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Experimental Demonstrations of the "Not-So-Minimal" Consequences of Television News Programs

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Two experiments sustain Lippmann's suspicion, advanced a half century ago, that media provide compelling descriptions of a public world that people cannot directly experience. More precisely, the experiments show that television news programs profoundly affect which problems viewers take to be important. The experiments also demonstrate that those problems prominently positioned in the evening news are accorded greater weight in viewers' evaluations of presidential performance. We note the political implications of these results, suggest their psychological foundations, and argue for a revival of experimentation in the study of political communication.

[The press] is like the beam of a searchlight that moves restlessly about, bringing one episode and then another out of the darkness into vision.

W. Lippmann (1922)

Four decades ago, spurred by the cancer of fascism abroad and the wide reach of radio at home, American social scientists inaugurated the study of what was expected to be the sinister workings of propaganda in a free society. What they found surprised them. Instead of a people easily led astray, they discovered a people that seemed quite immune to political persuasion. The "minimal effects" reported by Hovland and Lazarsfeld did much to dispel naive apprehensions of a gullible public (Lazarsfeld, Berelson, and Gaudet 1944; Hovland, Lumsdaine, and Sheffield 1949). Moreover, later research on persuasion drove home the point repeatedly: propaganda reinforces the public's preferences; seldom does it alter them (e.g., Katz and Feldman 1962; Patterson and McClure 1976; Sears and Chaffee 1978).¹

Although politically reassuring, the steady

stream of minimal effects eventually proved dispiriting to behavioral scientists. Research eventually turned elsewhere, away from persuasion, to the equally sinister possibility, noted first by Lippmann (1922), that media might determine what the public takes to be important. In contemporary parlance, this is known as agenda setting. Cohen put it this way:

the mass media may not be successful much of the time in telling people what to think, but the media are stunningly successful in telling their audience what to think about (1962, p. 16).

Do journalists in fact exert this kind of influence? Are they "stunningly successful" in instructing us what to think about? So far the evidence is mixed. In a pioneering study that others quickly copied, McCombs and Shaw (1972) found that the political problems voters thought most important were indeed those given greatest attention in their media. This apparently successful demonstration, based on a cross-sectional comparison between the media's priorities and the aggregated priorities of uncommitted voters in one community, set off a torrent of research. The cumulative result has been considerable confusion. Opinion divides over whether media effects have been demonstrated at all; over the relative power of television versus newspapers in setting the public's agenda; and over the causal direction

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¹Our abbreviated history of this vast literature is necessarily incomplete, conspicuously so at two points. In the first place, "minimal consequences" has critics of its own, Robinson (1976) being the most vocal. Robinson argues that network news and public affairs programming are largely responsible for the sharp increases in Americans' political cynicism over the past fifteen

years. In the second place, we do not mean to suggest that researchers should abandon tests of persuasion. "Minimal consequences" is an apt phrase to describe effects of short-term media presentations, but over the longer haul, media effects produced by repetitious presentations may prove to be substantial.

of the relation between the public's judgments and the media's priorities. (For reviews that vary in their enthusiasm, see Becker, McCombs, and McCleod 1975; Erbring, Goldenberg, and Miller 1980.) A telling indication of this confusion is that the most sophisticated cross-sectional study of agenda setting could do no more than uncover modest and mysteriously context-dependent effects (Erbring, Goldenberg, and Miller 1980). In short, "stunningly successful" overstates the evidence considerably.

But the problem may rest with the evidence, not the hypothesis. Along with Erbring and his colleagues, we believe that much of the confusion is the result of the disjuncture between cross-sectional comparisons favored by most agenda setting researchers, on the one hand, and the agenda setting hypothesis, which implies a dynamic process, on the other. If problems appear and disappear—if they follow Downs's (1972) "issue-attention cycle"—then to look for agenda setting effects cross-sectionally invites confusion. If they are to be detected, agenda setting effects must be investigated over time.

Though few in number, dynamic tests of agenda setting do fare better than their cross-sectional counterparts. Funkhouser (1973), for example, found substantial concurrence between the amount and timing of attention paid to various problems in the national press between 1960 and 1970 and the importance accorded problems by the American public. These results were fortified by MacKuen's more sophisticated and more genuinely dynamic analysis (MacKuen and Coombs 1981). MacKuen discovered that over the past two decades fluctuations in public concern for problems like civil rights, Vietnam, crime, and inflation closely reflected changes over time in the attention paid to them by the national media.

