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Who Influences Whom? The President, Congress, and the Media

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Influencing the policy agenda has long been viewed as one of the most important sources of political power. For decades, scholars have maintained that the president has the most significant role in setting the policymaking agenda in Washington, but little systematic empirical work has been done to measure the president's influence. We explore the president's success in focusing the issue attention of Congress and the mass media by evaluating time-series measures of presidential, mass media, and congressional attention to five issues: crime, education, health care, U.S.-Soviet relations, and the Arab-Israeli conflict. We find that most of the time the president reacts, responding primarily to fluctuations in media attention and world events. In domestic policy, we find a more interactive relationship, one that appears to offer the president the opportunity to act in an entrepreneurial fashion to focus the attention of others in the system on major presidential initiatives.

Influencing the policy agenda, the set of issues that receive serious attention by policymakers, has long been viewed as one of the most important sources of political power (Anderson 1978; Baumgartner and Jones 1993; Cobb and Elder 1972; Downs 1972; Fleming, Wood, and Bohte 1997; Jones 1994; Kingdon 1995; Light 1991; Peters and Hogwood 1985; Walker 1977). For decades, scholars have maintained that the president has a significant—indeed, the most significant—role in setting the policymaking agenda in Washington (see, e.g., Huntington 1965; Moe and Teel 1970). In a careful study of the Washington agenda, Kingdon (1995, 23) found that “no other single actor in the political system has quite the capability of the president to set agendas.” More recently, Baumgartner and Jones (1993, 241), in their broad examination of agenda setting, concluded that “no other single actor can focus attention as clearly, or change the motivations of such a great number of other actors, as the president.” Bond and Fleisher (1990, 230) argue that “the president’s greatest influence over policy comes from the agenda he pursues and the way it is packaged.”

Even scholars who have cautioned against acceptance of a presidency-centered view of government have recognized the importance of agenda setting to the presidency. Edwards (1989), for example, argues that although the president’s influence over Congress is “at the margins,” agenda setting has the potential to be one of the president’s most important strategic powers. Charles O. Jones, like Edwards, is skeptical of the president’s ability to set the policy agenda easily, remarking that the president is highly constrained in the choices he can make and faces a Congress with a substantial continuing agenda of its own. Nevertheless,

he concludes that the president has “significant influence” in agenda setting (Jones 1994, 181).

Despite the consensus among scholars about the president’s influence on the policy agenda, little systematic empirical work has been done to measure that influence. The most prominent work on the subject is that of Light (1991), who examined the president’s domestic agenda from the Kennedy to the Reagan administrations. Although he provides a solid descriptive and quantitative study of the process, Light centers on how a president sets his own agenda, not his role in setting Congress’s public agenda. Covington, Whrighton, and Kinney (1995) address that topic but are concerned with the president’s success on roll-call votes on issues on his agenda rather than with his effectiveness in placing his bills on the congressional agenda.

We explore the question of the president’s ability to affect attention patterns by other important institutional actors in the political system. Attention to issues is both a precursor to agenda setting and an indicator of issue strength in a restricted agenda space. More particularly, we examine the president’s success in focusing issue attention by Congress and by the mass media as represented by television. We do not presume that influence in agenda setting is unidirectional, however. In his study of the U.S. Senate, Walker (1977, 426) found that,

once a problem begins to attract attention and is debated seriously by other senators, it takes on a heightened significance in the mass media, and its sponsors, beyond the satisfaction of advancing the public interest as they see it, also receive important political rewards that come from greatly increased national exposure.

In other words, senators influenced the media’s attention, and the increased exposure senators thereby received obviously has the potential to prolong their attention to an issue.

Moreover, we do not presume that the influence of any actor or institution is constant across issues. Instead, we investigate the patterns of attention for a range of issues. We also do not presume that one actor’s influence will be constant on the same issue over time. Instead, influence on the agendas of other

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institutions may vary among presidents, for example, and also within a presidential term. We anticipate a variety of paths of influence in agenda setting.

In the next section we review past theory and research on presidential agenda setting with respect to the media and Congress. Because the literature is ambiguous about who influences whom in agenda setting, vector autoregression (VAR) is the most appropriate tool for studying these relations (Freeman, Williams, and Lin 1989). We use VAR to investigate the patterns of issue attention for five foreign and domestic policy issues from 1984 to 1994: U.S.-Soviet and Arab-Israeli relations, crime, education, and health care. We find that most of the time the president reacts, responding primarily to fluctuations in attention by the media and to events (in the case of foreign policy). In domestic policy, however, we find a more interactive relationship, which offers the president the opportunity to act in an entrepreneurial fashion to focus the attention of others in the system on major presidential initiatives.

PRESIDENTIAL AGENDA SETTING

We know little about who influences whom in agenda setting in Washington, and there is little theory to guide our investigation. Nevertheless, there is reason to believe that influence does occur.

The President

The White House invests substantial energy and time in attempting to shape the media's attention (see Edwards and Wayne 1999, chap. 5). It provides the press with briefings and background, press releases, and interviews and press conferences with high-level officials, including the president. It also makes efforts to coordinate the news emanating from various parts of the executive branch. Although we have rich descriptions of these efforts (Grossman and Kumar 1981; Maltese 1992; Rozell 1992, 1996), we know very little about their success in influencing the media.

Examinations of presidential influence on the media's agenda have focused on the State of the Union message. Gilberg and his colleagues (1980) found that the president was *not* able to influence media stories in the month following the 1978 address. Nearly a decade later, Wanta and his colleagues (1989) reviewed four studies and found mixed results. In two instances the president influenced the media's agenda, but in two instances he did not. Even two studies of the same president, Ronald Reagan, produced different results. Although he did not focus on the media, Cohen (1995) found that the president was able to influence the *public's* agenda through State of the Union messages.

An important aspect of a president's legislative strategy can be to influence Congress's agenda. If the president is not able to focus congressional attention on his priority programs, these will become lost in the complex and overloaded legislative process. Gaining congressional attention is also important because presidents and their staff can lobby effectively for only a few

bills at a time. Moreover, the president's political capital is inevitably limited, and it is sensible to spend it on the issues he cares about most.

Thus, presidents try hard to set Congress's agenda. The conventional wisdom of the president's success is captured in Neustadt's observation (1991, 8): "Congressmen need an agenda from outside, something with high status to respond to or react against. What provides it better than the program of the president?" Kingdon (1995, 23) adds that "the president can single handedly set the agendas, not only of people in the executive branch, but also of people in Congress and outside the government."

There are fundamental obstacles to the White House's ability to focus congressional attention, however. As Jones (1994, chap. 5) points out, presidents must cope with an elaborate agenda established by their predecessors. In addition, every administration must respond to unanticipated or simply overlooked problems that affect simultaneously the priorities of Congress as well as the president. Moreover, the president's complex set of public activities will inevitably be a distraction from his own agenda priorities. There are so many demands on the president to speak, appear, and attend meetings that it is impossible to organize his schedule for very long around a focus on his major goals, especially when he has been in office for long.

Congress is also quite capable of setting its own agenda. The public expects Congress to take the initiative, and members of Congress have strong electoral incentives to respond. Most of the major legislative actions of the 1980s were congressional initiatives.

The Media

The president is not the only potential agenda-setter in Washington, of course. In recent years scholars have focused on the influence of the media. On the surface, research on the effect of the media on policymakers' attention seems to have reached contradictory conclusions. After reviewing the literature, Rogers and Dearing (1994, 91) state that "the media agenda seems to have direct, sometimes strong, influence upon the policy agenda of elite decision makers." Yet, according to Kingdon (1995, 58-9), "one can find examples of media importance . . . but such examples are fairly rare . . . The media report what is going on in government, by and large, rather than having an independent effect on government agendas." Similarly, Light (1991, 86) found that the media were the least important influence on the source of domestic agenda ideas of any of the eight sources he studied. He concluded that, "for the White House staffs, the media is not a source of new ideas; it is at best a bridge to the political environment."

The media may influence attention by policymakers in less direct ways, however. The public's familiarity with political matters is closely related to the amount and duration of attention these affairs receive in the mass media (Page and Shapiro 1992, 12-3). The media also have a strong influence on the issues the public

views as important (Cook, Tyler, et al. 1983; Dearing and Rogers 1996; Gonzenbach 1996; Iyengar, Peters, and Kinder 1982, 848–58; MacKuen and Coombs 1981, chaps. 3–4; McCombs and Estrada 1997; McCombs and Shaw 1993; Protess and McCombs 1991; Winter and Eyal 1981). In addition, media coverage of issues increases the importance of these issues in the public's assessment of political figures. According to Iyengar (1991, 2), "the themes and issues that are repeated in television news coverage become the priorities of viewers. Issues and events highlighted by television news become especially influential as criteria for evaluating public officials."

Network news provides a frame of reference for issues, and this affects evaluations of presidents. Brody (1991) argues that presidential approval is strongly influenced by elite opinion as brought to the public's attention in the mass media. When the media began covering the Iran-contra affair, Reagan's public approval took an immediate and severe dip as the public applied new criteria of evaluation (Iyengar 1991, chap. 8; Krosnick and Kinder 1990). Krosnick and Brannon (1993) found that the role of assessments of Bush's economic performance in overall evaluations of him decreased substantially after the Gulf War began, and they concluded that it was media priming effects that caused a shift of attention to his performance on war-related criteria.

Experiments found that Carter's overall reputation and, to a lesser extent, views of his apparent competency were affected by network news. The standards people used in evaluating the president, what they felt was important in his job performance, seemed to be influenced by the news they watched on television (Iyengar, Peters, and Kinder 1982; see also Bartels 1993).

If television coverage can affect mass attitudes about the importance of issues and how they are handled, then policymakers, especially visible ones such as the president and members of Congress, have a strong incentive to put those issues on their agenda. In his analysis of a survey of former government officials and interviews with federal policymakers, Linsky (1986, 87) concluded: "The press has a huge and identifiable impact. . . . Officials believe that the media do a lot to set the policy agenda and to influence how an issue is understood by policymakers, interest groups, and the public."

The media, especially television, can limit the president's policy options. Writing about matters such as U.S. interventions in Somalia and Bosnia and the abrupt end of the Gulf War, both Baker (1995, 103) and Powell (1995, 418, 507, 573) argue that media coverage creates powerful new imperatives for prompt action, which makes it more difficult for the president to engage selectively in world affairs. Clinton complained that television coverage of Bosnia was "trying to force me to get America into a war" (Morris 1997, 245).

