Examining the Mediators of Agenda Setting: A New Experimental Paradigm Reveals the Role of Emotions

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Over two decades ago, Maxwell McCombs (1981) called for serious investigation of the mediators and moderators of media effects. Without rich, theory-based understanding of why and when agenda setting happens, he said, we cannot truly appreciate the phenomenon or its implications. This manuscript reports the results of a new experimental paradigm to examine the cognitive mechanism(s) of agenda setting. Challenging the assumption that accessibility is responsible for shifts in importance judgments, the current research shows that the content of news stories is a primary determinant of agenda setting. Rather than solely relying on what is accessible in memory, people pay attention to the content of news stories—to the extent that the content arouses negative emotions, national importance judgments follow.

KEY WORDS: agenda setting, media, accessibility, emotions, experiment

During the first half of the 20th century, the conventional wisdom (and worry) was that the media would have powerful, persuasive, “hypodermic-like” effects on the public’s attitudes and behaviors (e.g., Lasswell, 1927). But when this hypothesis was tested empirically, powerful persuasion by the news media appeared to be the exception rather than the rule (Klapper, 1960). It is not true, however, that the news media have no impact on citizens’ political thinking. On the contrary, investigations over the years have made it clear that the media do indeed shape American public opinion, oftentimes in more subtle ways than through direct persuasion (see, e.g., MacKuen, 1981). Even as early as the 1920s, Lippmann (1920, 1922, 1925) proposed the idea that the news media may affect the public’s political agenda by focusing an individual’s attention on some problems or political topics and by ignoring others. The notion that issues that are afforded a great deal of media coverage are the ones people view as the most important is the agenda-setting hypothesis (see, e.g., Kosicki, 1993; McCombs, 2004).
Extensive research using different methods has confirmed the hypothesis (Behr & Iyengar, 1985; Iyengar & Kinder, 1987; MacKuen, 1981; McCombs & Shaw, 1972). In 1993, Iyengar and Simon concluded that “agenda setting effects have been captured for all forms of mass media coverage, in both experiments and survey-based studies... These effects have been observed for both local and national problems. In all these areas, research has shown that individuals habitually refer to issues or events ‘in the news’ when diagnosing current social and political ills” (p. 368).

Although we know the agenda-setting effect exists, the mechanisms by which the effect occurs are less clear. The primary focus in this paper is on the cognitive mediators of news media agenda setting. To specify the mediators of an effect is to identify the causal mechanisms by which one factor affects another (Baron & Kenny, 1986). In the case of agenda setting, media attention to an issue presumably causes a change in a mediating variable in the minds of citizens, which in turn produces a change in importance.

The Role of Accessibility

One mechanism hypothesized to underlie agenda setting is the accessibility of issue-related information in memory (e.g., Iyengar & Kinder, 1987; Price & Tewksbury, 1997). This view of agenda setting as being caused by changes in accessibility is depicted in theories regarding the nature of the relationship between agenda setting and another media effect, priming. The media priming hypothesis states that media exposure to an issue will cause people to weigh that issue more heavily in making political judgments (the most commonly studied of which is evaluations of the president; Iyengar et al., 1984; Iyengar & Kinder, 1987; Krosnick & Kinder, 1990).

In recent years, scholars have begun to theorize about the relationship between agenda setting and priming. One school of thought most closely incorporates the notion that agenda setting is all about changes in accessibility. It argues that priming is a consequence of agenda setting—that the two effects are linked in a causal chain (Iyengar & Simon, 1993; McCombs & Reynolds, 2002; Weaver, McCombs, & Shaw, 2004). McCombs and Reynolds (2002) state that, “the link between agenda setting effects and subsequent expression of opinions about public figures or other objects is called priming” (p. 14). And Scheufele (2000) suggests that, “studies testing priming effects examine agenda setting as the independent variable and priming effects as outcomes of agenda setting or as the dependent variable” (pp. 304–305).

Proponents of this notion point to Iyengar and Kinder’s (1987) seminal work as providing empirical evidence for the causal link between agenda setting and media priming. However, although Iyengar and Kinder (1987) provided evidence of agenda setting and evidence of media priming, they did not test the causal link between the two. Miller and Krosnick (2000) did such a test, finding that media
exposure affects importance judgments, which, in turn, affect the ingredients of presidential evaluations among people who both trust the media and know a lot about politics.

Media scholars who theorize a causal link between agenda setting and priming refer to agenda setting as the process by which the media cause an issue to become accessible in people’s memories (thus assuming accessibility is the criterion variable for agenda setting rather than importance), and priming (changes in weights given to various considerations in making a summary political judgment) as the consequence of that increased accessibility. Although Miller and Krosnick (2000) showed that importance judgments mediate the relation between media exposure and overall presidential evaluations, this finding begs the question of whether accessibility is a mediator earlier in the chain—between media exposure and importance. Media exposure may increase the accessibility of issue-related information, which in turn may influence national importance judgments.

This hypothesis is somewhat pessimistic about the competence of the American public, and their motivation to make thoughtful, informed political decisions. Rather than using the media as a source of information, elaborating on that information, combining it with information stored in memory, and arriving at a judgment, the accessibility hypothesis paints a picture of an American public that is swayed by top-of-the-head considerations made prominent by the media (and not vetted by thoughtful considerations about the specific content of the media stories or with prior information stored in memory). Even by less cognitively taxing standards, like Popkin’s (1994) “low information rationality,” the accessibility explanation for agenda setting effects is unflattering.¹

Despite the normative implications of the conventional wisdom that accessibility mediates agenda setting, to date the hypothesis has not been subjected to empirical tests. I test this hypothesis by examining one of its implications. In doing so, I highlight problems in standard methods used to test the agenda-setting hypothesis for isolating accessibility as a potential cause. Informed by methods for measuring accessibility and examining its effects that have been developed in psychology, I implement a new experimental method to test the conventional wisdom and a series of additional theoretically derived mediational hypotheses.

Some scholars imply that accessibility is the sole mediator of agenda setting (e.g., Iyengar & Kinder, 1987), whereas others argue that accessibility plays a role, but is not the proximal cause of agenda setting. One implication of the hypothesis that accessibility is the sole mediator is that the specific content of the news stories

¹ This normative judgment is not meant to harken back to earlier conceptualizations of “hypodermic” media effects. A wealth of evidence demonstrates that some people show the agenda setting effect, whereas others do not. A review of the individual-level moderators of agenda setting (such as need for orientation, Weaver, McCombs, & Spellman, 1975; and cognitive sophistication, Zhu & Boroson, 1997; see also Hill, 1985; Iyengar & Kinder, 1985; McCombs, 2004; Smith, 1987; Winter, 1981) is beyond the scope of this paper. Suffice it to say that the effect is not all encompassing. But to the extent that the mechanism that underlies agenda setting among the people most susceptible to it is accessibility, the unflattering portrait applies.
should play less of a role in importance judgments (assuming that different versions of content all have the same positive effect on accessibility). If media focus on an issue increases the quickness with which the issue comes to mind, and this is the proximal cause of importance judgments, then whether the story explicitly states that the issue is a problem, or that it is less of a problem, or, presumably, that it is no longer a problem, should not matter. As long as the accessibility of the issue is increased, increased importance judgments should follow.