For essentially the same reasons that motivate dynamic analysis, we have undertaken a pair of experimental investigations of media agenda setting. Experiments, like dynamic analysis, are well equipped to monitor processes like agenda setting, which take place over time. Experiments also possess important advantages. Most notably, they enable authoritative conclusions about cause (Cook and Campbell 1978). In our experiments in particular, we systematically manipulated the attention that network news programs devoted to various national problems. We did this by unobtrusively inserting into news broadcasts stories provided by the Vanderbilt Television News Archive. Participants in our experiments were led to believe that they were simply watching the evening news. In fact, some participants viewed news programs dotted with stories about energy shortages; other participants saw nothing about energy at all. (Details about the procedure are given below in

the Methods section.) By experimentally manipulating the media's agenda, we can decisively test Lippmann's assertion that the problems that media decide are important become so in the minds of the public.

Our experimental approach also permits us to examine a different though equally consequential version of agenda setting. By attending to some problems and ignoring others, media may also alter the standards by which people evaluate government. We call this "priming." Consider, for example, that early in a presidential primary season, the national press becomes fascinated by a dramatic international crisis, at the expense of covering worsening economic problems at home. One consequence may be that the public will worry more about the foreign crisis and less about economic woes: classical agenda setting. But in addition, the public's evaluation of the president may now be dominated by his apparent success in the handling of the crisis; his management (or mismanagement) of the economy may now count for rather little. Our point here is simply that fluctuations in the importance of evaluational standards may well depend on fluctuations in the attention each receives in the press.

Another advantage of experimentation is the opportunity it offers to examine individual-level processes that might account for agenda setting. Here we explore two. According to the first, more news coverage of a problem leads to the acquisition and retention of more information about the problem, which in turn leads to the judgment of the problem as more important. According to the second, news coverage of a problem provokes the viewer to consider the claims being advanced; depending on the character of these ruminations, agenda setting will be more or less powerful.

In sum, we will: (1) provide authoritative experimental evidence on the degree to which the priorities of the evening newscasts affect the public's agenda; (2) examine whether network news' priorities also affect the importance the public attaches to various standards in its presidential evaluations; and (3) further exploit the virtues of experimentation by exploring individual cognitive processes that might underlie agenda setting.

Method

Overview

Residents of the New Haven, Connecticut area participated in one of two experiments, each of which spanned six consecutive days. The first experiment was designed to assess the feasibility of our approach and took place in November 1980, shortly after the presidential election. Experiment

2, a more elaborate and expanded replication of Experiment 1, took place in late February 1981.

In both experiments, participants came to two converted Yale University offices to take part in a study of television newscasts. On the first day, participants completed a questionnaire that covered a wide range of political topics, including the importance of various national problems. Over the next four days participants viewed what were represented to be videotape recordings of the preceding evening's network newscast. Unknown to the participants, portions of the newscasts had been altered to provide sustained coverage of a certain national problem. On the final day of the experiment (24 hours after the last broadcast), participants completed a second questionnaire that again included the measures of problem importance.

Experiment 1 focused on alleged weaknesses in U.S. defense capability and employed two conditions. One group of participants ($N=13$) saw several stories about inadequacies in American defense preparedness (four stories totalling eighteen minutes over four days). Participants in the control group saw newscasts with no defense-related stories ($N=15$). In Experiment 2, we expanded the test of agenda setting and examined three problems, requiring three conditions. In one group ($N=15$), participants viewed newscasts emphasizing (as in Experiment 1) inadequacies in U.S. defense preparedness (five stories, seventeen minutes). The second group ($N=14$) saw newscasts emphasizing pollution of the environment (five stories, fifteen minutes). The third group ($N=15$) saw newscasts with steady coverage of inflation (eight stories, twenty-one minutes). Each condition in Experiment 2 was characterized not only by a concentration of stories on the appropriate target problem, but also by deliberate omission of stories dealing with the two other problems under examination.