Anecdotal evidence aside, we know very little about the influence of the media on the policy attention of public officials. In addition to the conflicting studies

noted above, others also provide mixed findings. Gilberg et al. (1980) concluded that the media set the president's agenda rather than the reverse. Wanta et al. (1989) found evidence of this but also evidence that the president sometimes set the media's agenda. Wood and Peake (1998), in a surprising finding, conclude that even in foreign policy it is the media that influences the president's agenda rather than the other way around. Clearly, the media's influence on the government's agenda bears further study.

Congress

There is no question that Congress is an important agenda setter, perhaps the central one, in the U.S. political system. Baumgartner and Jones (1993) emphasize the importance of Congress in determining and changing the national agenda. Kingdon (1995, 34–42) places Congress second only to the administration as a whole as an agenda setter in Washington. Flemming, Wood, and Bohte (1997) find Congress to be the major agenda setter in environmental policy.

There is also little question that Congress has the major influence in setting its own agenda, as we discussed earlier. Our concern, however, is with the ability of Congress to influence the priorities of the president and the media. Although Kingdon shows that members of Congress can prevent presidential proposals from obtaining a place on the legislative agenda, he does not show that Congress can influence the agendas of either the president or the media. Although we may speculate that congressional activity, especially hearings, may influence media coverage of policy arenas or encourage presidents to respond with policy stances of their own, we lack systematic evidence to serve as the basis of such inferences.

DATA AND METHODS

Our primary, but not exclusive, focus is on the president's ability to direct the attention patterns of others. Are presidential, media, and congressional attention to domestic and foreign policy issues random actions, independent of one another, or is there some systematic pattern? Is the president an issue entrepreneur who focuses the attention of the media, Congress, and larger system on particular domestic and foreign policy issues? Or is the president more reactive to changing media, congressional, and systemic attention through time toward these same issues? Is the relationship between the president and other actors reciprocal, with the president both driving and reacting to media, congressional, and systemic attention? Do relations between the president and other actors differ across issues or issue types in some interesting way?

These are important questions for understanding policymaking processes as well as the operation of the presidency as an institution. We investigate these questions by evaluating time-series measures of presidential, media, and congressional attention to five issues that have been important in American politics over the last decade: crime, health care, education, U.S.-Soviet

relations, and the Arab-Israeli conflict.¹ The president shares leadership with Congress on domestic policy, but most analysts agree that the president is the chief foreign policy leader. Thus, we selected both domestic and foreign issues to enable a comparison of fundamentally different presidential roles and policy relationships.

Measuring Agendas

The measures for both domestic and foreign policy were constructed as weekly time series to capture the fine time dynamic associated with responsiveness by the president, media, and Congress. This also enables us to have greater confidence in the findings due to the larger sample size. As an added control for the foreign policy issues, we collected data on the incidence of world events for U.S.-Soviet relations and the Arab-Israeli conflict.

Measuring presidential attention to the five issues presents certain obstacles. The president's public face may not be a true reflection of what is happening behind the scenes. Therefore, we define the measure of the president's agenda as what the president does and says publicly from week to week. Such a measurement represents more than convenience, however. It is the president's public agenda to which the media and Congress are most likely to respond, because that is most accessible to them and therefore may affect their own agendas. This is especially true for Congress during the periods of divided government that have characterized much of the post-World War II period, because the White House is unlikely to share its long-term private policy agenda with leaders of the opposition party.

Cohen (1995) measured presidential attention to domestic policy issues by looking at State of the Union addresses. Yet, these annual speeches may give an incomplete image of attention as it changes due to events and shifting circumstances during the year. It is also unclear that the relative issue emphases in the addresses provide an accurate picture of presidential priorities on domestic and foreign policy. Presidents make their priorities known through a number of other outlets, including legislative proposals, news releases, position taking, briefings, speeches, press conferences, and letters.

To capture presidential attention registered through all these diverse outlets, we used *Public Papers of the President*, an annual compilation of presidential activities. We used key words (listed in the Appendix) in the subject index of each volume and searched the text for relevant activities. Specifically, we counted the number of paragraphs during each week of each year devoted

to some facet of the five issue areas. We also read each entry to ensure that it was pertinent to the key word and concept under investigation. We restricted the measures to the period from the 27th week of 1984 through the 23d week of 1994 because of the need to control for foreign policy events (discussed below) and to make all five issues cover a common time frame.

Figure 1 presents graphs of the measures for presidential attention to each of the five issue areas. We scaled the graphs commonly to provide a sense of the relative public attention given by the president to the five issues as well as their respective time dynamics. The president attended more heavily to U.S.-Soviet relations than to the other four issues throughout this period.

Presidential attention to crime and education generally exceeded presidential attention to health care and the Arab-Israeli conflict. The focus on crime and education also changed through time, however, with increased attention after 1989 during the Bush administration and again during and after the 1992 campaign. Likewise, presidential attention to health care increased during the 1992 election season and continued at higher levels in the first part of the Clinton administration. This suggests that presidential attention to domestic issues may be either election or presidency specific. Although these are interesting patterns, we must refrain from drawing conclusions until we have examined the statistical evidence.

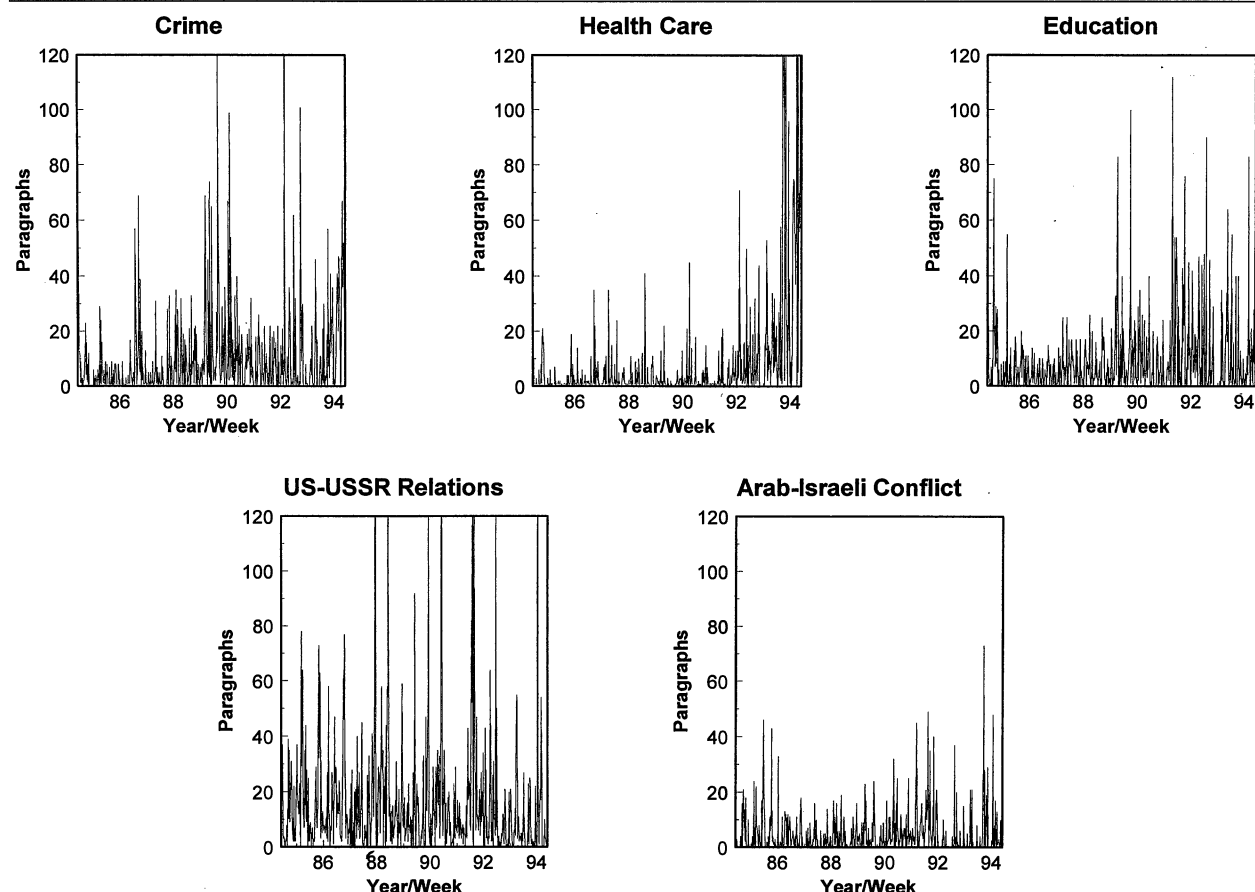
We measured media attention as the weekly broadcast time devoted to the five issues by television news. Rather than count the number of stories, as has been done in some past research (e.g., Baumgartner and Jones 1993; Flemming, Bohte, and Wood 1997; Flemming, Wood, and Bohte 1995), we counted the number of minutes devoted to each issue on the three nightly network news programs. Specifically, we searched the *Vanderbilt Television News Abstracts* using key words (listed in the Appendix) to capture stories concerning the five issues. We examined each instance for validity concerning whether it dealt with some facet of the issue or whether some confounding effect was involved.

Although the nightly newscasts are not the only news sources that may influence or be influenced by the president or Congress, they are the most important frequently watched sources, and they not only provide a consistent sample of coverage but also are continuous for the period under study. Each network spends about 22 minutes each night delivering the news in a half-hour program. This sums to a typical weekly news coverage of roughly 150 minutes, or 450 minutes for the three networks.

Figure 2 graphs the time-series measures for media coverage of crime, health care, education, U.S.-Soviet relations, and the Arab-Israeli conflict. Comparing the graphs, we can see that the media devoted more attention to the two foreign policy issues than to the three domestic policy issues. Apparently, the networks found foreign policy more interesting or more important than domestic policy throughout this period.

Coverage of the two foreign policy issues also exhibits relatively more dramatic changes, reemphasizing

¹ For parts of the series after the breakup of the Soviet Union, we look at relations between the United States and all the former Soviet states. In the analyses to follow, we performed tests of model stability using recursive residuals (Brown, Durbin, and Evans 1975; Harvey and Collier 1977). The models were stable for the two foreign policy issues, which suggests no shifts due to measurement, but there were some instabilities for the domestic policy issues for reasons discussed in the text.

FIGURE 1. Presidential Attention to Issues

Note: Each graph plots the weekly paragraphs of presidential rhetoric that appeared in *Public Papers of the President* for each issue area. See the Appendix for descriptions of the key word searches.

