Framing and the Public Agenda: Media Effects on the Importance of the Federal Budget Deficit

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What explains the shift in public opinion over time on the issue of the 1996 U.S. federal budget? Public opinion polls demonstrate dramatic shifts in the percentage of people considering the budget issue to be the most important problem facing the country from November 1994 through April 1996. In this article, we model Roper Center opinion polls against a prediction of opinion from media content to investigate how media coverage affects the importance assigned to the budget issue. We identify four dominant frames present in media coverage of the budget issue and argue that a model combining the theories of agenda setting and framing provides a better explanation for the shifts in aggregate opinion than either theory on its own. By combining framing with the traditional agenda-setting approach, we take into account the nuances of coverage within the issue, in addition to the sheer amount of coverage, for a more complete explanation of media effects on public opinion on the issue of the federal budget.

Keywords agenda setting, federal budget, framing, media effects, public opinion, public opinion polls, content analysis

Where does the public get its information about issues and policy alternatives? Many models of public opinion suggest that presentation of issues in the media plays an important role in shaping the attitudes of the public (i.e., McClosky & Zaller, 1984; Fan, 1988; Page & Shapiro, 1992; Stimson, 1991; Zaller, 1992, 1994). Media serve as the primary mechanism by which elite opinion is communicated to the public. Research on media agenda setting testifies to this influence (McCombs & Shaw, 1972; Iyengar & Kinder, 1987). According to this perspective, media do not tell the audience what to think but, rather, what to think *about* (Cohen, 1963). This is accomplished through the sheer amount of attention given by media outlets to various political issues; the more coverage an issue receives, the further up the agenda it supposedly moves. Agenda setting, then, explains why certain issues in the information environment are considered to be more important than others by the public (McCombs & Shaw, 1993). Experimental evidence demonstrates that

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when news coverage focuses more on a particular issue, people are more likely to cite that issue as the most important concern facing the nation (Iyengar et al., 1982).

However, the traditional agenda-setting concept, also referred to as the "first level" of agenda setting (McCombs & Bell, 1996), attempts to explain only why one issue becomes more important than another issue in the public's mind; it does not explicitly focus on the nuances of coverage *within* an issue. Some have argued, therefore, that the original agenda-setting theory does not go far enough; it "strips away almost everything worth knowing about how the media cover an issue and leaves only the shell of the topic" (Kosicki, 1993, p. 112). The traditional model of agenda setting overlooks the idea that *controversy* is the underlying basis of any issue that becomes a topic of media coverage. How different conceptions of issues emerge and evolve over time, not merely their increased presence in media, is important for understanding change in public opinion.

Consequently, scholars working in this domain have begun to extend the agenda-setting concept to consider how variations within coverage of an issue influence an issue's salience in the public mind (McCombs, 1992, 1994; McCombs & Bell, 1996). Described as the "compelling arguments" hypothesis, this perspective asserts that the selection of particular attributes of an issue for attention plays a powerful role in setting the public agenda (Ghanem & Evatt, 1995). As McCombs and Estrada (1997, p. 240) explain: "How news frames affect public opinion is the emerging second-level of agenda-setting. The first level is the transmission of object salience. The second level is the transmission of attribute salience." Attribute salience refers to the multitude of ways political elites or media sources can choose to shape the presentation of an issue; as such, the second level of agenda setting implicitly draws upon theories of media framing.

Framing—making some aspects of reality more salient in a text in order to promote a particular "problem definition, causal interpretation, moral evaluation and/or treatment recommendation for the item described" (Entman, 1993, p. 52)—has given rise to the argument that it is not the sheer quantity of information about a topic that drives its importance. Rather, it is *how* media discuss a topic that fosters changes in public opinion. Scholars have long argued that journalists' characterization of an issue shapes its reality for an audience, creating the acceptable range of meaning (Ball-Rokeach & Rokeach, 1987; Gamson, 1985, 1992; Gitlin, 1980; Graber, 1989; Hall et al., 1978). This perspective contends that media attention to discrete features of an issue will alter the public's understanding of the issue and the importance they assign to it.

Framing, then, provides a means of describing the power of communication to direct individual cognitions toward a prescribed interpretation of a situation or object. Several empirical examples testify to the insights that the framing approach can provide regarding media effects on opinion (Iyengar, 1991; Zaller, 1992). By framing issues in certain ways, the media influence the way people perceive a problem or issue and its consequences, possibly altering their final evaluation of the issue. For example, research suggests that framing economic and foreign policy questions in terms of gains versus losses (Quattrone & Tversky, 1988) or framing affirmative action in terms of unfair advantage versus just compensation (Kinder & Sanders, 1990) can change the basis of political judgment. Similarly, shifting the news frame of health care reform from a focus on economic considerations to ethical considerations alters how voters interpret the issue and use it in electoral

decisions (Shah et al., 1996, 1997). Media framing can also shape opinion in times of international policy disputes. Presentation of the Gulf War in terms of patriotic, technological, and euphemistic language, as opposed to dissent, error, and human loss, shaped public opinion about American involvement in the conflict (Allen et al., 1994).

These framing studies demonstrate that the way in which the media discuss an issue influences public opinion. Agenda-setting research that does not directly draw upon a framing perspective still touches on the importance of this "second level" of agenda setting (Atwater et al., 1985; Yagade & Dozier, 1990). In particular, research indicates that issues with a high degree of conflict have a greater influence on the agenda than would be warranted by the sheer amount of coverage given to them (MacKuen & Coombs, 1981). Exploring the relationship between stories with high levels of conflict and the public agenda, Wanta and Hu (1993, p. 251) concluded that "the agenda-setting influence of the mass media on the public [is] contingent to a great degree upon the sub-issue, or news frame, reported." However, their study considered 15 issue-specific categories of international news (such as military/nuclear arms, terrorism involving the United States, or crime/drugs) and not abstract frames or particular rhetorical devices. Thus, they focused on the sub-issues across the broader topic of international news rather than the nature of the controversy within a more discrete issue. Further investigation needs to consider the differing political language used to characterize a single issue and to explore, in combination with the amount of coverage the issue receives, the impact of these news frames on the importance assigned to that issue by the public.