Participants

Participants in both experiments responded by telephone to classified advertisements promising payment (\$20) in return for taking part in research on television. As hoped, this procedure produced a heterogeneous pool of participants, roughly representative of the New Haven population. Participants ranged in age from nineteen to sixty-three, averaging twenty-six in Experiment 1 and thirty-five in Experiment 2. They were drawn primarily from blue collar and clerical occupations. Approximately 30 percent were temporarily out of work or unemployed. Blacks made up 25 percent and women, 54 percent of the participants in Experiment 1 and 10 percent and 61 percent, respectively, in Experiment 2.

Participants were first scheduled for one of several daily sessions. Each of these sessions, with between five and ten individuals, was then randomly assigned to one of the two conditions in Experiment 1, or one of the three conditions in Experiment 2.² Random assignment was successful. Participants in the defense condition in Experiment 1 did not differ at all in their demographic characteristics, in their political orientations, or in their political involvement from their counterparts in the control condition, according to day 1 assessments. The sole exception to this pattern—the control group had a significantly larger proportion of black participants (38 vs. 15 percent, $p < .05$)—is innocuous, since race is unrelated to the dependent variables. And in Experiment 2, across many demographic and attitudinal pretreatment comparisons, only two statistically significant differences emerged: participants in the defense condition reported watching television news somewhat more often ($p < .05$), and participants in the pollution condition were somewhat less Democratic ($p < .03$). To correct for this, party identification has been included as a control variable, where appropriate, in the analyses reported below.

Manipulating the Networks' Agenda

On the evening before each day's session, the evening national newscast of either ABC or NBC was recorded. For each of the conditions being prepared, this broadcast was then copied, but with condition-inappropriate stories deleted and condition-appropriate stories inserted. Inserted stories were actual news stories previously broadcast by ABC or NBC that were acquired from the Vanderbilt Television News Archive. In practice, the actual newscast was left substantially intact except for the insertion of a news story from the VTNA pool, with a condition-irrelevant story normally deleted in compensation. All insertions and deletions were made in the middle portion of the newscast and were spread evenly across experimental days. In Experiment 1 the first newscast was left unaltered in order to allay any suspicions on the part of the participants, and for the next three days a single news story describing inadequacies in U.S. military preparedness was inserted

²Initially, each condition in both experiments was to be represented by three independent groups of viewers so that condition, session, and time of day would be independent. This arrangement prevailed in Experiment 2 but not in Experiment 1, where early attrition forced us to combine the defense sessions, thus confounding condition and time of day. Fortunately, this adjustment does not threaten the integrity of the experimental design, as comparisons reported in text show.

into the broadcasts. Similar procedures were followed in Experiment 2, except that we added material to all four newscasts. The stories comprising the treatments in both experiments are listed and described in the Appendix.³

Avoiding Experimental Artifacts

In both experiments we undertook precautions to guard against "demand characteristics" (Orne 1962)—cues in the experimental setting that communicate to participants what is expected of them. In the first place, we initially presented to participants a diverting but wholly plausible account of our purpose: namely, to understand better how the public evaluates news programs. Participants were told that it was necessary for them to watch the news at Yale to ensure that everyone watched the same newscast under uniform conditions. Second, editing was performed with sophisticated video equipment that permitted the cutting, adding, and rearranging of news stories without interrupting the newscast's coherence. Third, though key questionnaire items were repeated from pretest to posttest, they were embedded within a host of questions dealing with political affairs, thus reducing their prominence. The success of these precautions is suggested by postexperimental discussions. Not a single participant expressed any skepticism about either experiment's real purpose.

We also tried to minimize the participants' sense that they were being tested. We never implied that they should pay special attention to the broadcasts. Indeed, we deliberately arranged a setting that was casual and informal and encouraged participants to watch the news just as they did at home. They viewed the broadcasts in small groups, occasionally chatted with their neighbors, and seemed to pay only sporadic attention to each day's broadcast. Although we cannot be certain, our experimental setting appeared to recreate the natural context quite faithfully.