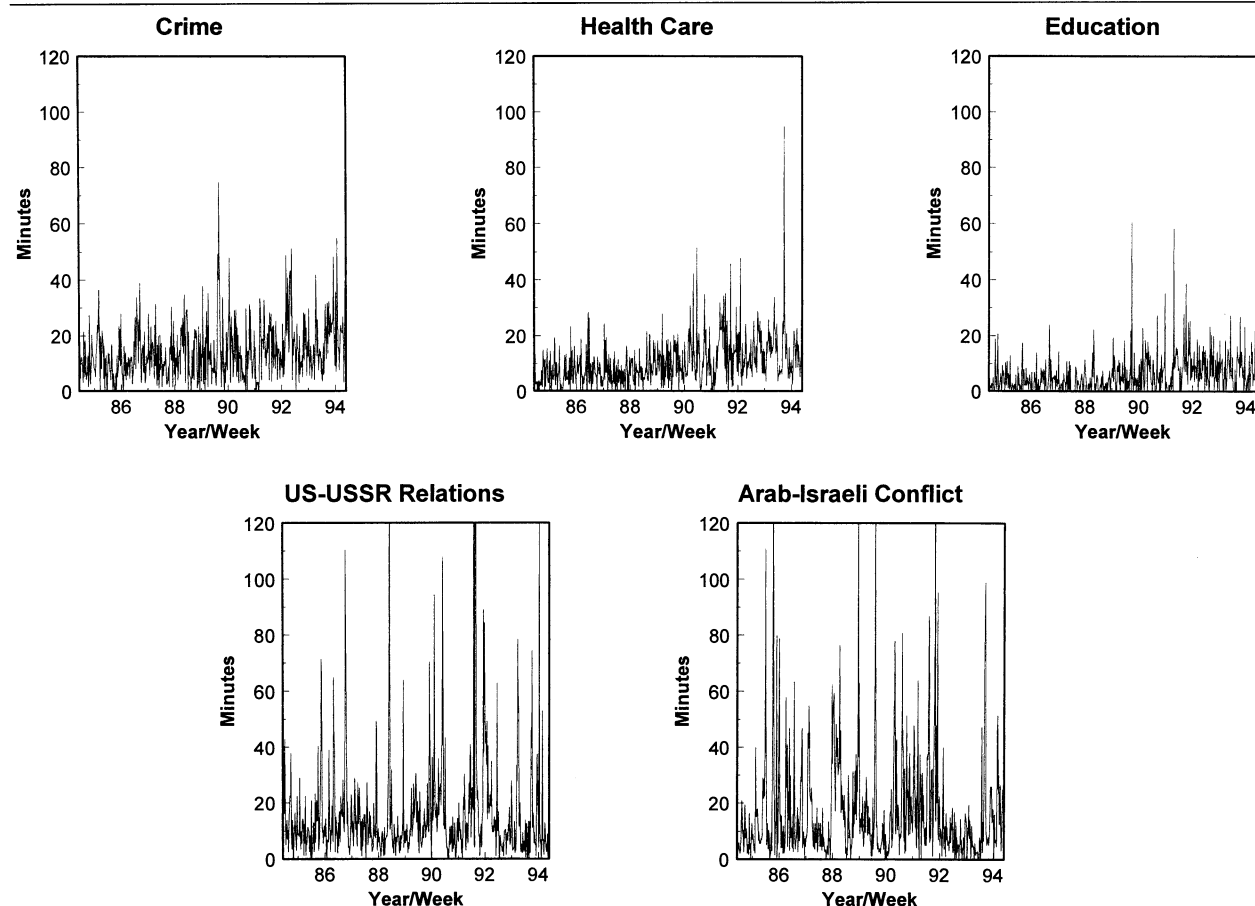
the need to control for foreign policy events. Average media attention to the Arab-Israeli conflict was slightly higher than average media attention to U.S.-Soviet relations. The average level of media attention to crime was also higher than the average level of media attention to health care and education. The five series do not exhibit obvious temporal patterns suggesting presidential leadership, but, again, we must await statistical evidence before drawing conclusions.

We measured congressional attention to the five issues as the number of days of hearings reported by the *Congressional Information Service Index* (CIS). Again, we conducted key word searches (listed in the Appendix) to identify when hearings were held, and we screened the hearings carefully so that we counted only the days actually focused on topics germane to the agenda items. We excluded hearings involving appropriations, nominations, or reauthorizations so that the measure would not be heavily weighted with more or less routine matters, which would falsely inflate congressional attention to the issue areas if they were included (Walker 1977). The measures of congressional attention are the total days of hearings Congress devoted each week to matters involving crime, health

care, education, U.S.-Soviet relations, and the Arab-Israeli conflict.

Since our central concern is to explain any patterns in the attention to issues of the president, Congress, and the media, we follow Baumgartner and Jones (1993) in using congressional hearings as the best measure of congressional attention. It is also comparable to our measures of the agendas of the president and the media. Hearings are the most typical source of media stories and the most likely focus of institutional response to media coverage of issues. Hearings are an excellent indicator of what Congress is taking seriously (Edwards, Barrett, and Peake 1997). Thus, they are an effective way to obtain the administration's attention. Hearings also tap congressional response to White House efforts to precipitate debate on issues, as when Clinton sought to focus attention on affirmative action and funding for Social Security in 1998.

One may argue that we also want to know whether the president is successful in obtaining a place on the agenda for his legislative proposals in addition to obtaining congressional attention to broad issues. Obviously, the specific and the broad frequently overlap, and hearings capture much of both. In addition, Ed-

FIGURE 2. Media Attention to Issues

Note: Each graph plots the weekly minutes of evening network television coverage for each issue area as reported by the Vanderbilt Archives. See the Appendix for descriptions of the key word searches.

wards and Barrett (1998) found that the president can almost always obtain a hearing for his major proposals. There is little variance across time. Our focus here is on the broader matter of congressional attention to issues, and hearings measure this concept well.

Figure 3 contains graphs of congressional attention to the five issue areas. We can see that Congress devoted substantially more attention to domestic issues than to foreign policy. Congressional attention to health care was somewhat higher than attention to crime and education. There was substantially more focus on U.S.-Soviet relations than on the Arab-Israeli conflict. Again, the temporal patterns associated with these graphs do not immediately suggest any interesting relationships among presidential, media, and congressional attention, but we must await statistical analysis before drawing conclusions.

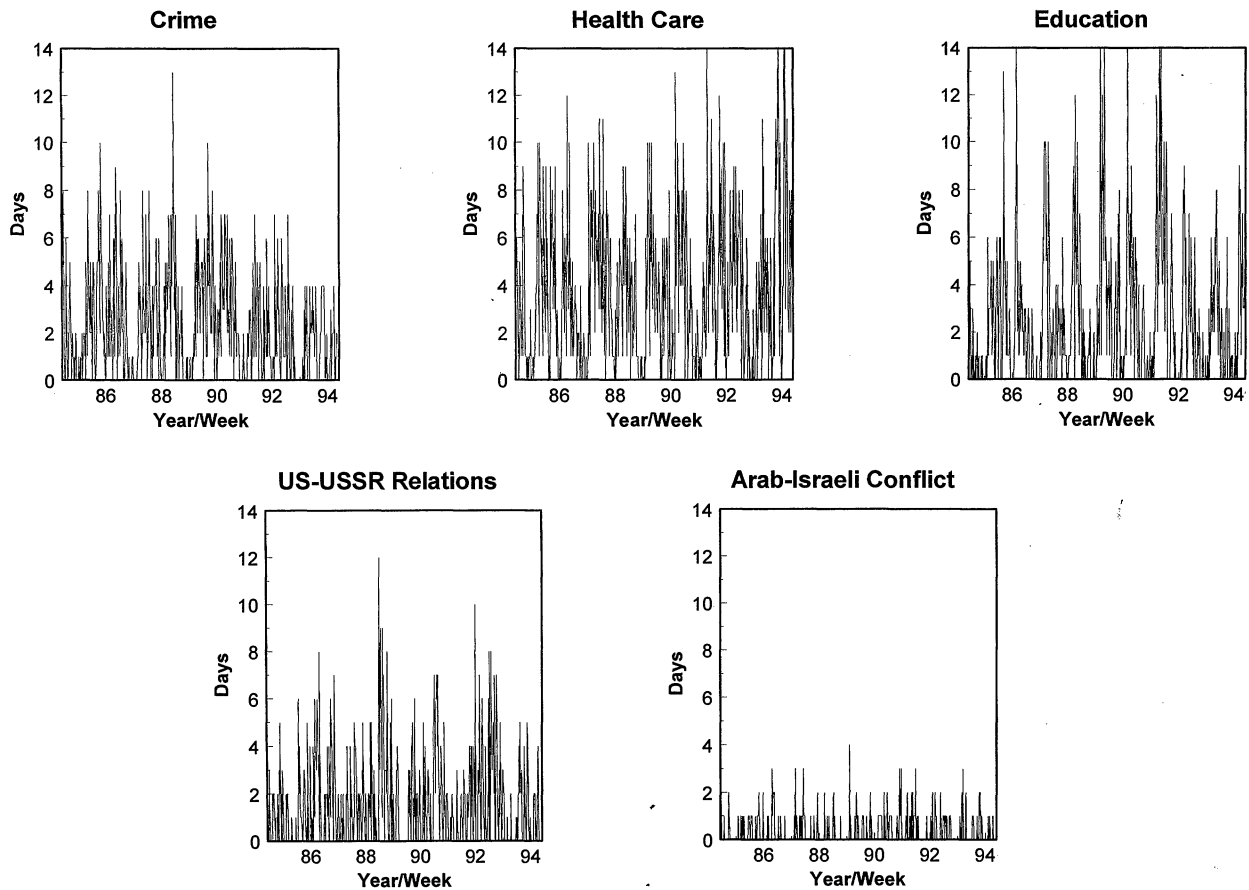
Because unfolding world events are important in capturing both media and presidential attention (Wood and Peake 1998), it is important to include an events measure in the analyses for U.S.-Soviet relations and the Arab-Israeli conflict. Figure 4 graphs a weekly count of international events for these two issues using the PANDA data set, provided by the Program on Nonviolent Sanctions and Cultural Survival at Harvard

University (Bond and Bond 1995). PANDA uses an artificial intelligence program (KEDS) to code discrete events from Reuters news leads.²

PANDA reports discrete actions by a target country toward a source country or discrete actions completely within a single country, such as a civil war or rights violation. Using key words (listed in the Appendix) pertaining to the five issues, relevant events were separated from the entire data set. We could have coded a dummy variable, but using a weekly count of events enabled the measure to reflect not only the presence but also the relative seriousness of developing situations. The events were then counted by week to create a consistent measure of exogenous events to match the other two series.