In this article, we use a model that accounts for both traditional agenda-setting effects and "second-level" framing effects in order to provide a richer account of changes in aggregate public opinion. Specifically, we examine the controversy over the 1996 federal budget and argue that changes in both the quantity and nature of media coverage predict shifts in the importance assigned to this issue by the American public. More specifically, we believe that an agenda-setting perspective, which emphasizes how much coverage a single issue receives, is enriched by a media framing perspective, which considers what type of coverage that issue receives. This contention was tested through the ideodynamic model and the InfoTrend content analysis computer program (Fan, 1988, 1994). This approach uses content analysis of the mass media to model changes in public opinion—in this case, changes in the importance of the federal budget deficit.

The Budget Deficit Controversy

In the 1994 elections and continuing into the 1996 campaigns, the federal budget was a topic of much debate among policymakers in Washington. Based on the "Contract with America," the new Republican majorities in the House and Senate jousted repeatedly with President Clinton over competing plans for balancing the budget. Republicans claimed that Democrats were not serious about reducing the deficit. Democrats insisted that Republicans were really interested in dismantling popular social programs such as Medicare.

In November 1995, President Clinton and congressional Republicans could not agree on long-term deficit reduction plans. In an effort to pressure the president, congressional Republicans refused to pass a bill authorizing stop-gap spending until

a budget agreement had been reached. This forced the government to shut down, furloughing 800,000 federal employees. Temporary spending measures maintaining expenditures at the previous year's level are routinely used to avoid such shutdowns; budget agreements are then passed after the new fiscal year has begun. In this instance, the congressional leadership decided to use the closing of the government as a weapon to draw attention to the disagreement over deficit reduction plans. Thus, while there was no necessary or logical connection between the two, the shutdown was constructed by elites and understood by the public in terms of the budget deficit.

The initial shutdown lasted 7 days, after which stop-gap spending was implemented. The president and Congress continued to battle over the balanced budget time frame and whether to use the projections and assumptions of the Congressional Budget Office or those of the White House's Office of Management and Budget. Budget talks, which began on November 28, 1995, were cut short just after they commenced, as negotiators "threw up their hands" on November 30 and canceled negotiations with a looming December 15 deadline (Hager, 1995).

Although talks resumed on December 4, stop-gap funding ran out at midnight of December 15, before any kind of agreement could be reached. Contentious political debate and an unprecedented second government shutdown of 21 days dominated the political discourse of the holiday season. The Congress and the president agreed on three stop-gap spending bills to send furloughed workers back to their jobs on January 6, 1996. However, additional contention and shutdown deadlines continued through the end of January and the first few months of 1996.

In addition to political debates and maneuvering, public opinion on the issue of the federal budget shifted over this period of time (from the summer of 1994 through the spring of 1996). In particular, survey marginals from the Roper Center indicate that the percentage of the public considering the federal budget deficit to be the "most important problem" facing the country increased from 5 percent during October 27–30, 1995, to 20 percent by the first part of 1996 (see Figure 1). The public's response to the issue of the budget deficit is not the same as a response to the government shutdown as an important problem. We measured public opinion from November 1994 through April 1996; the shutdown was a small part of this time frame, with only one poll question being asked during the shutdown period. In addition, the poll conducted during the shutdown revealed that when both the budget deficit and the shutdown were coded as separate response options to the most important problem question, 19 percent chose the budget deficit, while only 1 percent mentioned the shutdown.

The change in public opinion concerning the budget deficit and the literature on media agenda setting and framing suggest the need for an in-depth analysis of media content on this issue. How were the media presenting coverage on the budget issue? Was this coverage affecting public perceptions of this issue as the most important problem? We conducted an extensive content analysis of the debate surrounding the federal budget from a diverse sample of newspapers across the country. This analysis was used to determine whether changes in the media coverage surrounding the federal budget had an impact on public opinion over time. More specifically, we focused on changes in how news media characterized the politics surrounding the budget debate and how this coverage contributed to shifts in the public's perception of the most important problem facing the nation.

To do so, we determined dominant media frames of the budget debate, exam-

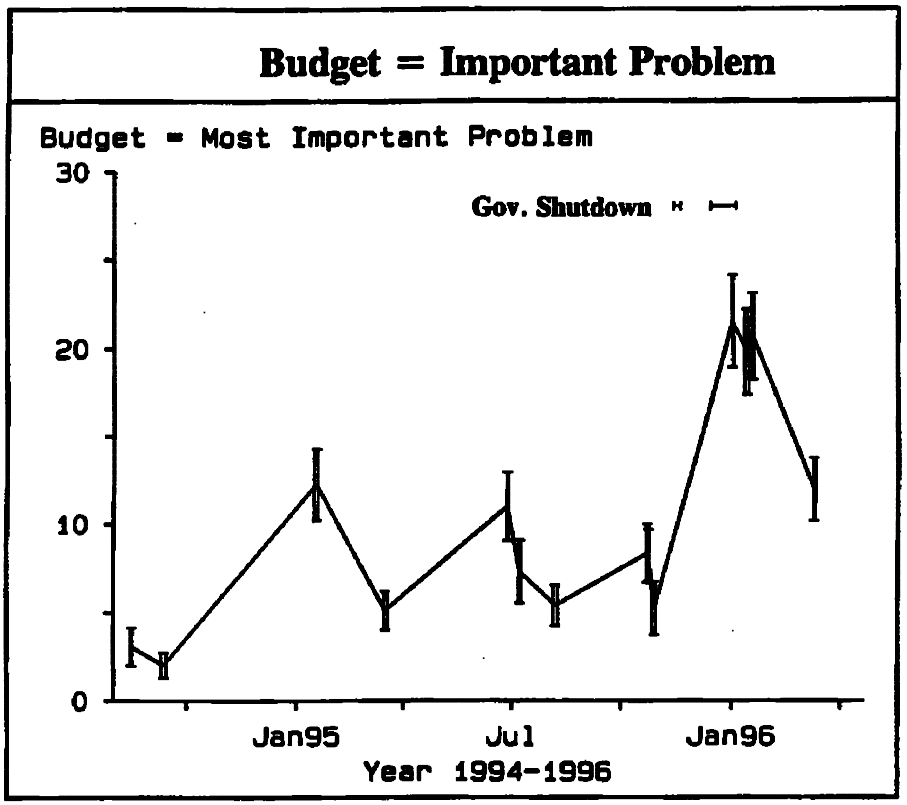

Figure 1. Percentage of the public considering the budget to be the most important problem facing the country. Survey data are taken from the Roper Center public opinion poll database for the question "What is the most important problem facing the country today?" Survey sponsoring organizatons include: CNN/*USA Today,* CBS/*New York Times,* the *Washington Post,* CBS News, ABC/*Washington Post,* and ABC News. The widths of the hash mark symbols correspond to the beginning and ending dates of the surveys, and the heights indicate 95 percent confidence intervals.