Results

Setting the Public Agenda

We measured problem importance with four questions that appeared in both the pretreatment and posttreatment questionnaires. For each of eight national problems, participants rated the

³Had participants viewed the actual newscasts each evening and compared them to the version presented on the subsequent day, they might well have discovered our alterations. This possibility was circumvented by instructing participants not to view the national network newscasts at home during the week of the study.

problem's importance, the need for more government action, their personal concern, and the extent to which they discussed each with friends. Because responses were strongly intercorrelated across the four items, we formed simple additive indices for each problem. In principle, each ranges from four (low importance) to twenty (high importance).⁴

The agenda setting hypothesis demands that viewers adjust their beliefs about the importance of problems in response to the amount of coverage problems receive in the media. In our experiments, the hypothesis was tested by computing adjusted (or residualized) change scores for the importance indices and then making comparisons across conditions. Adjusted change scores measure the extent to which pretest responses underpredict or overpredict (using OLS regression) posttest responses (Kessler 1978). Participants whose posttest scores exceeded that predicted by their pretest scores received positive scores on the adjusted change measure; those whose posttest scores fell short of that predicted received negative scores.

Table 1 presents the adjusted change scores for each of the eight problems inquired about in Experiment 1. In keeping with the agenda-setting hypothesis, for defense preparedness *but for no other problem*, the experimental treatment exerted a statistically significant effect ($p < .05$). Participants whose news programs were dotted with stories alleging the vulnerability of U.S. defense capability grew more concerned about defense over the experiment's six days. The effect is significant substantively as well as statistically. On the first day of the experiment, viewers in the experimental group ranked defense sixth out of eight problems, behind inflation, pollution, unemployment, energy, and civil rights. After exposure to the newscasts, however, defense ranked second, trailing only inflation. (Among viewers in the control group, meanwhile, the relative position of defense remained stable.)

Experiment 2 contributes further support to

⁴The wording of these items is given below:

Please indicate how important you consider these problems to be.

Should the federal government do more to develop solutions to these problems, even if it means raising taxes?

How much do you yourself care about these problems? These days how much do you talk about these problems?

Index reliability was assessed with Cronbach's Alpha. In Experiment 1, the obtained values for the defense importance indices were .77 and .79. In Experiment 2, the alpha values ranged from .69 to .89.

Table 1. Adjusted Change Scores for Problem Importance: Experiment 1

Problem	Condition	
	Defense	Control
Defense*	.90	-.79
Inflation	-.49	.23
Energy	-.40	.22
Drug addiction	-.19	-.48
Corruption	-.67	.05
Pollution	-.58	.60
Unemployment	.28	.54
Civil rights	-.27	-.27

* $p < .05$, one-tailed t-test.

classical agenda setting. As in Experiment 1, participants were randomly assigned to a condition—this time to one of three conditions, corresponding to an emphasis upon defense preparedness, pollution, or inflation. Changes in the importance of defense, pollution, and inflation are shown in Table 2. There the classical agenda setting hypothesis is supported in two of three comparisons. Participants exposed to a steady stream of news about defense or about pollution came to believe that defense or pollution were more consequential problems. In each case, the shifts surpassed statistical significance. No agenda setting effects were found for inflation, however. With the special clarity of hindsight, we attribute this single failure to the very great importance participants assigned to inflation before the experiment. Where twenty represents the maximum score, participants began Experiment 2 with an average importance score for inflation of 18.5!

As in Experiment 1, the impact of the media agenda could also be discerned in changes in the rank ordering of problems. Among participants in the defense condition, defense moved from sixth to fourth, whereas pollution rose from fifth to second among viewers in that treatment group. Within the pooled control groups, in the meantime, the importance ranks of the two problems did not budge.

Taken together, the evidence from the two experiments strongly supports the classical agenda

setting hypothesis. With a single and, we think, forgivable exception, viewers exposed to news devoted to a particular problem become more convinced of its importance. Network news programs seem to possess a powerful capacity to shape the public's agenda.