Note that the PANDA measure is not fully independent of the TV news measure discussed above, because the national media report some of the same events as the international media. Reuters news leads are far more comprehensive, however, in that they are written,

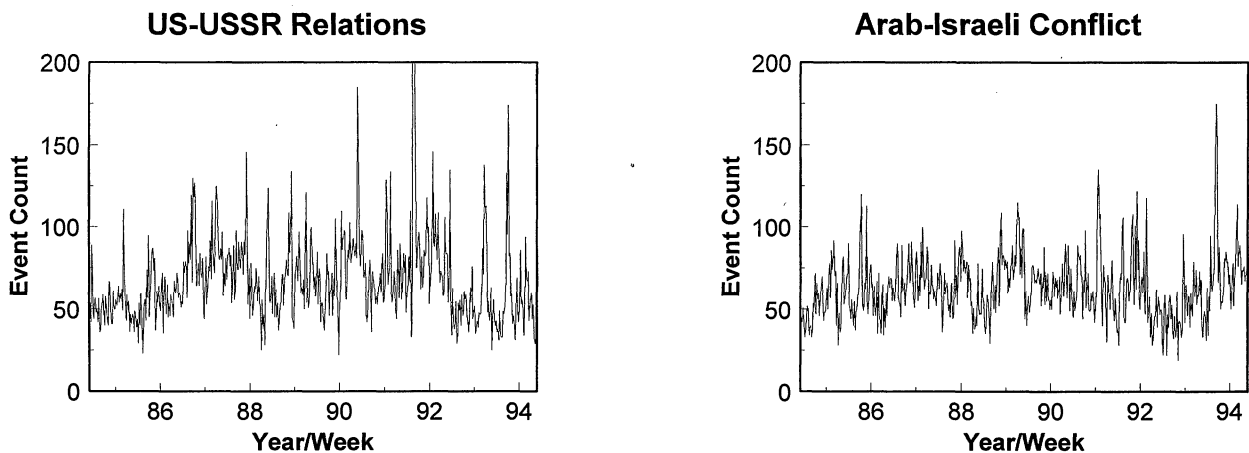
² KEDS, or the Kansas Events Data System, was developed by Philip Schrodt of the University of Kansas at Lawrence. Schrodt and Gerner (1994) describe the program in detail and also report validity tests of the machine-coded events.

FIGURE 3. Congressional Attention to Issues

Note: Each graph plots the weekly days of congressional hearings as reported by the *Congressional Information Service Index* for each issue area. See the Appendix for descriptions of the key word searches.

not visual, and devote more than the few minutes daily that the national media give to world events. Reuters also is international in focus, rather than national or domestic. Moreover, both the network news and the

president use Reuters to monitor world events, so it is almost *prima facie* evident that there should be some effect from this measure on media and presidential attention. The question is whether, independent of

FIGURE 4. Foreign Policy Events

Note: Each graph plots the weekly event counts from the *PANDA* data set for each issue area. See the Appendix for descriptions of the key word searches.

world events, effects exist among the president, media, and Congress.³

Methods

With measures in hand for presidential, media, and congressional attention to domestic and foreign policy issues, we used vector autoregression (VAR) methods (Freeman, Williams, and Lin 1989; Sims 1980) to evaluate the causal direction of attention and to provide evidence of the temporal dynamics associated with the policymaking system. VAR is the most appropriate method for circumstances in which theory provides a weak rationale for imposing restrictions on the parameters of a structural equation system. As our theoretical discussion indicated, we have little reason for imposing parameter restrictions in either direction, but without them a structural equation system cannot be identified. Thus, structural equations are inappropriate. This does not mean that the approach we use is devoid of theory. Indeed, all aspects of the reported VAR model have some theoretical rationale. We merely ask the data to tell us (given that theory is ambiguous on causal direction) which, if any, parameter restrictions are appropriate.

Another important advantage of VAR modeling over the structural equation approach is that it provides a strong control for history by including multiple lags of each variable in all equations. This means that problems of specification error are of less concern, since the VAR disturbances are random with respect to time. One way of viewing VAR modeling is as a multivariate extension of the Granger (1969) approach to causal inference. Each dependent variable is regressed on lagged values of itself, as well as lagged values of the other dependent variables in the system.⁴

Causal relations are evaluated by conducting joint

hypothesis tests for blocks of lags associated with each variable. What is interesting for us theoretically is that the control for history provides a representation of the degree to which issue inertia affects attention by the president, media, and Congress. A significant block of coefficients on the dependent variable in each equation implies that issue inertia is strong.

VAR methods typically exhibit high colinearity due to the multiple lags included for each variable in the system. For this reason, and the autoregressive nature of VAR models, regression coefficients are often erratic and difficult to interpret. Analysts typically rely instead on Granger (1969) causal analysis and simulated moving average responses that provide a smoothed representation of system dynamics. The moving average responses involve introducing a shock to a variable in the system and tracking out responses in the other variables using the VAR estimates for computing a forecast. We report 95% confidence intervals around the moving average responses.⁵ Commenting on Runkle (1987), Sims suggests that such confidence intervals have only an asymptotic justification, but if an interval always contains zero, then we should still be concerned that a relationship does not exist. The ordering of the variables in the simulations was based on Granger tests and forecast error variance decompositions when the causal direction was unambiguous; otherwise, all orderings were considered.⁶ Because the innovations may be correlated between variables, we plotted Choleski orthogonalized responses to one-standard-deviation simulated shocks.⁷

It is unclear how paragraphs in the *Public Papers*, minutes of television news coverage, and days of congressional hearings should relate to one another in terms of coefficient scale. For this reason, and because it is convenient to interpret the moving average responses in terms of standard-deviation units, we standardized all variables prior to the analysis. The magnitudes of standard-deviation changes for each variable in the simulations are noted at the bottom of the corresponding figures.

³ In a strict sense, not all PANDA events are strictly exogenous to the presidency. The president may take initiatives that become part of event progressions. In addition, some PANDA events may follow presidential or media attention. That is, the president and media may anticipate such events as elections, scheduled meetings, and the like, and increase their attention to them beforehand. In theory it would be possible to separate out such potentially confounding influences if one had access to the text used to create the PANDA data. Absent such access, we simply acknowledge these potential confounding effects and issue a word of caution.

⁴ The common wisdom in the VAR literature has always been that time series should *not* be differenced (e.g., Doan 1996, 8–3; Harvey 1990, 83; Sims, Stock, and Watson 1990). Recently, however, it has been suggested that VAR hypothesis tests with integrated data in levels may reject the null hypothesis of no causal relation too often (e.g., Freeman, Killstedt, and Williams 1996; Ohanian 1988; Phillips 1992). In this study we use conventional OLS-VAR methods for several reasons. First, there is a reasonable statistical rationale for using the traditional estimator. Sims (1988; see also Sims and Uhlig 1991) notes that under specific Bayesian assumptions OLS-VAR *p*-values for VARs in levels are fine. Furthermore, the behavior of the likelihood function is undeniably described by the test statistic values (Freeman, Kellstedt, and Williams 1996). Second, shocks to an integrated series cumulate and remain forever in the time-series sequence, but shocks in issue attention are unlikely to remain forever, due to the brief attention span and restricted agenda spaces of institutional and media actors. Moreover, issue attention cannot have infinite variance, because the particular issues examined here will never occupy all the agenda space at any one time.

⁵ Standard errors for the moving average responses are generated by Monte Carlo integration (e.g., Hamilton 1994, 336–40).

⁶ Forecast error variance decompositions are another approach to exogeneity testing. See Judge et al. 1988, 771–5 for discussion. Exogenous variables are placed first in the orderings, but when there are no exogenous variables, multiple orderings are examined.

⁷ A VAR is a reduced form model. All coefficients for variables at time *t*, as opposed to time *t* – 1, are forced to zero in estimation. When the process is inverted to a moving average, this inversion leaves all time *t* responses at zero. In fact, these coefficients and responses may not be zero, so we could lose information. That information is in the variance-covariance matrix of disturbances (VCV). Choleski decomposition is a way to convert the information in the VCV to identify instantaneous coefficients and responses. The VCV is orthogonalized so that the simulations track out the instantaneous as well as lagged responses of the variables. A potential problem with Choleski decomposition is that when the contemporaneous residuals are correlated, the responses may differ with the ordering of the variables. For this reason, we examined results from different orderings where contemporaneous correlations were non-zero. Contemporaneous correlations between the media and president equation residuals were 0.25 for crime, 0.29 for health care, 0.35 for education, 0.37 for Arab-Israeli conflict, and 0.54 for U.S.-Soviet relations. No other bivariate correlations were significantly large.

TABLE 1. Granger Tests for Attention to Foreign Policy Issues

Coefficient Block	U.S.-Soviet	Arab-Israeli	Dependent Variable
President	5.18 → (0.00)	2.31 (0.06)	Presidential attention
Media	2.79 → (0.03)	2.78 → (0.03)	
Congress	0.63 (0.64)	0.62 (0.64)	
President	1.45 (0.22)	1.00 (0.41)	Media attention
Media	6.62 (0.22)	14.81 → (0.00)	
Congress	0.23 (0.92)	0.34 (0.85)	
President	2.04 (0.09)	0.79 (0.53)	Congressional attention
Media	1.25 (0.29)	0.30 (0.88)	
Congress	21.01 → (0.00)	6.68 → (0.00)	

Note: The numbers in the table are *F* statistics; the numbers in parentheses are *p*-values. The arrows indicate possible Granger causal relations from the block of coefficients shown to the dependent variable. Both VARs contain four lags. Events at lag 0 are included as an exogenous variable to control for the contemporaneous effect of events. There were 514 weekly observations in the series, running from the 27th week of 1984 to the 23d week of 1994.

Based on Sims's (1980) methods for determining the appropriate lag length, we included in the crime, U.S.-Soviet, and Arab-Israeli VARs four weekly lags for all variables. We included five lags of the variables for the health care and education VARs.⁸ We did sensitivity testing to determine the effects of including additional lags up to twelve weeks. Longer lag lengths diminished marginally the probabilities associated with the reported findings, but in all cases relations were stable and consistent. We recognize that it may sometimes take more than four or five weeks for Congress to respond to the president or media through hearings, but the results reported below for Congress do not differ substantively for the longer lag lengths. Residuals from final analyses were nonautocorrelated and normally distributed.