ined changes in news frames over time, and modeled these frames against variation in public opinion found in the Roper Center poll data. Public opinion was measured by responses to the question "What do you think is the most important problem facing the country today?" Responses from 12 polls asking this question during the period of time examined in this study (November 1994–April 1996) were retrieved from the Roper Center at the University of Connecticut and used for this analysis. We began our content analysis in November 1994 to capture all media content following that year's congressional elections. The conflict between Congress and the president over the federal budget deficit began when the Republicans took control of Congress and began discussing the Contract with America.

Over the course of the budget debate in the news, the media repeatedly used particular frames, or ways of representing the meaning of the budget issue. As noted by McCombs (1997, p. 6), "a rich variety of frames influence the details of our pictures of the objects in the news," many of these drawing upon rhetorical

tools such as tone and drama (Patterson, 1994). We identified four specific frames: a "talk" frame, a "fight" frame, an "impasse" frame, and a "crisis" frame. These frames represented varying levels of intensity in how the budget issue was discussed and its status in political discourse. For example, politicians engaged in *talks* about the budget. Once there was disagreement over budget options, *fights* erupted between the various sides and continued until there was a breakdown in communication, or an *impasse*. Ultimately, the issue reached *crisis* proportions, until the chain of events was broken by a resolution. These frames represent the range of depictions within the politics surrounding the budget issue; together, they reflect the total amount of coverage devoted to the discussion of budget resolution efforts.

These frames carry differing meanings for the seriousness of the budget conflict. Therefore, the different frames should have different implications for the importance assigned to the issue of the budget in the minds of journalists and the American public. Journalists' or their sources' characterization—the spin, or frame, of a story—can have dramatic consequences for how the issue is defined and what linkages are made between it and other issues. An analysis that focuses on changes in particular frames of the budget issue, instead of focusing only on the sheer presence of the issue in the media, may provide a clearer understanding of the impact of media coverage on public opinion. We do not claim that the relationship between the sheer amount of coverage an issue receives and the importance attached to it by the public will be absent. Rather, we believe that considering both the quantity and nature of coverage, as suggested by the "compelling arguments" perspective (Ghanem & Evatt, 1995), offers a clearer psychological mechanism for understanding why the public agenda may change.

We offer two hypotheses to test both levels of agenda setting and to compare the results. The first hypothesis focused on the first level of agenda setting and suggested that changes in the sheer amount of coverage devoted to budget resolution efforts will significantly account for variance over time in public opinion concerning the relative importance of the budget deficit, irrespective of the nature or frame of the coverage. The second hypothesis tested the combined agenda-setting and framing approach (i.e., a combination of both the "first level" and "second level" of agenda setting). This approach suggests that changes in the quantity of frames reflecting more serious or conflictual meaning—such as the "fight," "impasse," and "crisis" frames—may play a greater role in accounting for variance in public opinion concerning the budget issue. This second hypotheses was based on the belief that a further theoretical elaboration of the agenda-setting perspective with a second level, or framing perspective, offers a richer explanation of changes in public opinion.

Method

Media Content

To study media presentation of federal budget resolution efforts, we randomly sampled news stories from a number of major American newspapers available through the NEXIS electronic database. Specifically, this research looked at the content of 19 different newspapers: the *Atlanta Journal Constitution, Boston Globe, Chicago Tribune, Dallas Morning News, Houston Chronicle, Kansas City Star, Los Angeles*

Times, Minneapolis Star Tribune, New Orleans Times Picayune, New York Times, Phoenix Gazette, Rocky Mountain News (Denver), *Sacramento Bee, San Diego Union Tribune, Seattle Times, San Francisco Chronicle, St. Petersburg Times, Washington Post,* and *Washington Times.* The large number of newspapers was chosen to avoid any biases that might be present in a single paper. Newspapers were selected to reflect the information contained in leading news sources from all regions of the country and from various political perspectives.

The NEXIS database was searched for any stories pertaining to the federal budget deficit that appeared between November 8, 1994 (1 day after midterm elections ushered in a Republican majority in the House and Senate), and April 20, 1996 (nearly a month after the final continuing resolution). The original search identified 42,695 stories related to the federal budget deficit.[1] A random number generator was then used to retrieve 10,000 stories as a sample from the original search. Text was retrieved within a 50-word window surrounding the tagged content.

Computer Content Analysis

A computer method was used to analyze stories (Fan, 1988, 1994).[2] The coding unit for this study was the paragraph. Conventions of newspaper journalism dictate that the paragraph has the smallest unit of meaning. The sentence typically relies on the context of the paragraph for its meaning. The paragraph may contain several ideas, and each is coded individually.

The content analysis was divided into two steps wherein various content analysis rules were applied to the text (see Appendix).[3] When we compared the computer content analysis with our hand coding of randomly selected paragraphs, we achieved an agreement score of approximately 90 percent (137 out of 151 paragraphs). It is important to note that all paragraphs that remained after the initial filter were included in the reliability check, not simply the paragraphs that characterized the federal budget deficit controversy. Even after correction for chance, coding reliability was 86 percent (Scott, 1955).

Meaning of Frames

Because we argue that four frames capture the primary characterizations of the discourse surrounding the budget issue, it is important to elaborate on the conceptualization of each frame. Operationally, all four frames were defined by phrases and word combinations reflected by the words or word fragments "budget," "deficit," "politic," or "fiscal," in combination with other words determining particular frames categorizations. First, our definition of the talk frame concerned nonconfrontational communication between the political leadership involved in attempts to resolve the budget issue. This frame was defined by the preceding general deficit phrases in combination with "talk," "negotiat," "debat," "resolv," "agreement," "discuss," "consult," "deal," or "confer." Word fragments were used in order to capture all instances of the word ending in differing suffixes. An occurrence of the talk frame can be seen in the following excerpt from a *New York Times* article:

> Republican leaders in Congress are trying to find a route to a balanced budget by making a *deal* with middle-of-the-road Democrats. (*New York Times,* January 11, 1996, p. B8)

Deal captures the discussion occurring on the budget. This frame does not indicate any great intensity over the nature or tone of the budget debate but, rather, simply reports that discussion is happening.