Priming and Presidential Evaluations

Next we take up the question of whether the media's agenda also alters the standards people use in evaluating their president. This requires measures of ratings of presidential performance in the designated problem areas—national defense in Experiment 1, defense, pollution, and inflation in Experiment 2—as well as measures of overall appraisal of the president. For the first, participants rated Carter's performance from "very good" to "very poor" on each of eight problems including "maintaining a strong military," "protecting the environment from pollution," and "managing the economy." We measured overall evaluation of President Carter in three ways: a single five-point rating of Carter's "overall performance as president"; an additive index based on three separate ratings of Carter's *competence*; and an additive index based on three separate ratings of Carter's *integrity*.⁵

In both Experiments 1 and 2, within each condition, we then correlated judgments of President Carter's performance on a particular problem with rating of his overall performance, his competence, and his integrity. (In fact these are partial correlations. Given the powerful effects of partisanship on political evaluations of the kind

⁵On the importance of and distinction between competence and integrity, consult Kinder, Abelson, and Peters 1981. The specific trait terms were smart, weak, knowledgeable (competence), and immoral, power-hungry, dishonest (integrity). The terms were presented as follows: How well do the following terms describe former President Carter: extremely well, quite well, not too well, or not well at all? The average intercorrelation among the competence traits was .43 in Experiment 1 and .62 in Experiment 2. For the integrity traits the correlations were .60 and .30.

Table 2. Adjusted Change Scores for Problem Importance: Experiment 2

Problem	Condition		
	Pollution	Inflation	Defense
Pollution	1.53**	-.71	-.23
Inflation	-.11	.11	-.06
Defense	-.44	-.34	.76*

* $p < .05$.

** $p < .01$.

under examination here, we thought it prudent to partial out the effects of party identification. Party identification was measured in both experiments by the standard seven-point measure, collapsed for the purpose of analysis into three categories.)

At the outset, we expected these partial correlations to conform to two predictions. First, when evaluating the president, participants will weigh evidence partly as a function of the agenda set by their news programs. Participants exposed to stories that question U.S. defense capability will take Carter's performance on defense into greater account in evaluating Carter overall than will participants whose attention is directed elsewhere; that is, the partial correlations should vary according to the broadcasts' preoccupations, in keeping with the priming hypothesis. Second, the priming effect will follow a semantic gradient. Specifically, priming is expected to be most pronounced in judgments of Carter's overall performance as president, somewhat less apparent in judgments of his competence, a personal trait relevant to performance; and to be least discernible in judgments of his integrity, a personal trait irrelevant to performance.

Experiment 1 treated our two predictions unevenly. As Table 3 indicates, the first prediction is corroborated in two of three comparisons. Steady coverage of defense did strengthen the relationship between judgments of Carter's defense performance and evaluations of his overall job performance, and between judgments of Carter's defense performance and integrity, as predicted. However, the relationship reverses on judgments of Carter's competence. And as for our second prediction, Experiment 1 provides only the faintest encouragement.

More encouraging is the evidence provided by Experiment 2. As Table 4 indicates, our first prediction is upheld in eight of nine comparisons, usually handsomely, and as predicted, the effects are most striking for evaluations of Carter's overall performance, intermediate (and somewhat irregular) for judgments of his competence, and fade away altogether for judgments of his integrity.

In sum, Experiments 1 and 2 furnish considerable, if imperfect, evidence for priming. The media's agenda does seem to alter the standards people use in evaluating the president. Although the patterns are not as regular as we would like, priming also appears to follow the anticipated pattern. A president's overall reputation, and, to a lesser extent, his apparent competence, both depend on the presentations of network news programs.

Mediation of Agenda Setting

Having established the consequences of the media's priorities, we turn finally to an investigation of their mediation. One strong possibility is information recall. More news coverage of a problem leads to the acquisition and retention of more information. More information, in turn, leads individuals to conclude that the problem is important.

Participants in both experiments were asked to describe "what the news story was about" and "how the story was presented" for each story they could recall something about. We coded both the number of stories as well as the volume of information participants were able to recall. We then correlated recall with participants' posttest beliefs about the importance of the target problem, controlling for their pretest beliefs.

In Experiment 1 the partial correlation using the number of defense stories recalled was $-.13$ (ns); in the case of volume of defense information recalled it was even tinier ($-.03$). The recall hypothesis also failed in Experiment 2. Here, for reasons of parsimony, we pooled the importance and recall data across the three conditions. The appropriate partial correlation between the number of news stories recalled and posttest importance, controlling for pretest importance was $-.20$ (ns). Recall of information seems a most unlikely mediator of agenda setting.