ANALYSIS

In this section we report the results of the VAR analyses of issue attention for the president, media, and Congress. We discuss the analyses for the two foreign policy issues first, followed by the three domestic policies. The former differ from the latter in that an exogenous variable that controls for the effect of world events on presidential, media, and congressional attention was entered contemporaneously into all equations. The events variable was positively related and highly statistically significant in both systems. We do not report the results for the events variables or other coefficient estimates, however, because our primary interest is in the Granger tests and simulations.

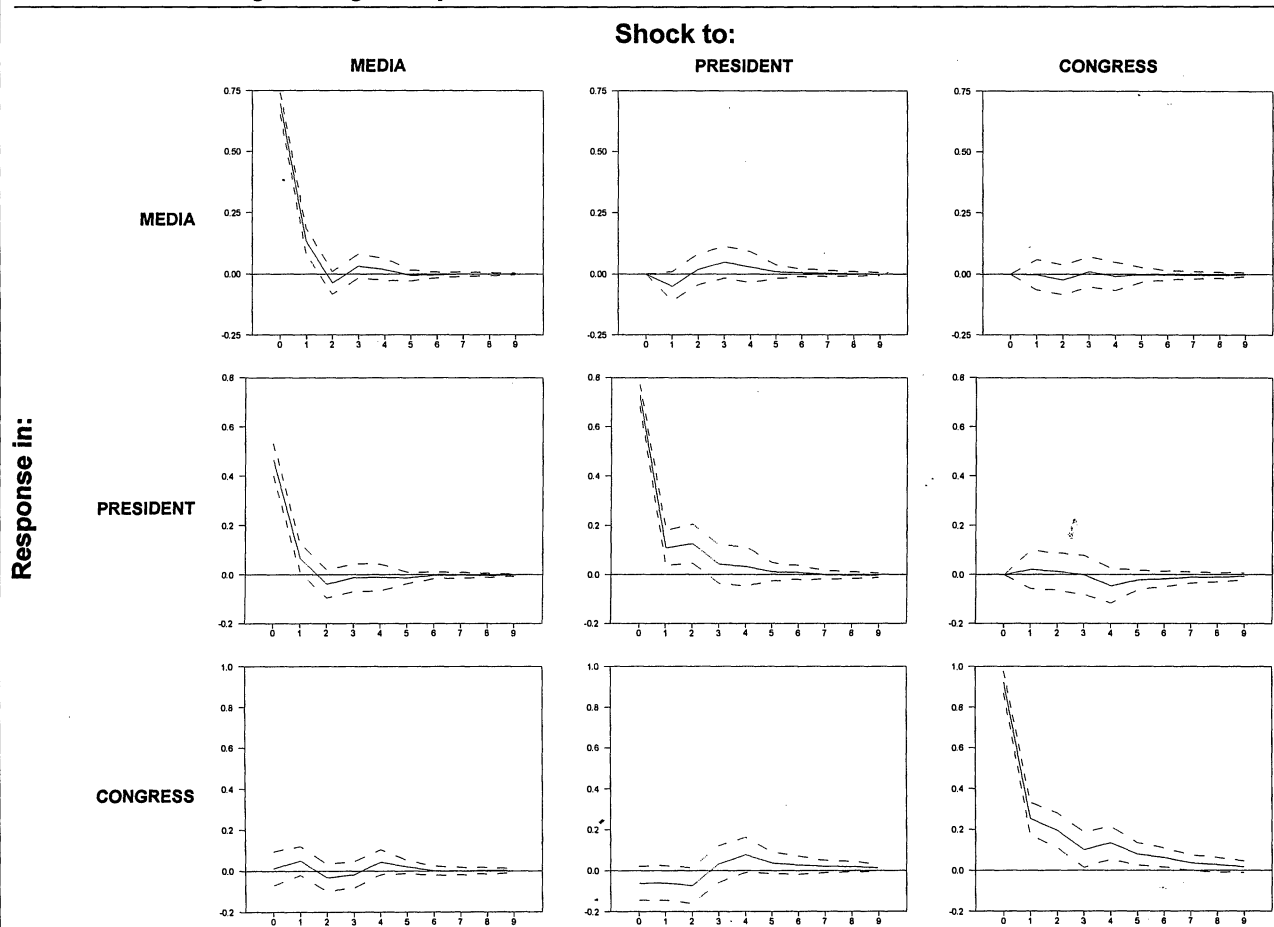
⁸ The Sims (1980) procedure entails sequentially adding lags to the VAR system and testing the statistical significance of each additional lag using a modified *F* test. We tested lags from 1 through 12 for the VAR system and arrived at the lag lengths reported above.

Foreign Policy Issues

The results for the two foreign policy issues are contained in Table 1 and figures 5 and 6. The test statistics in Table 1 show that, controlling for foreign policy events, presidential and congressional attention to foreign policy issues is strongly inertial. By inertial, we mean that attention to issues at one point is strongly related to attention to those issues in the past. Media attention to the Arab-Israeli conflict is also inertial, but this is less so for U.S.-Soviet relations. We can interpret these baseline results as showing that presidential, congressional, and media attention are strongly tied to historical trends as well as a continually unfolding progression of world events.

Given these historical trends and controls for events, what systematic relationships exist among presidential, media, and congressional attention? First, consider the relationships that do not exist among the respective series. Presidential attention does not strongly affect either congressional or media attention to foreign policy issues.

Table 1 gives the Granger tests, while Figure 5 gives the simulated moving average responses for attention to U.S.-Soviet relations. The graphs on the diagonal of Figure 5 contain the shocked variables, while the graphs off the diagonal represent the responding variables. The third horizontal panel of Table 1 suggests that presidential attention could be related to congressional attention to U.S.-Soviet relations. Yet, this relationship has a *p*-value of only 0.09, and the moving average response in Figure 5 suggests that the effect is small and in the wrong direction. The second column of Figure 5 reveals that a one standard deviation positive shock in presidential attention to U.S.-Soviet relations produced a small

FIGURE 5. Moving Average Response for U.S.-Soviet Issues

Note: Media is weekly minutes of evening network television news coverage. President is weekly paragraphs in *Public Papers of the President*. Congress is weekly days of congressional hearings. Each chart represents the response over 10 weeks to a one-standard-deviation shock in the column variable. One standard deviation is 23.06 minutes for the media, 27.57 paragraphs for the president, and 2.00 hearing days for Congress. Dashed lines are 95% confidence intervals.

negative change in congressional attention to this issue over three weeks.

Similarly, presidential attention does not Granger cause congressional attention to the Arab-Israeli conflict.⁹ The second column of Figure 6 reveals that a one-standard-deviation positive shock in presidential attention to the Arab-Israeli conflict produces little significant increase in congressional attention to this issue.

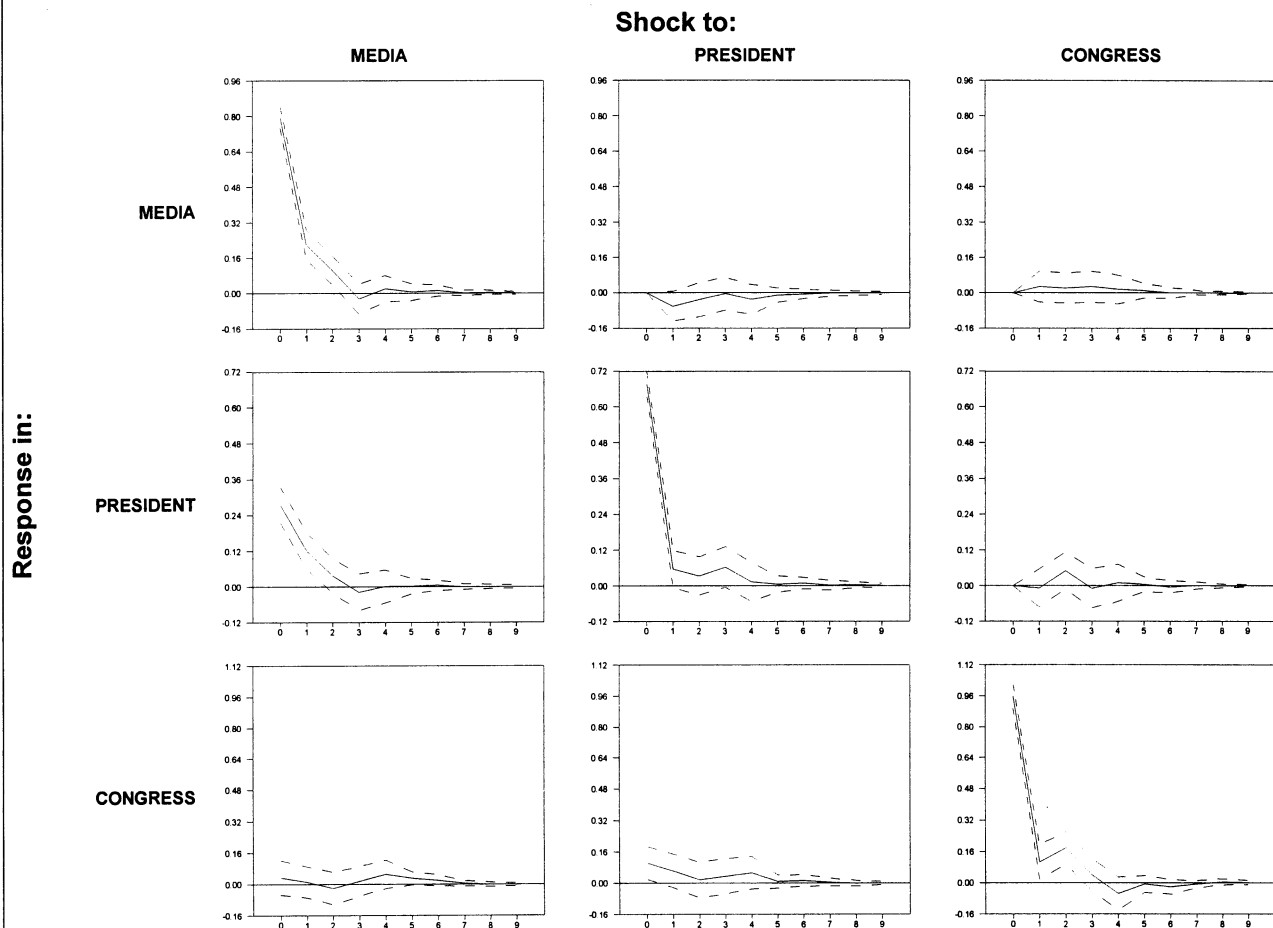
Presidential attention also has little influence on the media's agenda. The second panel of Table 1 shows that presidential attention does not Granger cause media attention toward either foreign policy issue. The middle columns of figures 5 and 6 confirm that a one-standard-deviation shock in presidential attention

produces little discernible change in media attention to either issue. Thus, it is doubtful that public attention by the president to these two foreign policy issues significantly alters either congressional or media attention in any systematic way.