The second frame in our analysis, fight, differed from the talk characterization in that the tone of the debate was more intense, signifying a more immediate concern about the budget conflict. Operationally, this frame was defined by the general deficit words or word fragments in combination with "fight," "disput," "battl," "skirmish," "war," "contest," "struggl," "conflict," "confront," "wrangl," or "clash."

> Just a day after suspending budget talks with words of optimism, President Clinton and Republican leaders of Congress were sounding more *confrontational* and talking about *fighting* out their differences in the November election. (*New York Times,* January 22, 1996, p. A1)

This example demonstrates how the characterization of the budget debate in terms of talks moves beyond a placid description of the attempts to reach a compromise to a more conflictual one. Because of the phrase "budget talks," this paragraph would be coded as containing both a talk and a fight frame. The fight frame elevates the intensity of the issue, increasing the negative tone of the conflict. Therefore, it should have a greater impact on public opinion than a straightforward characterization of budget talks.

The third frame, impasse, indicates a further stage in the budget discussions. It is distinct from the fight frame in that it encompasses the idea that fighting has reached a temporary breaking point, and talks cannot proceed. Yet, attached to the impasse frame is a similar sense of urgency about the budget issue as exists with the fight frame. Impasse frames were operationalized by the general deficit words or word fragments in combination with "impasse," "standoff," "gridlock," "stalemate," "broke down," "breakdown," or "stall."

> The political *standoff* has turned fiscal policy tighter, says Tim Taylor, editor of the Journal of Economic Perspectives in Minneapolis (*Rocky Mountain News,* April 8, 1996)

Finally, the crisis frame captures a fourth component characterizing discussion of the budget issue. The crisis frame signifies the media's portrayal of the issue as deteriorating into chaos. This frame goes beyond a simple reporting of discussions; it constructs the meaning of the issue by focusing on the inability of political leadership to take action to resolve the problem. Operationally, this frame was defined by the general deficit words or word fragments in combination with "crisis," "chaos," "emergency," or "fire."

> The current budget *crisis* in the federal government once again proves that "inside the beltway" is totally rotten and corrupt. (*Phoenix Gazette,* December 27, 1995)

In all of these stories, it is apparent that the spin, or frame, of a story is not automatic. Instead, the framing reflects elite sources or journalists' choices of how to characterize the events that occur.

Using InfoTrend to Model Opinion

A total of 4,158 paragraphs contained at least one of these frames. The results indicate that the media were most likely to report the budget issue in terms of the talk frame (61 percent of the paragraphs), followed by the fight frame (22.5. percent), the impasse frame (9.5 percent), and the crisis frame (6.9 percent).

Using the InfoTrend program to model the impact of such stories on public opinion, the cumulative impact of all news paragraphs was plotted every 24 hours, with the value of any given paragraph exponentially decreasing over time. Plots were created for each of the four frames examined here. Each plot yielded a persuasive force function. The persuasive force function indicates the amount of information regarding a particular frame available at a given time to influence public opinion. The result is four persuasive force functions, one each for talk (FT,t), fight (FF,t) impasse (FI,t), and crisis (FC,t) (t in each function refers to time). Each function F for time t is the sum of the number of paragraphs in news media coverage of a particular frame, with each one given its maximal value on the story date followed by an exponential decay with a 1-day half-life. This exponential decay rate has been applied in more than 50 prior studies of the impact of the press on opinion. It provides a good fit for the relationship between media coverage and public opinion polls (Domke et al., in press; Fan, 1988, 1996; Fan & Tims, 1989; Fan et al., 1994; Hertog & Fan, 1995).[4]

Overall, the amount of attention to the budget issue in media coverage increased as key events took place (see Figure 2). Particularly noticeable is the dramatic jump in coverage in the weeks following October 30, 1995. For example, newspaper coverage of the talk frame increased greatly after the week of November 6, 1995, in preparation for the November 13 midnight deadline before the government shutdown, and it remained high until the end of the shutdown on November 20. Talk coverage also surged before the second shutdown, with the exception of the period around December 25, the Christmas holiday. Finally, talk coverage peaked again around January 6, 1996, the end of the second government shutdown. Although quantity of coverage varied over time, it did not do so equally for all frames; different frames were used more or less at different points in time.

To get a clearer picture of the impact of these characterizations, each frame's paragraph scores were entered into the ideodynamic model (Fan, 1988, 1995; Hertog & Fan, 1995). For the computation, all four persuasive force functions in Figure 2 were assumed to contribute to public opinion that the budget crisis is an important problem. However, it was possible that the four types of information had different weights, as suggested by framing studies. Therefore, a total persuasive force function $FTFIC,t$ favoring the importance of the budget crisis on the national agenda was constructed as the sum of the individual forces, with each force having its own weight specified by a persuasibility constant k so that

$$FTFIC,t = kT\ (FT,t) + kF\ (FF,t) + kI\ (FI,t) + kC\ (FC,t).$$

This equation simply states that the persuasive force of all of the frames taken together is the sum of each individual frame weighted according to its impact relative to the other frames. In addition, there was also assumed to be a distracting persuasive force FD with no time variable because the distracting information was assumed to be constant over time.