In contrast to the hypothesis that accessibility is the sole mediator of agenda setting, other scholars argue that although the media may make some issues more accessible than others, whether those issues are used in making political evaluations depends on whether they are determined to be relevant to the evaluation (e.g., Price & Tewksbury, 1997). The relevance corollary presumes that some issues, no matter how accessible they are, will not affect importance judgments. When asked to list the most important issues facing the nation, or to make any other political judgment for that matter, some considerations will automatically come to the forefront of people’s minds, either because the construct is chronically accessible or was recently made accessible by an external stimulus (e.g., Zaller & Feldman, 1992). According to Price and Tewksbury (1997), whether or not people rely on any or all of those considerations when reporting their attitude will depend in part on whether they believe that they are suitable or germane to the judgment at hand. Considerations that are deemed suitable will be incorporated into the judgment, and those that are deemed unsuitable will be filtered out, or ignored. For example, no matter how accessible an issue like local garbage collection is, people will use a relevance filter to determine that the issue is not appropriate for a national importance judgment.

How Do Citizens Determine Relevance?

The relevance hypothesis states that people will decide whether to use information gleaned from the media to make political judgments only when the information is determined to be relevant. With regard to media priming, citizens might ask themselves, “Is it appropriate for me to incorporate my feelings about issue X or attribute Y in my evaluation of the candidate, president, etc.?” With regard to agenda setting, citizens might ask themselves, “Is issue X relevant to my importance judgment?” This hypothesis paints a more flattering picture of the public than the accessibility hypothesis. Rather than simply relying on what pops into their heads, the relevance hypothesis predicts that people will engage in a cognitive process of filtering out irrelevant information before making a judgment. But what considerations do people rely upon when determining relevance? In this section, I describe a set of theoretically derived predictions about the determinants of relevance for importance judgments.

Affect. One possible determinant of relevance is the emotional reactions a news story arouses. There are at least three ways people could use emotions to help
them decide whether an issue is important. First, the valence of people’s emotions may influence importance judgments. Specifically, negative emotions in general may serve as a cue that something is wrong and needs to be fixed (see, e.g., Martin, 2000). Consistent with this hypothesis, Carter, Stamm, and Heintz-Knowles (1992) found that the top three reasons people cited for listing an issue at the top of the political agenda were: (1) the issue’s threat, (2) the negative consequences of the issue, and (3) the belief that the issue has been neglected. All of these reasons presumably arouse negative emotional reactions.

A second possibility is that specific negative emotions mediate agenda setting. Marcus, Neuman, and MacKuen’s (2000) Theory of Affective Intelligence, drawing on work from neuroscience, proposes that there are two affective sub-systems of the brain that monitor our actions and the world around us. The disposition system monitors our habitual behaviors, and if all is going well, produces feelings of enthusiasm that encourage us to keep doing what we are doing. At the same time, the surveillance system monitors the world around us for things that may be threatening. If the surveillance system notices a threatening or novel stimulus, it produces the specific negative emotion of anxiety, which tells us that we must stop what we are currently doing and vigilantly reassess the situation to determine if a new course of action is needed to avert the threat.

From this perspective, the most likely negative emotion to mediate agenda setting is anxiety or fear. Specifically, if a news story arouses anxiety or fear, people may pay more attention to the specific content of the story, cognitively elaborate on the information, and come to a conclusion that the issue is an important one for the country. Alternatively, “important problem” may simply be the cognitive label that people use to describe their current anxious state (see, e.g., Zajonc, 1980). Either way, anxiety would mediate the impact of news exposure on national importance judgments.

Note that this hypothesis, and the negative valence hypothesis, requires that the news media arouse a particular negative emotion or set of negative emotions. But many news stories do not arouse any emotions at all, or may arouse positive emotions. Is it possible that positive emotions could mediate agenda setting? Although current theories are agnostic on this question, an answer may be found in the nature of the dependent variable, national importance judgments. In 2004, the National Election Study asked, “What do you think has been the most important issue facing the U.S. over the last four years?” In 2000, the NES asked, “What do you think are the most important problems facing this country?” And a 2007 CBS News Poll (Jan. 18–21) asked, “What do you think is the most important problem facing this country today?” (http://www.Pollingreport.com). This question, whether it uses the word “issue” or “problem,” implicitly or explicitly cues respondents to think of things that need to be fixed. As such, it is unlikely that news stories that arouse positive emotions will cause people to view the issue as important for the nation (i.e., something that must be fixed). This is not to say that positive emotions aroused by media stories will have no
effect on political attitudes, just that they are unlikely to affect national importance judgments.

To be fair, there is a subtle difference between asking people about important “issues” and asking them about important “problems.” Maybe the “issue” phrasing will focus people more broadly, to consider both things that need to be fixed and things that have already been fixed or are getting better (e.g., Wlezien, 2005). Thus, the present study experimentally manipulated question wording to determine whether positive emotions might mediate agenda setting for a positively keyed news story when respondents are asked to list important issues as opposed to problems.

Finally, general emotional arousal (independent of valence) may increase the prominence of the issue for people and thus may increase importance. Consistent with this hypothesis, McCombs (1999) found that a majority of respondents emphasized emotional arousal as the motive for listing an issue as nationally important. Therefore, to the extent that media exposure affects the valence of emotions, specific negative emotions, or emotional arousal, emotions may mediate the effect of exposure on national importance.

Inference. Another possible cognitive mediator of agenda setting is inference (Cohen, 1973; McCombs & Shaw, 1972; Weaver, Graber, McCombs, & Eyal, 1981). Newspaper and television news stories often make explicit statements about the importance of an issue in order to justify attention to it. However, even when such statements are not made (and in the absence of explicit statements that the issue is not important), most readers and viewers probably recognize that devoting attention to an issue means that elites, such as news reporters and politicians, believe the issue is a significant one for the country (see, e.g., Iyengar & Kinder, 1987). Consequently, people may infer from the media that an issue is nationally important because they conclude that others believe it to be important for the nation.

Personal importance. I also examine whether personal importance mediates the impact of media exposure on national importance judgments. People for whom an issue is personally important are motivated to pay particular attention to information about the issue and to think carefully about the implications of the information. A consequence of this process may be recognition of many reasons why the issue is truly important for the nation as a whole. Consistent with this notion, Miller, Krosnick, and Fabrigar (2007) show that personal importance causes national importance. So it is possible that media exposure has an effect on national importance judgments because it has an intervening impact on personal importance. In order for personal importance to mediate the effect of media exposure on national importance judgments, media exposure must have a significant effect on personal importance. Past research has shown that self-interest, value relevance, and group identification are all antecedents of personal importance (Boninger, Krosnick, & Berent, 1995), but has not examined the impact of external factors such as the media. I will test the causal impact of the media on personal impor-
Research Hypotheses

This manuscript reports the results of three experimental studies designed to test the following hypotheses:

H1: Media exposure to an issue will cause an increase in the accessibility of that issue in people’s minds. This hypothesis uses accessibility, rather than importance, as the criterion to test the agenda setting effect.

H2: The positive effect of media exposure to an issue on the national importance of the issue is mediated by accessibility.

H3: The positive effect of media exposure to an issue on the national importance of the issue is mediated by affect (valence, arousal, and/or specific emotions).

