) when the improvement in stress falls below an arbitrary value (here 0.001).

### *The Public Agenda (Most Important Problem Data)*

Goodness of Fit. The squared correlation (RSQ) in distances is proportion of variance of the scaled data (disparities) in the matrix that is accounted for by corresponding distances calculated from the recovered configuration.

$$\text{Kruskal Stress } 1 = 0.12417 \text{ RSQ} = 0.989$$

The derived coordinates in 2 dimensions are presented below:

Topic Code	Category	1	2
1	M1ECO	3.3996	-1.8109
2	M2CIVRTS	0.5372	1.0541
3	M3HEAL	-0.4524	-0.3944
4	M4AG	-0.5815	0.0491
5	M5LABOR	-0.4615	0.0788
6	M6EDU	-0.5321	-0.0523
7	M7ENV	-0.5760	-0.0381
8	M8ENERGY	-0.4771	-0.2347
10	M10TRANS	-0.6551	0.0207
12	M12CRIME	0.0478	-0.7013
13	M13WEL	-0.3418	-0.1916
14	M14HOUSE	-0.5965	0.0442
15	M15COM	-0.6558	0.0214
17	M17SCI	-0.6309	0.0423
18	M18FGNTR	-0.6285	-0.0079
	MIRDEF	2.6047	2.1206

Results for the legislative agenda (hearing data)

Krusal Stress = 0.05715      RSQ = 0.993

The stimulus coordinates in 2 dimensions are presented below.

Topic Code	Dimension		
	Category	1	2
1	H1ECO	0.7114	-0.0565
2	H2CR	0.5852	0.5468
3	H3HEAL	0.4996	-0.5086
4	H4AGRI	0.3324	0.1855
5	H5LABOR	0.4596	0.0422
6	H6EDU	0.9605	0.0892
7	H7ENVIRO	0.7099	-0.2107
8	H8ENERGY	0.5480	-0.1749
10	H10TRANS	0.0448	0.0435
12	H12CRIME	0.5687	-0.0541
13	H13WELFR	1.0213	0.1082
14	H14HOUSE	0.9382	0.2461
15	H15COMM	-0.3947	-0.4051
16	H16DEFEN	-2.5510	0.8411
17	H17SCIEN	0.8016	-0.1293
17	H18FGNTR	0.9178	0.1078
19	H19INTER	0.0306	-0.6120
20	H20GOVOP	-4.1579	-0.7470
21	H21LANDS	-2.0259	0.6879