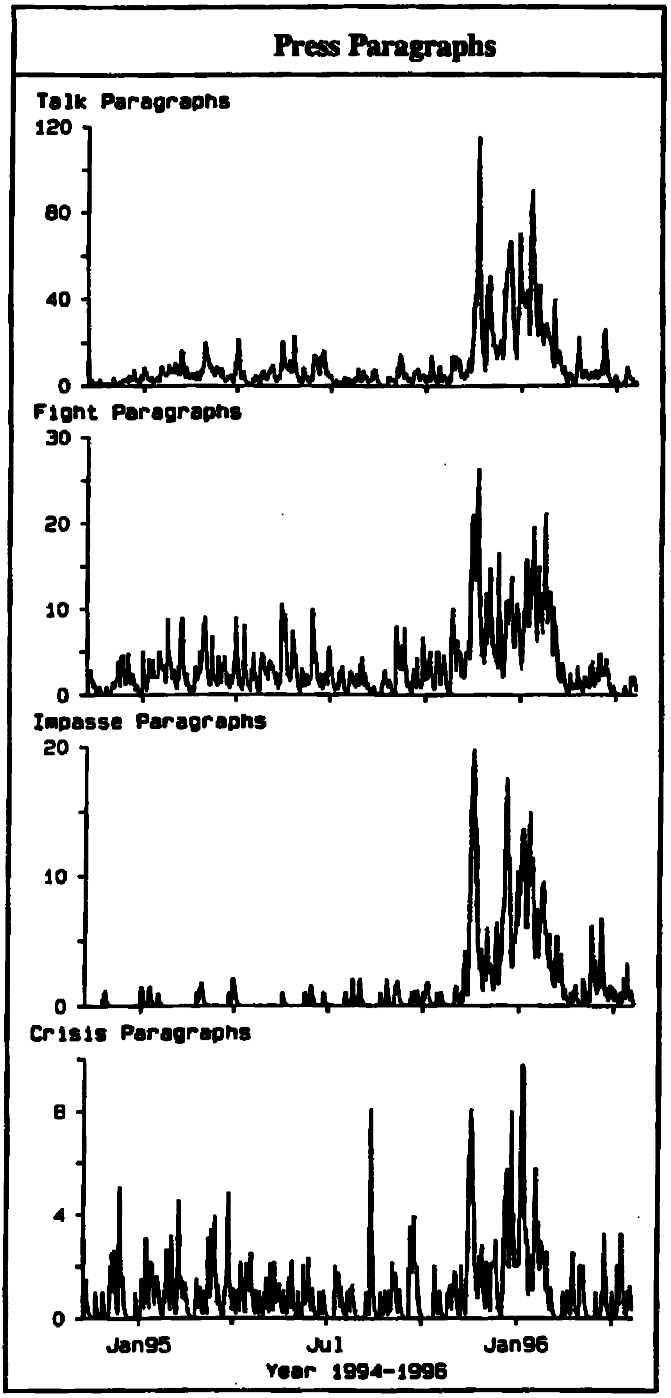

Figure 2. Press paragraphs covering four different frames of the budget debate.

These persuasive forces were entered into the following ideodynamic model:

$$B_{B,t} - B_{B,t-1} = F_{TFIC,t}(1 - B_{B,t-1}) - FD\ B_{B,t-1}.$$

In this equation, B_B is the belief or opinion that the budget crisis is the country's most important problem. This equation is a mathematical expression of the argument that a change over time in opinion that the budget is the most important problem (B_B) is due to two phenomena (given by the two terms on the right side of the equation). The first term on the right reflects the total persuasive force affecting those who do not yet believe the budget crisis is the country's most important problem. The persuasive force term, $F_{TFIC,t}$, is multiplied by the percentage of people who are not yet in agreement that the budget is the most important problem ($1 - B_{B,t-1}$). Conversion can occur only if there is persuasive information ($F_{TFIC,t}$), and it can change only those who are not yet persuaded ($1 - B_{B,t-1}$). The second term on the right is distracting information (FD) affecting those who were previously in agreement that the budget is the most important problem ($B_{B,t-1}$), so this term has the same form as the first term but is preceded by a minus sign to indicate persuasion away from the opinion that the budget is the most important problem.

The usual method for implementing this equation would be to use empirical values of opinion on the budget at $t - 1$ to predict opinion at t. However, we were able to use a different method. After the first public opinion poll point used to initialize the computation, the entire time trend is driven by persuasive information alone, so there is no constraint that there be opinion measurements at each calculation time interval. Furthermore, elimination of public opinion polls from the computation means that the R^2 value accurately gives the impact of the persuasive information. The rationale and statistics of the computation are given in Fan et al. (1994), Hertog and Fan (1995), and Fan (1995).

The parameters of the model are the distracting information, FD, and the relative strengths of the talk, fight, impasse, and crisis paragraphs (kT, kF, kI, and kC). Ideodynamics was used to predict opinion for two hypotheses. The first was a pure agenda-setting model in which all relevant types of persuasive information were given the same weight k so that $k = kT = kF = kI = kC$. The second hypothesis was a combined agenda-setting/framing model in which kT, kF, kI, and kC could all have different weights. This model recognized the framing condition that different types of information could have different persuasive powers.

Findings

Test of Hypothesis 1

The first hypothesis predicted an agenda-setting effect on public opinion. As just stated, the four types of frames were given the same weight k to test this hypothesis. The resulting parameters were $k = 0.20$ (0.15, 0.25) and FD = 31.6 (23.1, 45.1), with the numbers in parentheses representing the 95 percent confidence intervals in the nonlinear regression. Both constants are significant, reflecting the fact that information about the budget increased the issue's importance while distracting information decreased the issue's importance.