H4: The positive effect of media exposure to an issue on the national importance of the issue is mediated by inference.

H5: The positive effect of media exposure to an issue on the national importance of the issue is mediated by personal importance.

Study 1 examines whether accessibility, inference, or affect mediate the impact of media exposure on national importance judgments (Hypotheses 2–4). Study 2 tests an alternative explanation for the pattern of results demonstrated in Study 1 by examining the direct effect of media exposure on accessibility (Hypothesis 1). Study 3 tests a second alternative explanation, and examines whether personal importance mediates the agenda setting effect (Hypothesis 5).

Overview of Study 1

In Study 1, respondents were exposed to either a newspaper story about crime or not. And among those who were exposed to a crime story, the content of the story was manipulated—whether it stated that the crime rate is still very high and may increase, or that the crime rate has steadily declined. Respondents were also randomly assigned to one of two question wordings. Half were asked what they thought were the most important problems facing the nation, and half were asked what they thought were the most important issues facing the nation. I report analyses collapsing across this distinction unless otherwise noted.

Design and Procedure

Respondents in this study are 468 students from a large public university in the northeast United States and a large public university in the midwest United
States who participated for course credit. As is common in agenda-setting and priming laboratory experiments (e.g., Iyengar & Kinder, 1987; Miller & Krosnick, 2000), respondents were told that they would be participating in a study on selective perception—the way people’s attitudes influence their evaluations of newspaper articles taken from The New York Times. They then read a series of news articles and completed a survey.

One criticism of this methodology (e.g., Graber, 2004) is that because, like many other media experiments (e.g., Druckman, 2001a; Miller & Krosnick, 2000; Nelson & Oxley, 1999), the present studies use college students as participants, the findings cannot be generalized to other populations. However, media effects such as agenda setting, priming, and framing have been replicated in experiments that use a variety of samples, from college students (e.g., Druckman, 2001a; Nelson & Oxley, 1999; Miller & Krosnick, 2000) to adult volunteers from cities in which the investigators live (e.g., Iyengar & Kinder, 1987) to the general population (e.g., Nelson & Kinder, 1996), and in studies that match content analyses of the media to surveys of the general population (e.g., Iyengar & Simon, 1993). Therefore, the criticism that using a college student sample will lead to qualitatively different conclusions than a general population sample is not supported by the evidence.

All respondents read the same two articles on nonpolitical issues. They were randomly assigned to read an additional story that either (1) concluded that the juvenile crime rate was still very high (crime high condition), or (2) concluded that the juvenile crime rate was decreasing (crime low condition). A third group was randomly assigned to receive no additional story on crime (control condition). The crime high article, titled “Negative Data on Crime and Youth: New Study Shows Violent Crime Still High,” described a Justice Department study that concluded the juvenile crime rate in the United States is extremely high and still growing. The crime low article, titled “Upbeat Data on Crime and Youth: New Study Shows Violent Crime on the Decline,” described a Justice Department study that concluded the juvenile crime rate in the United States has been steadily declining.

Respondents then completed a questionnaire that first measured their attitudes toward the articles (e.g., “How interesting was the article?” and “How understandable was the article?”). They then answered an open-ended national importance question and a series of closed-ended questions assessing how nationally important they thought news reporters and politicians thought crime was. These questions were embedded within a set of similar questions about other issues.

Respondents were also asked to recall the crime article and report the extent to which they had felt a series of emotions while they were reading the story. They were also assessed. After completing the questionnaire, all respondents were thoroughly debriefed.

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2 Those in the control condition were randomly assigned to read one of the crime stories after they had answered all the national importance questions, so that their emotional reactions could be assessed.
Measures

National Importance. Respondents were asked to list the most important problems (issues) facing the country; up to three answers were coded. A coder who was not informed about the hypotheses decided whether each response referred to crime. An importance index was coded 1 if a person mentioned crime and 0 if not. Twenty-nine percent of the sample said crime is nationally important.

News Reporter and Politician Importance. Respondents were asked how important they thought news reporters in America (and then politicians) thought crime, and a series of other issues, were for the country as a whole. Responses were coded 0 = not at all important, .25 = not too important, .5 = somewhat important, .75 = very important, and 1 = extremely important.

Emotions. Respondents were asked the extent to which they felt angry, sad, proud, hopeful, happy, and afraid while reading the crime story. Responses for each emotion were coded 0 = not at all, .25 = not too, .5 = somewhat, .75 = very, and 1 = extremely. I created a valence index by summing responses to the negative emotions and subtracting the resulting value from the sum of the responses to the positive emotions. This index was recoded to range from 0 to 1, such that higher numbers equal more positive emotions. I created an arousal index by summing responses to both the negative and positive emotions. This index was recoded to range from 0 to 1, such that higher numbers equal more emotional arousal (regardless of valence).

Demographics. A Republican dummy variable was coded 1 for respondents who said they usually think of themselves as Republicans and 0 for everyone else. A Democrat dummy variable was coded 1 for those who said they usually think of themselves as Democrats and 0 for everyone else. Gender was coded 1 if male and 0 if female; race was coded 1 if white and 0 if nonwhite.

Results

Agenda Setting. Based on the agenda-setting hypothesis, respondents in the crime high condition (who read a story that implied that crime is still a problem for the nation) should be more likely to list crime as important for the nation than respondents who did not read any story about crime. But even respondents in the crime low condition might be expected to conclude that crime is still an important problem for the nation (compared to those who did not read a crime story) because the story did not say that crime has disappeared.

Given that the newspaper stories focused on juvenile crime rates in the United States, only responses regarding domestic crime and violence were counted. References to terrorism at home or abroad were not considered as mentions of crime for the purposes of this study. Mentions of terrorism were coded as a separate variable. Respondents in the three media exposure conditions did not differ in their mentions of terrorism.
I created two media exposure dummy variables to test the agenda-setting hypothesis. The crime high dummy variable was coded 1 for respondents in the crime high condition and 0 for everyone else. The crime low dummy variable was coded 1 for respondents in the crime low condition and 0 for everyone else. I ran a probit analysis predicting the dichotomous national importance variable with the two exposure dummy variables and controls for party identification, race, and gender. Both the crime high (b = 1.98, p < .001) and crime low (b = 1.13, p < .001) variables were statistically significant. Thus, respondents who read one of the two crime stories were more likely to list crime as important for the nation than those who did not read a crime story.

For the purposes of this study, however, the critical test is whether respondents in the crime high condition differed from respondents in the crime low condition in their likelihood to list crime as important for the nation. This is the test of the accessibility hypothesis. If accessibility mediates agenda setting, then the specific content of the stories should not matter. The mere fact that crime is made accessible through reading either the crime high or the crime low story means that there should not be a difference in the agenda setting effect between the two conditions. However, if content matters, we would expect respondents in the crime high condition, who are told that crime is still a very big problem, to show a stronger agenda-setting effect than respondents in the crime low condition, who are told that crime is less of a problem.