The failure of the recall hypothesis led us to consider a second possibility, that agenda setting might be mediated by covert evaluations triggered by the news stories. This hunch is consistent with

Table 3. Correlations between Overall Evaluations of Carter and Judgments of Carter's Performance on Defense as a Function of News Coverage: Experiment 1

	Coverage emphasizes defense	Coverage neglects defense
Carter's overall performance	.59	.38
Carter's competence	.03	.58
Carter's integrity	.31	.11

Table entries are first-order Pearson partial correlations, with party identification held constant.

Table 4. Correlations between Overall Evaluations of Carter and Judgments of Carter's Performance on Specific Problems as a Function of News Coverage: Experiment 2

	Coverage emphasizes defense	Coverage neglects defense
Carter's overall performance	.88	.53
Carter's competence	.79	.58
Carter's integrity	.13	-.17
	Coverage emphasizes pollution	Coverage neglects pollution
Carter's overall performance	.63	.42
Carter's competence	.47	.56
Carter's integrity	.33	.15
	Coverage emphasizes inflation	Coverage neglects inflation
Carter's overall performance	.63	.39
Carter's competence	.71	.38
Carter's integrity	.07	.08

Table entries are first-order Pearson partial correlations, with party identification held constant.

a growing body of experimental research in which people are invited to record their thoughts as a persuasive message is presented. These thoughts are later classified as unfavorable, favorable, or as neutral to the persuasive message. It turns out that attitude change is predicted powerfully by the intensity and direction of such covert evaluations: the greater the number of unfavorable reactions, the lower the level of attitude change and vice versa. (For a detailed review of these experiments see Petty, Ostrom, and Brock 1980.)

This result extends with little effort to agenda setting. Viewers less able or willing to counterargue with a news presentation should be more vulnerable to agenda setting. To test this hypothesis, participants in Experiment 2 were asked to list "any thoughts, reactions, or feelings" about each news story they recalled. These responses were then scored for the number of counterarguments, with an average inter-coder correlation across the three treatment problems of .86. Consistent with the covert evaluation hypothesis, such counterarguing was inversely related to increases in problem importance. The partial correlation between the number of counterarguments (concerning news stories about the treatment problem) and posttest importance, controlling for initial importance was $-.49$ ($p < .05$) in the defense treatment group; $-.35$ (ns) in the inflation treatment group; and $-.56$ ($p < .05$) in the pollution treatment group. Pooled across conditions, the partial correlation was $-.40$ ($p < .05$).⁶

⁶Typical counterarguments were: in the defense condition a viewer reacted to a story depicting Soviet

And who are the counterarguers? They are the politically involved: those who claimed to follow public affairs closely, who reported a higher level of political activity, and who possessed more political knowledge. Of these three factors, political knowledge appeared to be the most consequential. In a regression analysis, pooling across the experimental groups, counterarguing was strongly predicted only by political knowledge ($Beta = .43, p < .05$).⁷

To summarize, agenda setting is strengthened to the degree audience members fail to counterargue. Agenda setting appears to be mediated, not by the information viewers recall, but by the covert evaluations triggered by the news presentations. Those with little political information to begin with are most vulnerable to agenda setting. The well informed resist agenda setting through

superiority over the U.S. in the realm of chemical warfare by saying, "The story was very one sided and made me feel even more strongly that the military is overfunded." In the pollution condition, a viewer reacted to a story on the evils of toxic waste: "Overdone—reporter admitted to no evidence to link this with lung disease." Counterarguments with respect to inflation news were comparatively rare. Most came in the form of remarks critical of President Reagan's proposed cuts in social programs.

⁷And who are the politically knowledgeable? Presumably they are people who over some interval in their past paid special and abiding attention to media presentations bearing on their perhaps idiosyncratic interests, and hence developed a particular point of view—a point of view that current media presentations have difficulty budging.

effective counterarguing, a maneuver not so available to the less informed.⁸

Conclusion

Fifty years and much inconclusive empirical fussing later, our experiments decisively sustain Lippmann's suspicion that media provide compelling descriptions of a public world that people cannot directly experience. We have shown that by ignoring some problems and attending to others, television news programs profoundly affect which problems viewers take seriously. This is so especially among the politically naive, who seem unable to challenge the pictures and narrations that appear on their television sets. We have also discovered another pathway of media influence: priming. Problems prominently positioned in television broadcasts loom large in evaluations of presidential performance.⁹