The time trend predicted with these constants is shown in Figure 3. The per-

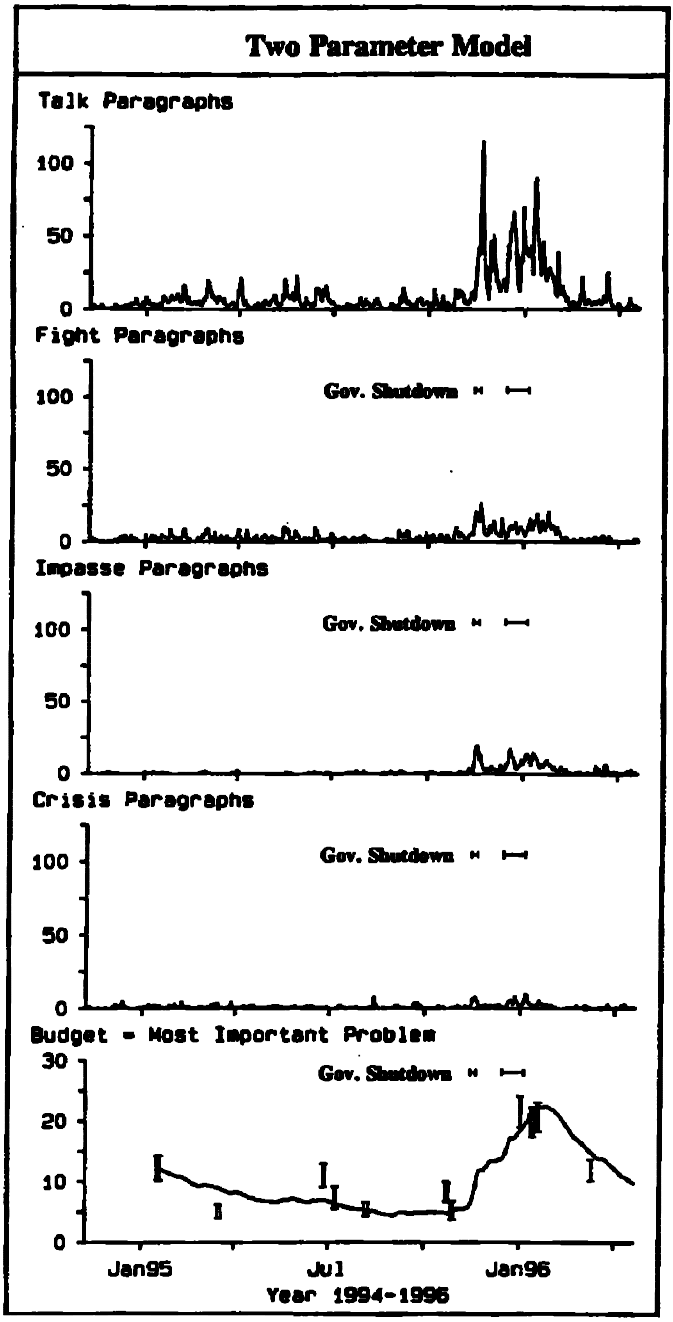

Figure 3. Test of Hypothesis 1: traditional agenda setting. The top four frames are plotted as in Figure 2, and the bottom frame is plotted as in Figure 1.

centage of the public considering the budget deficit the most important issue was set at 12 percent on January 16, 1995, since this was the value provided by the first available poll.

The top four panels of Figure 3 provide the persuasive force functions for the four frame categories, all multiplied by the same weight *k*. These panels are the same as those in Figure 2, except that all frames have the same vertical scale. The bottom panel gives the final prediction of opinion that the budget is the most important problem based on the two estimated parameters and compares it with the confidence interval for each of the available polls. Across the polls, the ideo-dynamic model representing agenda-setting effects accounted for 85 percent of variance in public opinion (R^2 = .85).

Test of Hypothesis 2

The second hypothesis, the combined agenda-setting/framing perspective, assumed that the characterization of an issue can have differential effects on public assessments of the nation's most important problem. The same poll data were used to test this hypothesis as were used to test Hypothesis 1. The estimated parameters (and their 95 percent confidence intervals) were *k*T = 0.00 (0, 0.13), *k*F = 1.66 (1.23, 2.11), *k*I = 0.06 (0, 0.75), *k*C = 0.00 (0, 1.45), and *k*D = 56.0 (43.3, 76.5).

These data show that the only news content significantly contributing to change in public opinion was the fight frame, since it was the only type of frame significantly different from zero. The distraction constant was also significant. Thus, fight frames about the budget increased the issue's importance, while distracting information decreased the issue's importance. The final prediction is presented in Figure 4.

The top four panels of Figure 4 provide the persuasive force functions for the four frame categories, all of which were given at individual weighting constants (as stated earlier). The bottom panel gives the final prediction of opinion that the budget is the most important problem based on the five estimated parameters. The equation accounted for 92 percent of variance in public opinion (R^2 = .92).

Discussion

The findings of our study demonstrate that considering both the way in which an issue is framed and the frequency of coverage add to the ability to predict issue importance in the mind of the public. Our data show that the rise of the budget as the most important issue in late 1995 and early 1996 can be modeled via shifts in how the news about budget politics was framed. By considering only the total amount of coverage the budget received, research may miss the important impact of media characterization of an issue on public opinion. While the presence of all of the frames increased in the media over time, only the fight frame had a significant impact on public opinion, causing the budget issue to rise dramatically to the top of the public's list of the nation's most important problems. This occurred even though the status of the budget deficit itself never changed. What shifted was the politics surrounding the issue and, more important, how the media framed the political efforts of Congress and the president.

Our findings indicate that the agenda-setting approach is able to explain 85 percent of the variance in the 12 poll points analyzed, indicating that first-level