To test the accessibility hypothesis, a new crime exposure variable was created, coded 1 for respondents in the crime high condition and 0 for respondents in the crime low condition. A probit analysis was conducted with this new variable. The exposure coefficient was positive and statistically significant (b = .85, p < .001), indicating that respondents in the crime high condition were more likely to list crime as important for the nation than respondents in the crime low condition. Contrary to the accessibility hypothesis, content did, in fact, matter. The probability that respondents in the crime low condition will list crime as one of the most important problems facing the nation is 35% compared to 55% for respondents in the crime high condition.\footnote{Using Clarify (King, Tomz, & Wittenberg, 2000), I calculated predicted probabilities by holding demographic variables constant at their means and varying the condition dummy variable (crime low or high).}

These results do not completely eliminate accessibility from the decision calculus. Even though crime was stated as being on the decline, respondents in the crime low condition were still more likely to list crime as nationally important than those in the control condition (albeit less likely than those in the crime high condition). This pattern could indicate that accessibility is a necessary, but not sufficient, condition for agenda setting. But the pattern could also be the sole result of the content differences between the conditions. Study 3 will further address this issue.
Assessing Mediation by Indicators of Relevance. According to Baron and Kenny (1986), two necessary conditions for mediation are that: (1) the independent variable has a statistically significant effect on the mediator, and (2) the mediator has a statistically significant effect on the dependent variable, controlling for the effects of the independent variable. Once these steps in the causal chain are established, I tested the significance of the indirect effect by employing three versions of the product of coefficients tests proposed by Aroian (1944), Goodman (1960), and Sobel (1982); see also Baron & Kenny, (1986); MacKinnon, Lockwood, Hoffman, West, and Sheets (2002).

Mediation by News Reporter Importance. I first examined whether the independent variable (media exposure) causes changes in the proposed mediator (news reporter importance). Column 1 of Table 1 shows the results of an OLS regression testing whether media exposure is a significant predictor of news reporter importance.\(^5\) Respondents in the crime high condition believe that news reporters thought the issue was more important for the nation than those in the control

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Reporter Importance</th>
<th>National Importance</th>
<th>Politician Importance</th>
<th>National Importance</th>
</tr>
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<tr>
<td>Crime High Exposure</td>
<td>.07***</td>
<td>1.93***</td>
<td>.04+</td>
<td>1.95***</td>
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<td>.01</td>
<td>1.13***</td>
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<td>Politician Importance</td>
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<td>Democrat</td>
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<td>(.02)</td>
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<td>(.02)</td>
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\(R^2\)  .05  .02  
N  455  455  454  454

Note. Table entries in Columns 1 and 3 are unstandardized regression coefficients. Entries in Columns 2 and 4 are probit coefficients. Standard errors appear in parentheses. + \(p < .10\) * \(p < .05\) *** \(p < .001\).

\(^5\) I also estimated all models with scaled dependent variables using ordered probit. Because the results were very similar, I report OLS coefficients for ease of interpretation.
condition \( (b = .07, p < .001) \). Respondents in the crime low condition did not show a similar effect \( (b = .02, \text{n.s.}) \). Thus, news reporter importance could mediate agenda setting for respondents in the crime high condition.

In the second causal step, one must determine whether the mediator (news reporter importance) predicts the dependent variable (importance) while controlling for the independent variable (media exposure). As Column 2 of Table 1 shows, news reporter importance does not predict importance judgments \( (b = .74, \text{n.s.}) \). Because this step in the causal chain is not statistically significant, perceptions of news reporter importance do not mediate the agenda setting effect.

**Mediation by Politician Importance.** I used the same causal step procedure to determine whether assessments of politician importance could mediate the agenda-setting effect. First, the parameters of Column 3 in Table 1 were estimated using OLS regression. Respondents in the crime high condition did, in fact, believe that politicians thought the issue was more important for the nation than those in the control condition \( (b = .04, p < .10) \). But as with news reporter importance, respondents in the crime low condition did not show a similar effect \( (b = .01, \text{n.s.}) \). In addition, politician importance was a significant predictor of national importance \( (b = 1.36, p < .05, \text{see Column 4 of Table 1}) \). Given that both causal steps were statistically significant, politician importance could mediate the impact of crime high exposure on importance judgments (but not the effect of crime low exposure, because crime low exposure did not affect perceptions of politician importance).

To determine whether the indirect effect is statistically significant, I computed the products of coefficients tests (equations 1, 2, and 3). Neither the Sobel \( (z = 1.48) \), Aroian, \( (z = 1.40) \), nor Goodman \( (z = 1.57) \) z-statistics were significant, indicating that politician importance does not mediate agenda setting—news exposure and politician importance have independent effects on importance judgments.\(^6\)

**Mediation by Emotions.** Table 2 shows the results of the causal step analyses testing whether affective arousal or valence could mediate the effect of media exposure on importance. As Column 1 of Table 2 shows, neither the crime high nor the crime low exposure conditions are significant predictors of affective arousal \( b = -.03, \text{n.s.} \), and \( b = .00, \text{n.s.} \), respectively). As Column 3 of Table 2 shows, arousal is a positive, significant predictor of national importance \( (b = 2.92, p < .001) \); the more affectively aroused about crime a person is, the more likely he or she is to rate the issue of crime as nationally important. But because the first causal step in the chain is not statistically significant for either crime high or crime low exposure, affective arousal does not mediate agenda setting.

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\(^6\) Based on simulations, MacKinnon, Lockwood, and Hoffman (1998; see also MacKinnon et al., 2002) recommend different critical values for the z-statistic. At the \( p < .05 \) level, MacKinnon’s recommendation is for a critical value of \( z = .97 \). Based on this critical value, I would conclude that politician importance does mediate agenda setting. But MacKinnon’s distribution is not yet widely used in the social sciences, so I have chosen to use the normal distribution for the z-statistic. This decision reflects a conservative willingness to be more accepting of Type II than Type I error.
With regard to affective valence, as would be expected given the content of the stories, respondents in the crime high condition had more negative emotional reactions ($b = -0.14$, $p < .001$) and respondents in the crime low condition had more positive emotional reactions ($b = 0.15$, $p < .001$), compared to those in the control condition (see Column 2 of Table 2). And the effect of valence on importance was negative and marginally statistically significant ($b = -1.40$, $p < .10$), indicating that respondents who had more negative emotional reactions to the crime story they read were more likely to think that crime was important (see Column 4 of Table 2).

Both steps in the causal chain are statistically significant for both crime high exposure and crime low exposure. However, emotional valence can only mediate the crime high exposure effect on national importance because the signs of the effects for crime low exposure are inconsistent. Crime low exposure has a positive effect on valence (i.e., reading the story made them feel more positive about the issue), but valence has a negative impact on importance (i.e., the more negative people’s emotions about the issue are, the more likely they are to rate the issue as important).