These results for the president on foreign policy are unexpected and counterintuitive, because it is widely accepted that the chief executive is the foreign policy leader in the United States. As such, the president should command the attention of other actors. Our statistical analysis suggests, however, that he does not do so on U.S.-Soviet relations and the Arab-Israeli conflict.

In contrast, the conventional wisdom is that Congress is a less important actor than the president in foreign policy, and our analysis supports this. Table 1 shows that congressional attention does not Granger cause attention by either actor for either issue; the third columns of figures 5 and 6 also reveal that neither the media nor the president respond to a one-standard-deviation positive shock in congressional attention. The president and the media are seemingly inattentive

⁹ As discussed above, Granger testing is a method for evaluating the direction of causality among a set of time-series variables. One variable is said to Granger cause another variable when lagged values of the variable are significantly related to the dependent variable after controlling for the history of the dependent variable. Typically, the analyst evaluates both possible directions of causality using an *F*-test approach for testing the joint significance of multiple lags. See Granger and Newbold (1986, 259–60) for further discussion.

FIGURE 6. Moving Average Response for Arab-Israeli Issues

Note: Media is weekly minutes of evening network television news coverage. President is weekly paragraphs in *Public Papers of the President*. Congress is weekly days of congressional hearings. Each chart represents the response over 10 weeks to a one-standard-deviation shock in the column variable. One standard deviation is 21.65 minutes for the media, 10.53 paragraphs for the president, and 0.64 hearing days for Congress. Dashed lines are 95% confidence intervals.

toward congressional activities as they pertain to U.S.-Soviet relations or the Arab-Israeli conflict.

What relationships do exist among the president, media, and Congress for the two foreign policy issues? The first panel of Table 1 shows that media attention Granger causes presidential attention for both issue areas. The first columns of figures 5 and 6 confirm this result by tracking out the dynamics of presidential responsiveness through time. With respect to U.S.-Soviet relations, a one-standard-deviation positive shock in media attention produces a large 0.47 standard-deviation increase in presidential attention. This response is restricted to only one week following a change in media attention.

With regard to the Arab-Israeli conflict, a one-standard-deviation positive shock in media attention produces an initial 0.27 standard-deviation increase in presidential attention. This is followed by a continuing response across time, with a total standard-deviation change of about 0.39 in the first and second weeks after the shock. Thus, the statistical evidence suggests that

the president is highly reactive to the media for both U.S.-Soviet relations and the Arab-Israeli conflict.

Domestic Policy Issues

The results for the three domestic policy issues are contained in Table 2 and figures 7, 8, and 9. The test statistics in Table 2 show that presidential, media, and congressional attention to domestic policy issues is strongly inertial. Observing the presidential equations in the first panel of Table 2, past presidential attention to crime, health care, and education determines current presidential attention to these issues. Similarly, the media equation in the second panel of Table 2 shows that past media attention to these issues affects current media attention. Finally, the third panel of Table 2 shows that past congressional attention to the three issues determines current congressional attention to them. We can interpret these baseline results as again demonstrating that attention for all three actors

TABLE 2. Granger Tests for Attention to Domestic Policy Issues

Coefficient Block	Crime	Health Care	Education	Dependent Variable
President	3.38 → (0.01)	36.92 → (0.00)	2.85 → (0.01)	Presidential attention
Media	2.53 → (0.04)	0.80 (0.55)	2.81 → (0.02)	
Congress	0.99 (0.41)	0.36 (0.87)	1.48 (0.19)	
President	1.78 (0.13)	4.19 → (0.00)	2.40 → (0.04)	Media attention
Media	14.61 → (0.00)	12.10 → (0.00)	3.91 → (0.00)	
Congress	0.50 (0.74)	1.51 (0.19)	1.59 (0.16)	
President	0.96 (0.43)	1.76 (0.12)	3.46 → (0.00)	Congressional attention
Media	0.25 (0.91)	0.36 (0.88)	2.00 (0.08)	
Congress	34.01 → (0.00)	25.34 → (0.00)	42.43 → (0.00)	

Note: The numbers in the table are *F* statistics; the numbers in parentheses are *p*-values. The arrows indicate possible Granger causal relations from the block of coefficients shown to the dependent variable. The crime VAR contains four lags; the health care and education VARs contain five lags. There were 514 weekly observations in the series, running from the 27th week of 1984 to the 23d week of 1994.

is strongly inertial and bound by a stream of historical interest and precedent.

Is presidential, media, and congressional attention to domestic policy issues related? Again, consider first the relationships that do not exist among the respective time series. The first and second panels of Table 2 show that congressional attention does not Granger cause media or presidential attention to any of the three domestic policy issues. Consistently, the moving average responses in figures 7, 8, and 9 show that a one-standard-deviation positive shock in congressional attention produces little or no change in either media or presidential attention to these two issues.

Turning the relation around, Congress is also unresponsive to a media focus on crime and health care. The third panel of Table 2 shows that the media do not Granger cause congressional attention for either issue. The first column of Figure 7 and the second column of Figure 8 suggest minimal responsiveness by Congress to a one-standard-deviation positive shock in media attention to crime and health care.

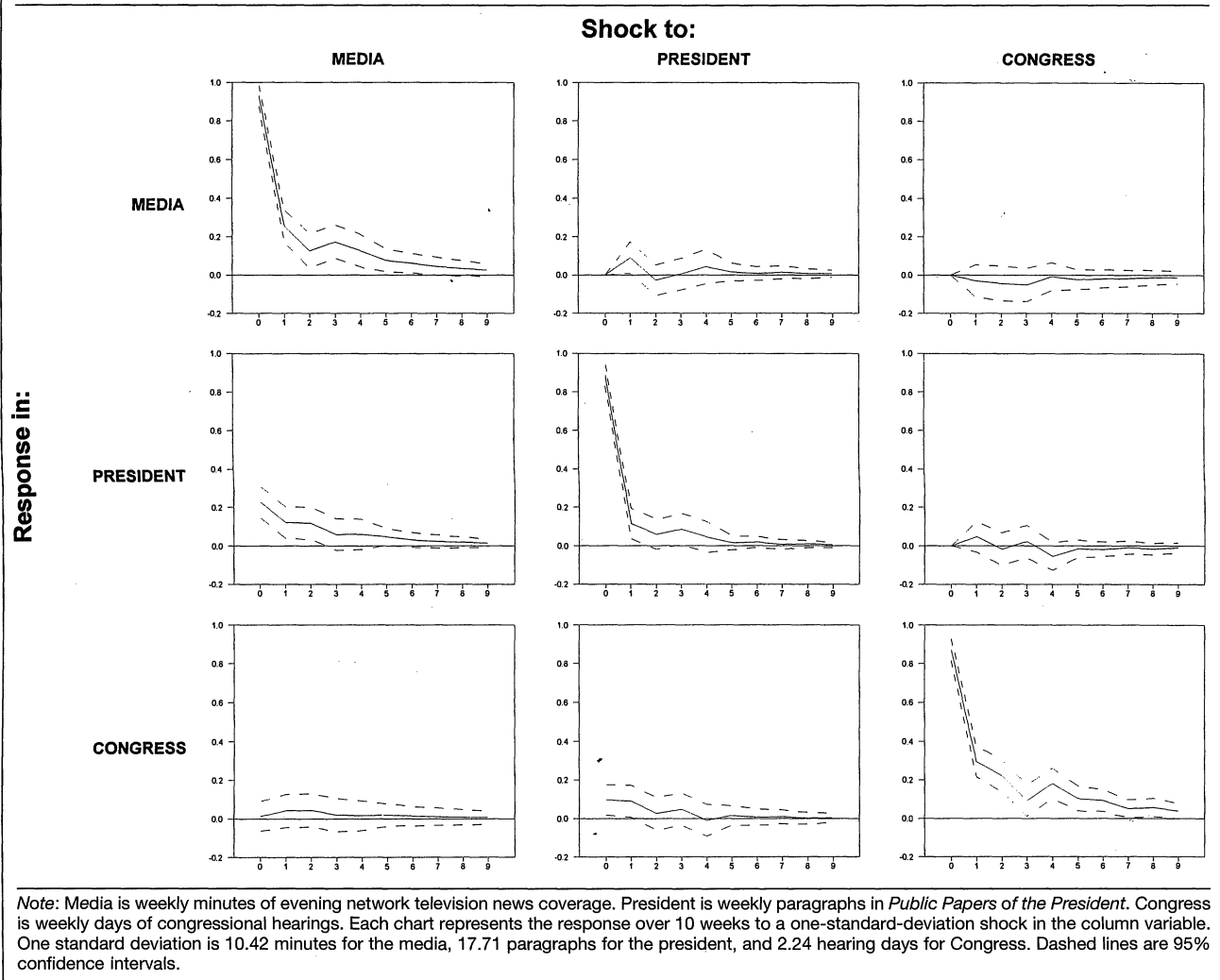
What relationships do exist among the president, media, and Congress for the three domestic policy issues? The primary relationships are between the president and the media, but these relations differ fundamentally for the three issues. For crime, the president operates in a reactive mode, much as for the two foreign policy issues discussed above. The first panel of Table 2 shows that media attention to crime Granger causes presidential attention. Consistently, the first column of Figure 7 reveals that a one-standard-deviation positive shock to media attention to crime produces an initial 0.24 standard-deviation increase in presidential attention, followed by a decline in presidential attention over the next few weeks. The total cumulative presidential response over six weeks is about 0.54 standard deviations.

In the other direction, the second panel of Table 2 shows that the president does not Granger cause media attention to crime. Consistently, the second column of Figure 7 reveals only a weak response by the media to an increase in presidential attention. Thus, on crime there is little evidence of a reciprocal relationship between presidential and media attention.