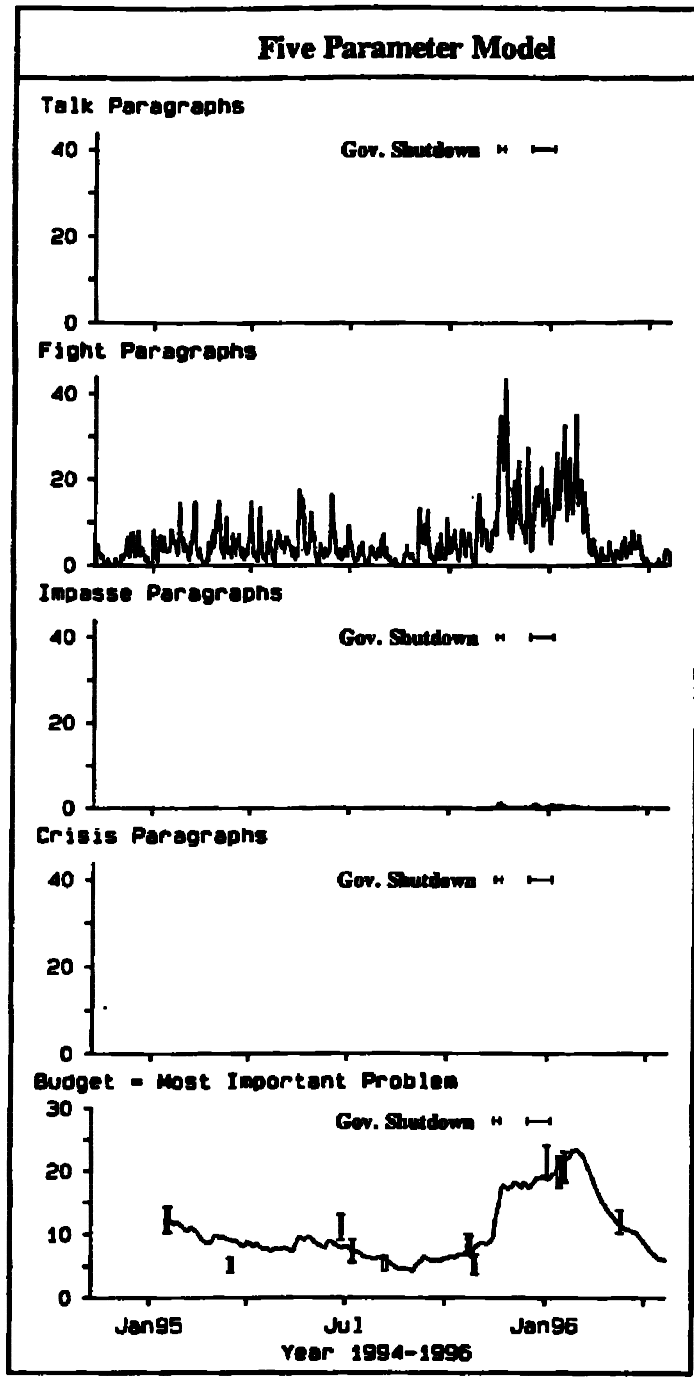

Figure 4. Test of Hypothesis 2: agenda setting and framing. All frames are plotted as in Figure 3.

agenda setting has strong explanatory power in predicting opinion. The combined approach, however, is able to account for 92 percent of the variance via a theoretically richer avenue of understanding media effects because it incorporates this "second level." Specifically, our results involve two interesting points. First, it is not the most plentiful type of budget content—talk frames (61.1 percent of paragraphs coded)—that is predictive. Instead, the more dramatic and conflictual fight frames (22.5 percent of the paragraphs coded) best explain changes in public opinion. This finding indicates that all frames or characterizations of the issue are not equally powerful in terms of persuasive content. When an issue is important enough to cause fighting among elites, its salience will be heightened. Therefore, the cues presented to the public by political elites play an important role in influencing public opinion (Graber, 1988). This finding is similar to research by other scholars regarding the importance of conflict in editors' criteria for choosing a news story (Graber, 1993) and in increasing the salience of particular issues in the public mind (MacKuen & Coombs, 1981; Wanta & Hu, 1993). Conflict among elites helps to raise reader interest and, as a result, also raises the perceived importance of the content of the conflict.

Second, the fact that impasse frames and crisis frames do not significantly contribute to change in public opinion is also an important finding. While the persuasive content of these frames may be greater than a talk frame in terms of conflict, the frequency with which each was used by the media was not great enough to shift opinion on the budget. In addition, the quantity of the fight frames may have overshadowed the quantity of impasse and crisis frames, thereby deflating the relative contributions of these frames in explaining the overall variance. This finding reasserts the importance of quantity in our examination and reinforces the importance of first-level agenda setting in explanations of media influence on public opinion. In addition, it may be that these frames, in terms of content, are too conflictual, as suggested by drive-reduction models of fear appeals (Hovland et al., 1953; Janis, 1967; McGuire, 1969). These findings suggest that the notion that conflict causes the greatest increase in importance for the budget deficit issue requires further clarification. The most extreme levels of conflict do not cause the greatest increase in importance. Rather, messages containing low to moderate levels of conflict are likely to increase persuasive impact, while highly conflictual messages "stimulate defensive behaviors and therefore reduce persuasion" (Eagly & Chaiken, 1993, p. 436). The relationship between conflictual messages and persuasion may be nonmonotonic. Thus, when the intensity of the debate is not arousing enough (talk) or too arousing (impasse, crisis), the effect on the salience of an issue is diminished.

This strongly suggests the importance of adopting a theory that considers media influence both in terms of (a) the quantity of coverage and (b) the characterization of the issue, or the attributes that journalists choose to make salient in their coverage. In this way, both quantity (agenda setting) and quality (framing) are important pieces of a comprehensive explanation of media influence on aggregate opinion on the budget issue. Furthermore, issues may not be simply static "types," as they have been classified in past research. Issues may be dynamic, as well, in the ways that elites and media sources choose to present them to the public. Overall, our findings show that only a particular level of elite cue giving in terms of content and frequency will trigger the public to evaluate the problem as important.

Conclusion

Empirical studies of media effects may profit by moving beyond first-level agenda-setting theory toward an approach that incorporates the nature, or framing, of issue coverage. As a theory of media effects, "first-level" agenda setting may lack a certain specificity regarding media influence on public opinion, given our knowledge of psychological and mass communications research on the intricacies of news presentation and viewer selectivity. The "second level" of agenda setting, or the framing concept, addresses the multifaceted ways an issue can be covered. It explains how the salience of particular attributes can be raised, thereby affecting the way the public understands and prioritizes the issue. By attending to *how* an issue is covered, this approach considers the political context in which issues exist, the many ways issues can have meaning, and the struggle over how issues are constructed by the media and conveyed to the public.

Our findings explain how a hybrid model of agenda setting and framing can better illustrate the media's effect on public opinion. Future empirical research should treat the agenda-setting and framing approaches not as competing theories but as complementary ones, as put forth theoretically in recent literature (McCombs & Bell, 1996; McCombs & Estrada, 1997; Ghanem & Evatt, 1995; McCombs, 1997). Our article serves as an empirical test linking the first and second levels of agenda setting with the purpose of offering a richer understanding of how the public agenda is determined.

Determining how the media affect public opinion is important. Agenda setting has been critical in establishing that the media do play a role. Now theories that offer a richer psychological explanation of the ways in which media coverage influence political attitudes should be explored at both the aggregate and individual levels. The combined perspective put forth in this article offers a parsimonious and psychologically convincing explanation for changes in public opinion. The study of human cognition has clearly established the role simple heuristics and external cues play in the formation and maintenance of attitudes. A more concerted effort needs to be made in including these considerations in future assessments of change in public opinion.