How long do these experimental effects persist? We cannot say with certainty. Our results are generally consistent with MacKuen's time-series analysis of agenda setting, which finds news media to exert persisting effects on the judgments the public makes regarding the country's most important problems (MacKuen and Combs 1981). We also know that our experimental effects survive at substantial levels for at least twenty-four hours, since posttests in both experiments were administered a full day after the final broadcast. This is a crucial interval. The dissemination of television news is of course periodic, typically following cycles of twenty-four hours or less. The regularity and frequency of broadcasts mean that classical agenda setting and priming are, for most people, continuous processes. When news presentations develop priorities, even if rather subtle

⁸These results work against the claim that the classical agenda setting and priming effects are special products of artificially high levels of attention induced by our experimental setting. In the first place, as we argued earlier, attention did not seem to be artificially high. Second, the information recall results imply the greater the attention, the *less* (marginally) beliefs are changed. Third, the counterarguing results imply, similarly, that the more "alert" viewers are, the *more* able they are to defend themselves against the media's priorities. All this suggests that our experimental setting, if anything, *underestimates* the influence of network news.

⁹In a pair of experiments conducted since the two reported here, we found additional strong support both for classical agenda setting and for priming. The new experiments demonstrated also that priming depends not only on making certain evidence prominent but also on its relevance; priming was augmented when news presentations portrayed the president as responsible for a problem (Iyengar, Kinder, and Peters 1982).

ones as in our experiments, viewers' beliefs are affected—and affected again as new priorities arise.

Political Implications

We do not mean our results to be taken as an indication of political mischief at the networks. In deciding what to cover, editors and journalists are influenced most by organizational routines, internal power struggles, and commercial imperatives (Epstein 1973; Hirsch 1975). This leaves little room for political motives.

Unintentional though they are, the political consequences of the media's priorities seem enormous. Policy makers may never notice, may choose to ignore, or may postpone indefinitely consideration of problems that have little standing among the public. In a parallel way, candidates for political office not taken seriously by news organizations quickly discover that neither are they taken seriously by anybody else. And the ramifications of priming, finally, are most unlikely to be politically evenhanded. Some presidents, at some moments, will be advantaged; others will be undone.

Psychological Foundations

On the psychological side, the classical agenda setting effect may be a particular manifestation of a general inclination in human inference—an inclination to overvalue "salient" evidence. Extensive experimental research indicates that under diverse settings, the judgments people make are swayed inordinately by evidence that is incidentally salient. Conspicuous evidence is generally accorded importance exceeding its inferential value; logically consequential but perceptually innocuous evidence is accorded less (for reviews of this research, see Taylor and Fiske 1978; Nisbett and Ross 1980).

The analogy with agenda setting is very close. As in experimental investigations of salience, television newscasts direct viewers to consider some features of public life and to ignore others. As in research on salience, viewers' recall of information seems to have little to do with shifts in their beliefs (Fiske, Kenny, and Taylor 1982). Although this analogy provides reassurance that classic agenda setting is not psychologically peculiar, it also suggests an account of agenda setting that is unsettling in its particulars. Taylor and Fiske (1978) characterize the process underlying salience effects as "automatic." Perceptually prominent information captures attention; greater attention, in turn, leads automatically to greater influence.

Judgments are not always reached so casually, however; according to their retrospective accounts, our participants occasionally quarreled with the newscasts and occasionally actively

agreed with them. Counterarguing was especially common among the politically informed. Expertise seems to provide viewers with an internal means for competing with the networks. Agenda setting may reflect a mix of processes therefore: automatic imprinting among the politically naive; critical deliberation among the politically expert.

Alterations in the standards by which presidents are evaluated, our second major finding, may also reflect an automatic process, but of a different kind. Several recent psychological experiments have shown that the criteria by which complex stimuli are judged can be profoundly altered by their prior (and seemingly incidental) activation. (For an excellent summary, see Higgins and King 1981.) As do these results, our findings support Collins's and Loftus's (1975) "spreading-activation" hypothesis. According to Collins and Loftus, when a concept is activated—as by extended media coverage—other linked concepts are made automatically accessible. Hence when participants were asked to evaluate President Carter after a week's worth of stories exposing weaknesses in American defense capability, defense performance as a general category was automatically accessible and therefore relatively powerful in determining ratings of President Carter.