Moving to health care, the statistical evidence depicts the president as entrepreneurial on this issue. That is, the president is unresponsive to either the media or Congress, but he strongly determines media attention and may also affect congressional attention. The first panel of Table 2 shows that neither media nor congressional attention to health care Granger causes presidential attention. The second and third columns of Figure 8 confirm this assessment, since shocks, respectively, to media and congressional attention produce little significant movement in presidential attention.

In the other direction, the second panel of Table 2 reveals that presidential attention Granger causes media attention to health care issues. The first column of Figure 8 plots the dynamics of the response by the media; a one-standard-deviation increase in presidential attention produces a 0.25 standard-deviation initial increase in media attention and a cumulative response over two weeks of about 0.43 standard deviations.

The president also may affect congressional attention to health care issues, but the statistical evidence is weaker here. The third panel of Table 2 shows that presidential attention does not Granger cause congressional attention, but the first column of Figure 8 suggests some consistent positive movement in congressional attention after an increase in presidential attention. This effect is very weak relative to responses by the media, but it provides some evidence that the

FIGURE 7. Moving Average Response for Crime Issues

president may affect congressional attention to health care.

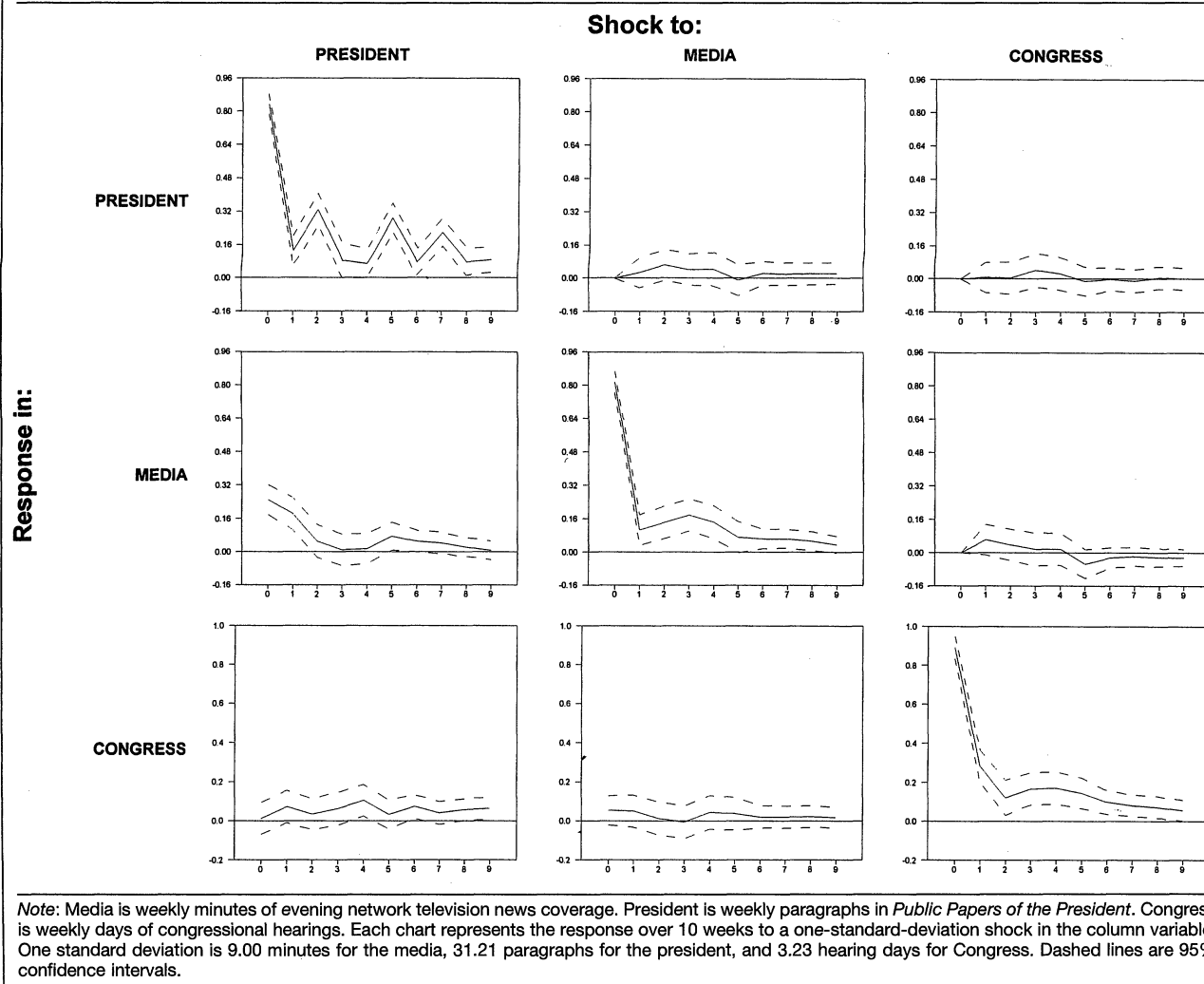
It is also worth noting that the results on health care are strongly determined by whether we retain weeks for the 1992 election and Clinton presidency in the sample. If we omit those observations, then the relationship among the president, media, and Congress becomes essentially random and driven only by issue inertia.¹⁰ This suggests the overarching importance of the Clinton presidency to media and congressional attention to health care.

Finally, consider the relationships that exist for the education issue. The Granger tests in column 3 of Table 2 show a reciprocal relationship between presi-

dential and media attention. The president both responds to and causes media attention to education through time. We can track the dynamics of these reciprocal relations by changing the variable order in the simulations. If we place the president first in the variable ordering, the first column of Figure 9 suggests that a one-standard-deviation shock in presidential attention produces about a 0.34 standard-deviation increase in media attention in the week following the shock. Congressional attention also responds to the shift in presidential focus with continuing attention distributed across time. If we place the media first in the variable ordering, however, a one-standard-deviation shock in media attention also produces about a 0.34 standard-deviation shift in presidential attention and a 0.18 shift in congressional attention. It is technically incorrect to infer much from these point estimates because of an identification problem that results from feedback due to contemporaneous correlation.¹¹ The

¹⁰ We also did Chow tests for whether there were structural breaks in presidential, media, and congressional attention after November 1992. Controlling for other factors, there were statistically significant increases in presidential and media attention after this date, but there was no statistically significant change in congressional attention. The lack of a congressional response may relate to the time lag before the start of congressional hearings. The Chow test results confirm the weak effects from the president to Congress for the VAR discussed above.

¹¹ The contemporaneous correlation between the media and president is about 0.35.

FIGURE 8. Moving Average Response for Health Care Issues

intuitive sense from the Granger tests and simulations, however, is a relationship that runs in both directions and is of about the same magnitude in either direction.

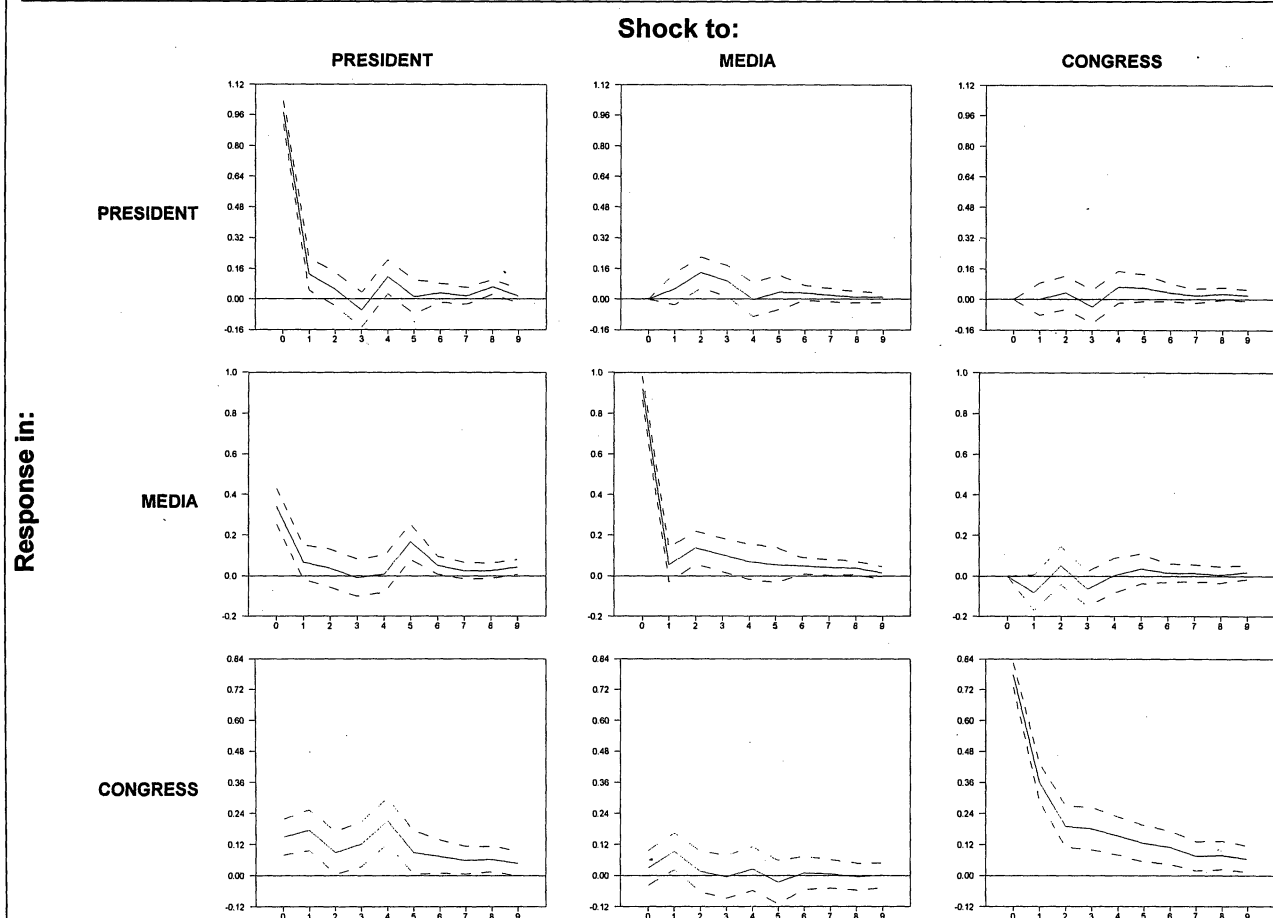
We should also note that presidential influence on the media and Congress is strongly dependent on the time frame of the analysis.¹² If we consider only the Reagan years, then the media no longer Granger cause presidential attention to education, and the president does not Granger cause congressional attention to education policy. Yet, Reagan's attention does Granger cause media attention to the education issue. Both Bush and Clinton were concerned with education policy (albeit holding different views about how to improve it). Thus, it is not surprising that they were more sensitive (and thus more responsive) to media coverage of education than was Reagan. And it also makes sense that their greater commitment to improv-

ing education policy also had more influence on congressional attention.¹³

Conversely, Reagan's concern for education policy was largely symbolic. His focus was on affecting media coverage to bolster his image. When the president's pollster found that the public overwhelmingly disapproved of the administration's reductions in aid to education, Michael Deaver arranged for Reagan to make a series of speeches emphasizing quality education. As Deaver later gloated, public approval of the president regarding education "flip-flopped" without any change in policy at all (Jaroslovsky 1984). As in the case of health care policy, we see that when the president makes a special effort to lead, he may succeed (although in this case the president used the bully pulpit rather cynically).