### Table 2. Mediation by Valence of Emotions and Emotional Arousal, Study 1

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Arousal</th>
<th>Valence</th>
<th>National Importance</th>
<th>National Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime High Exposure</td>
<td>-.03</td>
<td>-.14***</td>
<td>2.14***</td>
<td>1.82***</td>
</tr>
<tr>
<td></td>
<td>(.02)</td>
<td>(.02)</td>
<td>(.28)</td>
<td>(.28)</td>
</tr>
<tr>
<td>Crime Low Exposure</td>
<td>.00</td>
<td>.15***</td>
<td>1.18***</td>
<td>1.36***</td>
</tr>
<tr>
<td></td>
<td>(.02)</td>
<td>(.02)</td>
<td>(.28)</td>
<td>(.30)</td>
</tr>
<tr>
<td>Valence</td>
<td></td>
<td></td>
<td></td>
<td>-1.40+</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.72)</td>
</tr>
<tr>
<td>Arousal</td>
<td></td>
<td></td>
<td>2.92***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.81)</td>
<td></td>
</tr>
<tr>
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<td>.02</td>
<td>.01</td>
<td>.02</td>
<td>.06</td>
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<tr>
<td></td>
<td>(.02)</td>
<td>(.02)</td>
<td>(.29)</td>
<td>(.29)</td>
</tr>
<tr>
<td>Democrat</td>
<td>.05**</td>
<td>-.02</td>
<td>-.03</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>(.02)</td>
<td>(.02)</td>
<td>(.28)</td>
<td>(.28)</td>
</tr>
<tr>
<td>White</td>
<td>.05*</td>
<td>-.01</td>
<td>-.21</td>
<td>-.08</td>
</tr>
<tr>
<td></td>
<td>(.02)</td>
<td>(.02)</td>
<td>(.34)</td>
<td>(.33)</td>
</tr>
<tr>
<td>Male</td>
<td>-.05***</td>
<td>.04**</td>
<td>-.74**</td>
<td>-.78***</td>
</tr>
<tr>
<td></td>
<td>(.02)</td>
<td>(.01)</td>
<td>(.24)</td>
<td>(.23)</td>
</tr>
</tbody>
</table>

R²  .06  .28
N   455  455  455  455

**Note.** Table entries in Columns 1 and 2 are unstandardized regression coefficients. Entries in Columns 3 and 4 are probit coefficients. Standard errors appear in parentheses.

+ $p < .10$

* $p < .05$

** $p < .01$

*** $p < .00$
To determine whether the indirect effect for crime high exposure is statistically significant, I computed the product of coefficients tests (equations 1, 2, and 3). The Sobel \((z = 1.87, p < .10)\), Aroian, \((z = 1.86, p < .10)\), and Goodman \((z = 1.89, p < .10)\) z-statistics were statistically significant at the \(p < .10\) level, indicating that emotional valence does, in fact, mediate agenda setting. When media exposure leads people to have more negative emotions about the issue, those negative emotions cause an increase in the likelihood that a person will rate the issue as nationally important.

As discussed earlier, it is possible that positive emotions might mediate agenda setting if the national importance question focuses people on the broader category of “issues” rather than “problems.” Thus, among people who were asked about the most important “issues” facing the country, emotional valence may have the opposite effect—those who experience positive emotions (i.e., people who read the crime low story, see above) might be more likely to view crime as an important “issue” for the nation. To test this hypothesis, I ran the analysis reported in Column 4 of Table 2 separately for those who were randomly assigned to receive the problem wording and those who received the issue wording. Among those in the problem wording condition, valence had a negative, statistically significant impact on importance (probit coefficient = \(-2.47, \text{se} = 1.17, p < .05\)). The more negative people’s emotions, the more likely they were to list crime as important for the nation. Among those in the issue wording condition, valence also had a negative, although nonsignificant, impact on importance (probit coefficient = \(-.71, \text{se} = .96, \text{n.s.}\)). Therefore, positive emotional valence cannot mediate agenda setting among those who received the “issue” wording.

Next, I examined whether individual emotions (angry, sad, afraid, proud, hopeful, and happy) mediate agenda setting.\(^7\) First, the impact of the experimental conditions on each individual emotion was estimated in OLS regression using the variables listed in Table 3. As Row 1 of Table 3 shows, the impact of the crime high dummy variable on the three negative emotions, angry, sad, and afraid, is positive and statistically significant \((b = .09, p < .001, b = .15, p < .001, \text{and } b = .08, p < .001, \text{respectively})\). In contrast, the impact of the crime high dummy variable on the three positive emotions, proud, hopeful, and happy, is negative and statistically significant \((b = -.16, p < .001, b = -.12, p < .001, \text{and } b = -.16, p < .001, \text{respectively})\). As Row 2 of Table 3 shows, the crime low dummy variable had the exact opposite effects on emotions. Compared to respondents in the control condition, those who read that the juvenile crime rate was declining had statistically significantly less negative and more positive emotional reactions. This is another indication that the content of the stories matters for people—not only does

\(^7\) Based on the valence results and the fact that there were no effects for the question wording manipulation of “issue” versus “problem,” there is no reason to expect that positive emotions will mediate agenda setting. However, for the sake of completeness, I report the tests of mediation for the positive emotions.
variation in content have differential effects on importance judgments, but it also has starkly differential effects on emotions.

Next, the impact of each emotion on importance judgments (controlling for experimental condition) was estimated in probit using the variables listed in Table 4. Consistent with past research showing that negative emotions are a cue for people that there is a problem that needs to be fixed (Martin, 2000), two of the three negative emotions (sad and afraid, $b = 1.81$, $p < .001$ and $b = 2.33$, $p < .001$, respectively) were positive, significant predictors of national importance. None of the positive emotions were significant predictors (a separate analysis focusing on only those in the issue wording condition also revealed no significant effects for any of the positive emotions). The more sad and afraid respondents felt, the more likely they were to list crime as one of the most important issues facing the nation.

Given this pattern of findings, only the two negative emotions of sadness and fear could possibly mediate the impact of experimental condition on national importance, but only among those in the crime high condition (because the crime low condition has a negative effect on sadness and fear, which both have positive effects on importance). The Sobel, Aroian, and Goodman tests were statistically significant for sad ($z = 3.01$, $p < .01$; $z = 2.97$, $p < .01$; and $z = 3.05$, $p < .01$, respectively) and afraid ($z = 2.91$, $p < .01$; $z = 2.87$, $p < .01$; and $z = 2.95$, $p < .01$, respectively). Exposure to media content that says the crime rate is high and possibly on the rise causes people to be more sad and afraid, which, in turn, increases the likelihood that they will list crime as important for the nation.

### Table 3. Media Exposure Predicting Specific Emotions, Study 1

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Dependent Variable</th>
<th>Angry</th>
<th>Sad</th>
<th>Afraid</th>
<th>Proud</th>
<th>Hopeful</th>
<th>Happy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime High Exposure</td>
<td></td>
<td>.09***</td>
<td>.15***</td>
<td>.08***</td>
<td>−.16***</td>
<td>−.12***</td>
<td>−.16***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.02)</td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.03)</td>
</tr>
<tr>
<td>Crime Low Exposure</td>
<td>−.13***</td>
<td>−.14***</td>
<td>−.13***</td>
<td>.12***</td>
<td>.15***</td>
<td>.15***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.02)</td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.03)</td>
</tr>
<tr>
<td>Republican</td>
<td></td>
<td>.01</td>
<td>−.02</td>
<td>.03</td>
<td>.00</td>
<td>.04</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.02)</td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.03)</td>
</tr>
<tr>
<td>Democrat</td>
<td></td>
<td>.07***</td>
<td>.04</td>
<td>.05+</td>
<td>.01</td>
<td>.05+</td>
<td>.00</td>
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<td>(.02)</td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.03)</td>
</tr>
<tr>
<td>White</td>
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<td>.06+</td>
<td>.07+</td>
<td>.03</td>
<td>.02</td>
<td>.01</td>
<td>.04</td>
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<td>(.03)</td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.03)</td>
</tr>
<tr>
<td>Male</td>
<td>−.01</td>
<td>−.11***</td>
<td>−.10***</td>
<td>.01</td>
<td>.00</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.02)</td>
<td>(.03)</td>
<td>(.02)</td>
<td>(.02)</td>
<td>(.02)</td>
<td>(.02)</td>
</tr>
</tbody>
</table>

$R^2$ .13 .20 .16 .16 .16 .21

N 455 455 455 455 455 455

Note. Table entries are unstandardized regression coefficients; standard errors appear in parentheses.