Methodological Pluralism

Over twenty years ago, Carl Hovland urged that the study of communication be based on field and experimental research (Hovland 1959; also see Converse 1970). We agree. Of course, experimentation has problems of its own, which our studies do not fully escape. That our participants represent no identifiable population, that our research setting departs in innumerable small ways from the natural communication environment, that the news programs we created might distort what would actually be seen on network newscasts—each raises questions about the external validity of our results. Do our findings generalize to other settings, treatments, and populations—and to the American public's consumption of evening news particularly? We think they do. We took care to avoid a standard pitfall of experimentation—the so-called college sophomore problem—by encouraging diversity in experimental participants. We undertook extra precautions to recreate the natural communication environment: participants watched the broadcasts in small groups in an informal and relaxed setting. And we were careful not to tamper with standard network practice in constituting our experimental presentations.

Limitations of experimentation—worries about external validity especially—correspond of course

to strengths in survey-based communication research. This complementarity argues for methodological pluralism. We hope our results contribute to a revitalization of Hovland's dialogue between experimental and survey-based inquiries into political communication.

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Appendix

Day	Network	Length (min)	Content
Experiment 1			
1	ABC	1.40*	Increases in defense spending to be proposed by the incoming Reagan Administration.
2	ABC	4.40	Special assignment report on the declining role of the U.S. as the "arsenal of democracy." Story notes the declining level of weapons production since the early seventies and points out the consequences on U.S. ability to respond militarily.
3	NBC	4.40	Special segment report on U.S. military options in the event of Soviet aggression in the Persian Gulf region. Story highlights Soviet superiority in conventional forces and tanks and suggests that a U.S. "rapid deployment force," if used, would be overwhelmed.
4	ABC	1.10*	Air crash in Egypt during joint U.S.-Egyptian military exercises.
		4.30	Special assignment report on the low level of education among incoming military recruits. Describes resulting difficulty in the use of advanced equipment and shows remedial education programs in place.
Experiment 2			
Defense			
1	ABC	4.40	Declining role of the U.S. as the "arsenal of democracy" (see above).
2	NBC	4.00	Special report on the readiness of the National Guard. Notes dilapidated equipment being used and lack of training among members.
3	NBC	3.00*	Growing U.S. involvement in El Salvador; draws parallel with Vietnam.
4	ABC	2.00	Deteriorating U.S.-USSR relations over El Salvador.
4	ABC	4.00	Special report on U.S. capability to withstand a chemical attack. Story highlights the disparity in the production of nerve gases between the U.S. and USSR and notes the vulnerability of U.S. forces to chemical weapons.
Pollution			
1	ABC	2.20	Congressional hearings on toxic waste in Memphis.
		2.10	Report on asbestos pollution in the soil and resulting dangers to health for residents of the area.

Appendix (continued)

Day	Network	Length (min)	Content
2	ABC	2.40	Toxic dumping in a Massachusetts community and the high rate of leukemia among the town's children.
3	NBC	2.10*	Underground coal fire in Pennsylvania; carbon monoxide fumes entering residents' homes.
4	ABC	5.10	Special feature on the growing dangers from toxic waste disposal sites across the nation. Sites shown in Michigan, Missouri, Louisiana, and California.
Inflation			
1	ABC	2.30*	Reagan's approach to inflation to concentrate on government spending reductions. Results of a public opinion poll concerning cuts in government spending reported.
		2.20*	Taxpayers in Michigan protest the high level of taxes.
2	ABC	2.20*	Reagan's plans to deal with inflation discussed.
		4.10	Special report on supply-side economics as a means of controlling inflation; views of various economists presented.
3	NBC	3.00*	Latest cost of living statistics announced in Washington and reaction from the Administration and Congress.
		1.20*	Reaganomics discussed at a House committee hearing.
4	ABC	3.00	Special report on economic problems in the U.S. and the prospects for improvement under the Reagan Administration.
		2.30*	Democrats attack the proposed cuts in social services and programs.

*Story appeared live in original newscast.