¹² We did separate VARs for each administration. Chow tests based on the residuals from these separate regressions confirm that regressions were different for each administration.

¹³ We confirmed the greater responsiveness of the Bush and Clinton administrations to media coverage in a separate unreported simulation analysis. Due to space limitations we do not include the figure from the subanalysis. Results are available on request from the authors.

FIGURE 9. Moving Average Response for Education Issues

Note: Media is weekly minutes of evening network television news coverage. President is weekly paragraphs in *Public Papers of the President*. Congress is weekly days of congressional hearings. Each chart represents the response over 10 weeks to a one-standard-deviation shock in the column variable. One standard deviation is 6.95 minutes for the media, 15.02 paragraphs for the president, and 3.07 hearing days for Congress. Dashed lines are 95% confidence intervals.

CONCLUSION

Our findings regarding the ability of the president to set the agenda of Congress and the media are mixed. Most of the time, all three react to events and issues, even in the foreign policy arena. This broad conclusion is consistent with the work of others (Edwards 1989; Jones 1994, 1995), who urge skepticism regarding the president's ability to dominate the political system.

The Role of Inertia

In general, attention by the president, Congress, and television networks are determined in the first instance by strong inertial forces. The White House and Congress must deal with a wide range of issues because of routines of governing, such as budgeting or a regularly scheduled G-7 meeting. They also must respond to prior commitments of the government, including entitlement spending, protection of civil rights, and treaty obligations.

Similarly, the media has norms of what constitutes a good story. Crime, with its high human interest value, is perhaps the classic media policy issue. Virtually all

citizens are at some point concerned with the personal safety of themselves, family members, or friends. In addition, crime stories can be presented in terms of good and evil and thus are relatively easy for people to understand. There are strong incentives for the media, which must appeal to the mass public, and elected officials, who must face the public in frequent elections, to put crime on their agendas independent of the president.

The media has routines for assigning correspondents to cover issues or countries, and Congress has routines and timetables for organizing hearings. It is difficult for them to alter these routines rapidly in response to presidential leadership, and the interest group system typically reinforces a commitment to established routines. Given the strong inertial forces of government and the fact that all three institutions are subject to random and exogenous forces beyond their control (primarily events), there is limited room left on the agenda. Under normal circumstances, the networks are also constrained by the length of their nightly news programs—22 minutes per day for each. In such a

situation, the president faces an uphill battle to influence the policy agendas of others.

The Variety of Paths of Influence

Even in the face of the strong inertial forces in agenda setting, the president, Congress, and the media do exert mutual influence. Perhaps the most interesting aspect of our findings is the variety of ways in which that occurs across issues.

In foreign policy, we find one-way relations. In neither of the two foreign policy areas does the president cause media or congressional attention to the issue. Instead, the president reacts to inertia, events, and the media. Although the data do not allow us to determine why the president is responsive to the media, our findings are consistent with our theorizing about the effect of the media on public opinion and the incentives this provides the president for addressing the issues raised in the media.

In domestic policy, we find a more interactive relationship, one that appears to offer the president more opportunity for influencing agendas. On two of the three issues, education and health care, the president affects media attention in some instances. The relationship for the third issue, crime, nearly reached conventional levels of statistical significance. Bush and Clinton had strong and statistically significant effects on congressional attention to the education issue, and Clinton's influence on congressional attention to health care approached statistical significance. At the same time, the president also responds to media attention to crime and education. In no instance does the president respond to Congress, however.

Thus, most of the time presidents react, responding primarily to fluctuations in attention by the media and, in the area of foreign policy, world events. This is to be expected, because presidents have limited institutional resources and do not desire to be influential on all issues. As risk-averse actors, however, they are ever watchful and respond when other institutions deem an issue worthy of greater consideration.

Nevertheless, we find evidence that the president can act in an entrepreneurial fashion to focus the attention of others in the system. If an issue is not already part of ongoing media coverage or congressional hearings, then the president may be able to set the agenda of the networks and Congress. In the early part of his term, Clinton made health care his highest priority, in contrast to the concerns of his two predecessors. In that period, the president strongly determined media attention and also may have affected congressional attention. On the issue of education, Bush and Clinton affected congressional attention, and Reagan influenced the media's agenda.

Thus, under special circumstances presidents move issues onto the agenda of other institutions and focus attention, especially when the issue is important to them and constitutes a major presidential initiative. Under these circumstances, presidents operate as issue entrepreneurs, essentially creating attention where none exists.

Congress has no influence on the agenda of the president or the media, and its own agenda is only influenced by the president and the media on the issue of education. It is ironic that the branch of government created to be most responsive to its environment is the one whose agenda is least likely to be affected by outside influences, at least among the issues measured in this research.

The media, in contrast, has an especially important role in agenda setting. It influences the president's agenda on both foreign and domestic policies. These findings reinforce those of studies that focus more narrowly on the media's influence on institutional agendas, and they signal a need to investigate further the media's effect.

Our central concern in this study has been the president's ability to set the agendas of Congress and the media. It is noteworthy that the influence of the White House varies across issues, within an issue over time, and within a single presidency over time. Although we have taken an important step toward understanding institutional agenda setting, we have just begun the journey. The need to explore the variety of paths of influence in agenda setting sets our own research agenda for the future.

APPENDIX

The following key words were used to search the *Vanderbilt Television News Archive*. The list includes the words and the years for which they were used. Not all the stories in which these words appeared were counted. We read the abstracts and coded the variables so that only those stories related to U.S.-Soviet relations, the Arab-Israeli conflict, crime, health care, or education were part of the measure.

Year	Key Words
U.S.-Soviet	
1984-90	USSR, Soviet, Russia, Moscow, U.S.-USSR rels., arms control, summit, nuclear weapons, Chernobyl, Gorbachev
1991	USSR, Soviet, Russia, Moscow, U.S.-USSR rels., arms control, summit, nuclear weapons, Gorbachev, Yeltsin, Republic, Commonwealth
1992-94	USSR, Soviet, Russia, Moscow, U.S.-USSR rels., arms control, summit, nuclear weapons, Gorbachev, Yeltsin, all former Soviet states (Latvia, Lithuania, Estonia, Azerbaijan, Mongolia, Kazakhstan, Tajikistan, Moldova, Belarus, Armenia, Ukraine, Uzbekistan, Turkmenistan, Kyrgyzstan, Georgia, Kurdistan)
Arab-Israeli	
1984-94	Israel, Jerusalem, Tel Aviv, Syria, Lebanon, Jordan, Egypt, PLO, Arafat, Palestine, Palestinian, Arab-Israeli, terrorism, intifada, West Bank, Gaza, Golan, occupied
Crime	
1984-94	crime, criminal(s), violence, gang(s), prison(s), murder, drugs (narcotics only), justice, death penalty, sentence, execution
Health Care	
1984-94	health and care, Medicare, Medicaid, health and care and reform, medicine, doctors, disease, health

Year	Key Words
Education	
1984-94	Educ*, teach*, college, student*

Note: *means wild card.

The key words for the index of the *Public Papers of the President* are provided in the following list. All entries mentioned in the index were read to ensure validity for inclusion as attention to U.S.-Soviet relations, the Arab-Israeli conflict, crime, health care, and education.

Year	Key Words
U.S.-USSR	
1984-90	United Soviet Socialist Republics (all concurrent listings), nuclear weapons (all concurrent listings), arms control, Afghanistan, any mention of Soviets in any other listing in the index (i.e., Middle East—Soviet Role)
1991-94	Same as above, except no Afghanistan, and including: Commonwealth of Independent States (all concurrent listings), Estonia, Latvia, Lithuania
Arab-Israeli	
1984-94	Israel, Jordan, Syria, Egypt, Lebanon, Middle East (having to do with conflict or terrorism), terrorism (dealing with the Middle East), all relevant subtopics
Crime	
1984-94	law enforcement and crime, drug abuse and trafficking, and all relevant subtopics
Health Care	
1984-94	health and medical care, health and human services, specific diseases and health-related conditions, and all relevant subtopics
Education	
1984-94	education, teacher, school

The key words for the *Congressional Information Service Index* are provided in the following list. All entries mentioned in the index were read to ensure validity for inclusion as attention to U.S.-Soviet relations, the Arab-Israeli conflict, crime, health care, and education.

Year	Key Words
U.S.-USSR	
1984-90	USSR, Soviet, Russia, Moscow, arms
1991-94	control, Warsaw Pact, Afghanistan and Soviets, the names of each of the former Soviet states
Arab-Israeli	
1984-94	Israel, Jerusalem, Syria, Lebanon, Jordan, Egypt, Palestinian Liberation Organization, PLO, Palestine, Palestinian, Arab-Israeli, Middle East
Crime	
1984-94	crime, criminal, violence, gang, prison, murder, drugs (narcotics only), death penalty, sentence, execution
Health Care	
1984-94	health, health care, Medicare, Medicaid, medicine, doctor, physician, medical, disease, cancer, AIDS, drugs (excluding illicit narcotics)

Year	Key Words
Education	
1984-94	educ*, teach*, school* university*, college, student*

Note: *means wild card.

The following key words were used for searching the PANDA events data set within a database environment (Microsoft Access). Abbreviations were used per the codes. These correspond to targets, sources, and places.

Year	Key Words
U.S.-USSR	
1984-94	Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kurdistan, Kyrgyzstan, Latvia, Lithuania, Moldova, Mongolia, Russia, Tajikistan, Turkmenistan, Ukraine, USSR, Uzbekistan
Arab-Israeli	
1984-94	Israel, Jordan, Palestine, Syria, Egypt, Lebanon

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