+ $p < .10$

** $p < .01$

*** $p < .001$
Summary. Study 1 shows that respondents who read the crime high story did, in fact, evidence a greater agenda-setting effect than those who read a story that said crime was on the decline or who did not read a story about crime. This finding is inconsistent with the accessibility hypothesis. In addition, agenda setting was mediated by the specific negative emotions of sad and afraid.

Overview of Study 2

The primary goal of Study 1 was to test the hypothesis that agenda setting is due solely to increases in accessibility. Although the results are inconsistent with this conventional wisdom (because the content of the stories did, in fact, moderate agenda setting), there is an alternative explanation for the findings. An assumption was made in Study 1 that crime was equally accessible for the crime high and crime low respondents (thus, any differences in agenda setting between the two conditions could not be attributed to differences in accessibility). However, it is possible that this was not the case. Respondents who read the crime high story might have processed it more deeply, due to the threatening or anxiety-producing nature of the content (see, e.g., Marcus et al., 2000). This could have made crime

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Emotion</th>
<th>Independent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Angry</td>
<td>Sad</td>
</tr>
<tr>
<td>Crime High Exposure</td>
<td>1.94***</td>
<td>1.79***</td>
</tr>
<tr>
<td></td>
<td>(.27)</td>
<td>(.28)</td>
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<tr>
<td>Crime Low Exposure</td>
<td>1.23***</td>
<td>1.45***</td>
</tr>
<tr>
<td></td>
<td>(.29)</td>
<td>(.30)</td>
</tr>
<tr>
<td>Emotion</td>
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<td>1.81***</td>
</tr>
<tr>
<td></td>
<td>(.51)</td>
<td>(.48)</td>
</tr>
<tr>
<td>Republican</td>
<td>.05</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>(.29)</td>
<td>(.29)</td>
</tr>
<tr>
<td>Democrat</td>
<td>.05</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>(.28)</td>
<td>(.28)</td>
</tr>
<tr>
<td>White</td>
<td>−.09</td>
<td>−.17</td>
</tr>
<tr>
<td></td>
<td>(.33)</td>
<td>(.34)</td>
</tr>
<tr>
<td>Male</td>
<td>−.83***</td>
<td>−.66**</td>
</tr>
<tr>
<td></td>
<td>(.23)</td>
<td>(.24)</td>
</tr>
<tr>
<td>N</td>
<td>455</td>
<td>455</td>
</tr>
</tbody>
</table>

Note. Dependent variable is open-ended national importance judgments. Table entries are probit coefficients; standard errors appear in parentheses. Coefficients in Row 3 of the table refer to the specific emotion listed in the corresponding column heading.

**p < .01
***p < .001
more accessible to respondents in the crime high condition. Thus, the pattern of results in Study 1, could possibly be explained by differences in accessibility, rather than by differences in content. Study 2 was designed to examine the differences in crime accessibility among respondents in each of the experimental conditions used in Study 1.

**Design and Procedure**

Respondents in this study are 72 students enrolled in an American Government course at a large public university in the midwestern United States. They were told the purpose of the study was to examine people’s perceptions of newspaper articles and that they would be completing three tasks: (1) read newspaper articles from *The New York Times*; (2) complete a brief task for another study; and (3) answer questions about their attitudes about the stories.

They were randomly assigned to read one of the three sets of newspaper stories from Study 1 (crime high, crime low, or control). To measure crime accessibility, respondents completed a word-completion task in which they were given a set of 20 word fragments (such as OT_ER), one at a time, and were asked to complete the fragment to make an English word. Word completion tasks have been demonstrated to be a reliable measure of construct accessibility (e.g., Bassili & Smith, 1986; Gilbert & Hixon, 1991; Tulving, Schacter, & Stark, 1982). For the present study, 10 of the word fragments could be completed to make either a crime-related word or a non crime-related word, and 10 of the word fragments could be completed to make at least two non crime-related words (see appendix for the set of word fragments). Each word fragment was shown to respondents on an overhead projector. Respondents were given 15 seconds to generate as many completions as they could. Once the 15 seconds were up, the next fragment was placed on the projector, and so on. After the word fragment task, respondents were told that they would not be answering any questions about the stories, and that the study was finished.

**Measures**

Accessibility was measured by counting how many of the 10 word fragments that could have been completed as a crime-related word were actually completed as such. The accessibility variable ranged from 0 to 10, with higher numbers meaning that crime was more accessible.

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8 Crime-related word fragments were generated from a pilot study in which 30 subjects were given 60 seconds to “list all the words that come to mind when you think of crime.” Words that appeared in at least 33% of the responses and could be turned into a word fragment that could be completed in at least two ways were used (Bassili & Smith, 1986).
Results

To test the assumption of Study 1 that crime was equally accessible for respondents who read the crime high story and respondents who read the crime low story (and higher than for respondents who did not read a crime story), a series of t-tests comparing accessibility scores among the three conditions were conducted. Contrary to expectations, crime was significantly more accessible to respondents who read the crime low story (mean = 4.80) than to respondents who read the crime high story (mean = 3.92; t(47) = .06, p < .05). Crime was also significantly more accessible to respondents who read the crime low story than to respondents in the control condition (mean = 3.70; t(46) = 2.46, p < .05). There was no significant difference in accessibility between respondents in the crime high and control conditions. Thus, Hypothesis 1 is confirmed, but, paradoxically, only for the crime low story. In retrospect, this finding is consistent with research on the attention-grabbing effects of novel stimuli. Positive newspaper stories about crime are, on balance, less prevalent than negative ones. This novelty may have caused respondents to read the story more carefully or think more about the content, which, in turn, may have increased the accessibility of the construct.

Although the expectation of equivalent levels of accessibility between the crime high and crime low conditions was disconfirmed, the pattern of accessibility results obtained in Study 2 casts doubt on the alternative explanation of Study 1’s results (that accessibility differences are at the root of the agenda setting findings). The hypothesis tested in Study 1 is that respondents in the crime high condition would be more likely to evidence the agenda-setting effect than those in the crime low condition because of differences in content. Namely, the fact that the crime low story explicitly concluded that crime is on the decline should dampen the effect. The alternative explanation for Study 1’s finding of a greater agenda-setting effect in the crime high than the crime low condition is that differences in accessibility are the cause. Specifically, crime may have been more accessible to respondents in the crime high condition, which may have led to the greater agenda-setting effect among those respondents. However, the results of Study 2 show that crime was not more accessible to respondents in the crime high condition. Thus, differences in accessibility cannot explain the pattern of agenda setting results obtained in Study 1. Even if the issue is highly accessible, respondents will not evidence agenda setting unless the stories arouse negative emotions.