Appendix: Computer Instructions

In the first step, computer instructions were implemented to select federal budget stories from the original NEXIS download. Root forms or word fragments are often used in place of full words in the InfoTrend content analysis rules to capture a wider range of relevant words and phrases. Therefore, stories in which "school," "county," "city," "state," "company," "corporat," "operational," "hospital," "household," or "rent a car" appeared within 20 characters of "budget" were eliminated. Of the original 10,000 stories, 8,742 contained news coverage of the federal budget. However, many of these remaining stories mentioned the budget deficit only in passing or as a single issue among a laundry list of topics. Such stories were removed during this next stage of analysis so that only relevant paragraphs remained.

The next filter analyzed the remaining text on the basis of the four frames outlined (media coverage of budget resolution efforts in terms of talk, fight, impasse, or crisis). Examples of some operational definitions of the frame categories

follow. Rules were created to address the potential for a paragraph to contain multiple frames; in such instances, each frame was individually counted and used in subsequent analysis. Furthermore, when frames were negated by such words as "no" and "not," coding rules were designed to filter them out. Therefore, only paragraphs that focused explicitly on one of the four frames were analyzed.

"Talk" frames were conceived of as paragraphs of news stories containing reference to budget resolution efforts characterized in terms of measured discussions among Washington elites. Operationally, they were defined by phrases and word combinations indicating such characterizations as reflected by the words or word fragments "budget," "deficit," "politic," or "fiscal," in combination with "talk," "negotiat," "debat," "resolv," "agreement," "discuss," "consult," "deal," or "confer." Rules were created to eliminate paragraphs containing phrases such as "good deal," "great deal," "news conference," "press conference," "talk radio," and "talk show."

"Fight" frames were conceived of as paragraphs of news stories containing reference to budget resolution efforts characterized in terms of heated disputes among Washington elites. Operationally, they were defined by phrases and word combinations indicating such characterizations by the use of the words or word fragments "budget," "deficit," "politic," or "fiscal," in combination with "fight," "disput," "battl," "skirmish," "war," "contest," "struggl," "conflict," "wrangl," or "clash." Rules were created to eliminate paragraphs containing phrases such as "star wars" or "Gulf War."

"Impasse" frames were defined as paragraphs of news stories containing reference to budget resolution efforts characterized in terms of a breakdown in communications among Washington elites. Impasse frames were operationalized by phrases and word combinations indicating such characterizations, including the words or word fragments "budget," "deficit," "politic," or "fiscal," in combination with "impasse," "standoff," "gridlock," "stalemate," "broke down," "breakdown," or "stall."

Finally, "crisis" frames were paragraphs in news stories containing references to budget resolution efforts characterized in terms of confusion and disorder among Washington elites. Operationally, they were defined by phrases and word combinations indicating such characterizations by the use of the words or word fragments "budget," "deficit," "politic," or "fiscal," in combination with "crisis," "chaos," "emergency," or "fire."

Notes

1. These stories were selected on the basis of a general search string. This string selected all stories discussing (a) "budget" within two words of "deficit" or "federal" or "Washington" or "cut!" or "balanc!" or "reduc!" or (b) "deficit" within two words of "cut!" or "reduc!" (! denotes any extension of a word [e.g., cutting, balancing, balanced, reducing, reduced, etc.).

2. Unlike a number of other computer methods in which both the input and analysis techniques are preset (and therefore limited) by the software search strategies, the InfoTrend system is actually a high-level programming language in which the researcher enters words, word relationships, and phrases to extract meaning from the text. User-defined dictionaries are used to locate words in the text, and then the machine implements a series of user-defined decision rules to extract ideas based on word relationships, not simply word counts. Another strength of the InfoTrend system is the ability to "layer" successive filters to select relevant text. Paragraphs identified as containing one set of ideas can be used as the input for a separate set of instructions to extract a second group of ideas. The researcher is able to

obtain a level of detail and specificity typically associated with hand coding and yet is able to analyze large amounts of data that would otherwise be time or cost prohibitive. The InfoTrend program allows researchers to work through a series of inductive and deductive cycles in on-screen tests to refine the dictionaries of word relationship rules. In this way, the rules are tested paragraph by paragraph by the human coder for accuracy and contextual relevance. This interactive style of developing computer instructions allows for media content to guide the construction of the rules rather than content coding being based on the researcher's ad hoc assumptions.

3. We wanted the search string to be inclusive rather than exclusive, since we could pare down the stories to dispose of irrelevant ones using filtering; therefore, we used a search string that created a rather broad cache of stories (42,695 original stories). As described earlier, 10,000 stories were then randomly selected. We were still left with a rather broad group of stories, many irrelevant to our investigation. Because of this, we filtered more content to get rid of extraneous stories. For example, our filter rules removed text dealing with school budgets, city budgets, corporate budgets, and international budget or deficit discussions. Some stories were deemed irrelevant because they mentioned the budget issue in passing, as part of a laundry list of other issues. Also, some stories dealt with the deficit but not with the efforts toward deficit resolution (i.e., some discarded stories focused on various budget provisions as opposed to efforts to resolve the debate). Since our focus was on the budget resolution efforts, not the pros and cons of the content of the budget provisions, we excluded these stories. The 4,158 paragraphs analyzed in the end all contained one of the frames that we identified as relevant to the topic of budget resolution.

4. The decay rate formulation reported in these studies differs from the agenda-setting decay rate discussed by Watt et al. (1993) in two significant ways: First, their study assumes that, as information hits, it immediately influences the agenda. That is, information acts instantaneously with no lag time. If the persuasive influence of information decays exponentially, their model assumes a half-life of zero. Information does not persuade on later dates. The ideodynamic model used in this article recognizes that persuasion can occur over a measurable time period, as two-step flow theories of media influence contend. This model takes into account this secondary influence by estimating that the persuasive influence of information has a half-life of one day. Second, Watt et al. (1993) are mainly concerned with how quickly ideas go off the agenda. They attribute this to an exponential rate of forgetting the original persuasive information. In contrast, the ideodynamic model makes no such assumption. Rather, it assumes that new information must distract or direct public opinion toward a new agenda for change to occur. Thus, the model used here considers the dynamics within the information environment.

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