Overview of Study 3

Although the pattern of results in Study 2 suggests that accessibility is not the sole mediator of the agenda-setting effect evidenced in Study 1, these results cannot yet definitively rule out accessibility as a mediator. After all, the respondents in Study 2 were not the same as the respondents in Study 1. Thus, it is not possible to conclude with certainty that the pattern of accessibility results obtained
from the respondents in Study 2 is an accurate representation of the accessibility pattern evidenced by the Study 1 respondents.  

Another way to think about the problem of testing the accessibility hypothesis is to consider that in virtually every past agenda-setting study, content, and accessibility are confounded. Past experiments have manipulated media exposure by using real media stories that have appeared in the newspaper or on television (e.g., Iyengar & Kinder, 1987). And previous studies matching content analyses of media content to public opinion data (e.g., Funkhouser, 1973; Shaw & McCombs, 1977; Wanta & Hu, 1994) have, by definition, focused on actual media content. For all of these studies, the independent variable is the number of news stories on a particular issue. Given limited space and time, media outlets choose what to cover, at least in part, based on objective indicators of national significance (e.g., Behr & Iyengar, 1985). Since past studies either simulate or measure actual media content, high-exposure respondents are usually receiving lots of media content about important topics. And we know that when people receive the content, accessibility will usually increase as a result (see, e.g., Miller & Krosnick, 2000). So content and accessibility are inextricably linked.

For example, Iyengar and Kinder’s (1987) experimental manipulation of television news content began with real national newscasts into which they inserted other actual news stories. The target problems manipulated in their experiments conducted between 1980 and 1983 included defense, inflation, pollution, energy, unemployment, and the Iran hostage crisis. For Iyengar and Kinder, experimental realism was tremendously important—their goal was to simulate as faithfully as possible actual national news broadcasts so as to minimize demand characteristics. But in doing so, they manipulated news coverage of objectively important problems of the day. So respondents in the “high exposure” conditions watched lots of stories about an important problem, thus confounding content and accessibility (because high exposure increases accessibility).

Even Study 1 in the present investigation confounds content and accessibility to a degree. The problem is that any manipulation of content should have a corresponding positive effect on accessibility. So, in Study 1, the fact that respondents in the crime low condition still evidenced a significant agenda-setting effect compared to those in the control condition could be due either to the fact that they

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9 It is not possible to assess importance judgments and accessibility in the same study, because doing so would not permit a clean test of the impact of either variable. Accessibility must be measured before all other variables to reduce contamination because accessibility measurements will be artificially inflated for all concepts referred to in previous questions (Fazio, 1990). Furthermore, asking questions to measure issue accessibility will increase the accessibility of those issues, which could contaminate answers to later open-ended questions about importance (if answers to those questions are influenced partly by accessibility). Also, respondents might conclude that the researchers are particularly interested in the issues asked about in initial questions intended to measure accessibility, and therefore might limit their answers to later open-ended importance questions issues mentioned in the prior questions measuring accessibility.
read some content that said that crime still exists (i.e., even though it is on the
decline, the fact that it exists at all may lead people to view it as an important
problem) or to the fact that crime was more accessible to them relative to respon-
dents in the control condition. Finally, the pattern could indicate that both acces-
sibility and public policy-relevant content are necessary.

In the absence of being able to manipulate content without a corresponding
increase in accessibility, there are at least two ways to disentangle accessibility and
content. First, one could conduct a study in which, in addition to the traditional
agenda-setting manipulation, some respondents receive a story that says a problem
no longer exists (so, for example, respondents could read a story that says the
unemployment rate is 0%). Presuming that the issue will be equally accessible for
both groups, if the accessibility hypothesis is correct, then respondents in both
conditions should still rate the issue as one of the most important for the nation.
But if content differences matter, then those who receive the “0%” content would
not be expected to evidence the agenda-setting effect. However, a study such as
this would stretch the limits of experimental realism.

Another way to disentangle accessibility and content would be to conduct an
experiment such that, in addition to the traditional agenda-setting manipulation,
some respondents are assigned to do a different task aimed at increasing the
accessibility of the issue in a content-free manner. Presuming that accessibility is
equally high for respondents in each condition, the accessibility hypothesis would
predict that both groups would evidence the agenda-setting effect. But if content
matters, then only those in the media content condition should evidence the
agenda-setting effect.

In summary, whereas it is virtually impossible to manipulate content without
an increase in accessibility, it is possible to manipulate issue accessibility without
corresponding content that implies that the issue is important. The goals of Study
3 are to disentangle accessibility and content using the latter method and to test
whether personal importance mediates agenda setting.

Design and Procedure

Respondents in this study are 197 student volunteers from a large public
university in the midwestern United States. The design and procedures of this
study were the same as in Study 1. However, in addition to the three conditions in
Study 1, there was a fourth condition. Respondents were randomly assigned to
receive either: (1) the crime high story, (2) the crime low story, (3) no story about
crime, or (4) a word-search puzzle that they were told appeared in a recent issue
of the New York Times Leisure section. The word search task was entitled “Famous
Criminals and Crimes.” Respondents in this condition were asked to complete the
word search task (after approximately five minutes they were told they could move
on to the rest of the questionnaire; see appendix for the puzzle). This task was
aimed at increasing the accessibility of crime, without saying anything about crime.
as a public policy issue. After the media content, respondents were asked the open-ended national importance question and a closed-ended measure of the personal importance of crime.

**Measures**

National importance, party identification, gender, and race were assessed as in Study 1. Twenty-one percent listed crime as one of the most important national issues. Personal importance was assessed by asking respondents how important the issue of crime was to them personally, coded such that 1 = extremely important, .75 = very important, .5 = somewhat important, .25 = not too important, and 0 = not at all important.

**Results**

**Agenda Setting.** To test the agenda-setting hypothesis, I created three media exposure dummy variables. The first was coded 1 for the crime high condition and 0 for all others. The second was coded 1 for the crime low condition and 0 for all others. The third was coded 1 for the puzzle condition and 0 for all other respondents. I ran a probit analysis predicting responses to the open-ended national importance question with the three dummy variables and demographic controls.

As Column 1 of Table 5 shows, consistent with Study 1, respondents in the crime high condition are more likely to list crime as one of the most important problems facing the nation than respondents in the control condition (b = 2.04, p < .001), and respondents in the crime low condition are more likely to list crime as one of the most important problems facing the nation than respondents in the control condition (b = 1.11, p < .10). However, there is no evidence of the agenda-setting effect among respondents in the puzzle condition, compared to the control condition (b = .36, n.s.). Subsequent analyses comparing pairs of conditions to one another directly (by dropping the other two conditions) show that the agenda-setting effect is significantly larger for respondents in the crime high than the crime low condition (b = .88, p = .05, see Column 2 of Table 5). The probability that respondents in the crime low condition will list crime as one of the most important problems facing the nation is 21%, compared to 38% for respondents in the crime high condition.

10 To test the validity of the word search task as a manipulation of accessibility, I conducted a pilot study similar to Study 2 except with four conditions. Seventy-seven students were randomly assigned to one of four conditions: control (n = 19), crime high (n = 20), crime low (n = 19), and word search (n = 19). They then did the word completion task. Respondents in the word search condition completed more of the word fragments as crime words (mean = 6.42) than those in the control (mean = 4.37; t = 3.37, p < .01) or crime low condition (mean = 4.95, t = 2.56, p < .05). There was no difference between the word search and crime high condition (mean = 5.65; t = 1.23, n.s.). Thus, the word search task is a valid manipulation of accessibility.
Agenda setting is significantly larger for those in the crime high than the puzzle condition (b = 1.97, p < .001, Column 3 of Table 5). The probability that respondents in the puzzle condition will list crime as one of the most important national problems is 8%, compared to 37% for those in the crime high condition. Importance judgments in the puzzle and control conditions do not differ (b = .40, n.s.), nor do those in the crime low and puzzle conditions (b = .70, n.s.).

For the hypothesis that accessibility is a sufficient condition for agenda setting to be confirmed, all conditions that increased the accessibility of the issue of crime (i.e., the crime high, crime low, and puzzle conditions) should show significant agenda-setting effects compared to the control condition. This is not the case. For the content hypothesis to be confirmed, the strength of the agenda-setting effect should vary by the extent to which the issue is described as a problem. This, in fact, is what occurred. As with Study 1, respondents who read the crime high story are more likely to evidence the agenda-setting effect than people who read the crime

### Table 5. Agenda Setting Effect, Study 3

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime High Exposure</td>
<td>2.04***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.62)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crime Low Exposure</td>
<td>1.11+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.63)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puzzle Exposure</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.73)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crime Low vs. Crime High</td>
<td></td>
<td>.88*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.45)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puzzle vs. Crime High</td>
<td></td>
<td></td>
<td>1.97***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puzzle vs. Control</td>
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<td></td>
<td></td>
<td>.40</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td>(.75)</td>
<td></td>
</tr>
<tr>
<td>Crime Low vs. Puzzle</td>
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<td></td>
<td></td>
<td></td>
<td>.70</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.59)</td>
</tr>
<tr>
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<td>-.29</td>
<td>-.52</td>
<td>-.59</td>
<td>-.21</td>
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<tr>
<td></td>
<td>(.49)</td>
<td>(.55)</td>
<td>(.71)</td>
<td>(1.23)</td>
<td>(.77)</td>
</tr>
<tr>
<td>Democrat</td>
<td>-.53</td>
<td>-.96</td>
<td>-1.76**</td>
<td>.53</td>
<td>-.07</td>
</tr>
<tr>
<td></td>
<td>(.44)</td>
<td>(.53)</td>
<td>(.77)</td>
<td>(.82)</td>
<td>(.61)</td>
</tr>
<tr>
<td>White</td>
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<td>-.60</td>
<td>-1.67*</td>
<td>-.99</td>
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<tr>
<td></td>
<td>(.47)</td>
<td>(.57)</td>
<td>(.75)</td>
<td>(.83)</td>
<td>(.60)</td>
</tr>
<tr>
<td>Male</td>
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<td>-.94*</td>
<td>-1.77**</td>
<td>-.39</td>
<td>-.32</td>
</tr>
<tr>
<td></td>
<td>(.41)</td>
<td>(.47)</td>
<td>(.63)</td>
<td>(.88)</td>
<td>(.58)</td>
</tr>
</tbody>
</table>

Note. Dependent variable is open-ended national importance judgments. Table entries are probit coefficients; standard errors appear in parentheses.

+p < .10
* p < .05
***p < .001
low story. And respondents who completed a word search task to increase the accessibility of crime (relative to the control condition) do not evidence any greater propensity to list crime as one of the most important issues facing the nation, when compared to the control, crime high, or crime low respondents.

As with Study 1, these results do not rule out the possibility that accessibility is a necessary mediator of agenda setting. To test this hypothesis fully, one would need a manipulation of content that did not cause a corresponding increase in accessibility (a virtual impossibility). But these results disconfirm the hypothesis that accessibility is a sufficient, fundamental mediator of agenda setting.

Mediation by Personal Importance. To examine whether personal importance mediates agenda setting, I combined the puzzle and control conditions and regressed personal importance on the remaining exposure dummy variables (crime high and crime low, with the puzzle and control conditions serving as the comparison group), controlling for demographics. I then ran a probit analysis to examine the impact of personal importance on national importance, controlling for the media exposure dummy variables and demographics. Consistent with past research (Miller et al., 2007), personal importance predicted national importance ($b = 3.02$, $p < .001$). However, neither the crime high nor the crime low variable predicted personal importance ($b = -.02$, n.s. and $b = .06$, n.s., respectively). Therefore, personal importance cannot mediate the agenda-setting effect revealed in Study 3.

Discussion

Over two decades ago, Maxwell McCombs (1981), the architect of the agenda-setting hypothesis, called for serious investigation of the mediators and moderators of the phenomenon. Without rich, theory-based understanding of why and when agenda setting happens, he said, we cannot truly appreciate the phenomenon or its implications. In the spirit of McCombs’s plea, the present research is one of the first investigations of the cognitive mechanism(s) of agenda setting. Challenging the assumption that accessibility is fundamentally responsible for shifts in importance judgments, the results demonstrate that the specific content of news stories is a primary determinant of agenda setting. The current studies provide a cleaner test of this hypothesis by, for the first time, unconfounding media content and accessibility. Rather than simply relying on what is accessible in memory, people pay attention to the content of news stories and make judgments about national importance based on that content. Accessibility may be a necessary condition for agenda setting; the current findings cannot rule out this possibility. But it is not a sufficient condition.

This study demonstrates that people pay careful attention to current information gleaned from the media and use it to update and adjust a host of heretofore unrecognized political evaluations. Individuals use information obtained from the media to evaluate how important issues are for elites. Specifically, the crime high story signaled to readers that news reporters and politicians think the issue is more
important for the nation. And people’s emotional reactions are logically affected by media content—people who read the crime high story had more negative emotional reactions, whereas those who read the crime low story had more positive emotional reactions.

My research shows that some of these effects of media exposure, namely the negative emotions of sadness and fear, do, in fact, mediate agenda setting. When news exposure causes people to feel sad or fearful about an issue, they will be more likely to view it as nationally important. Thus, my research adds to that of Martin (2000) and Marcus et al. (2000) by putting specific negative emotions in the middle of a causal chain between media exposure and importance judgments.

Although news reporter importance, politician importance, and positive emotions did not mediate agenda setting, they, along with negative emotions, may have powerful effects on other political attitudes and behaviors. Beliefs about the importance of an issue to elites could affect citizens’ support for legislative initiatives or their vote choices. Negative emotions motivate people to become politically active, whereas positive emotions could have a demobilizing effect (e.g., Miller & Krosnick, 2004). These findings open the door to a host of new hypotheses about the influence of the media on political attitudes and behaviors.

Moreover, the current study provides a more nuanced perspective on the causes of national importance judgments. To date, most theorizing and empirical research on the determinants of citizens’ national importance judgments has focused almost exclusively on the media. In contrast, my research shows that the media is only one of possibly many causes of national importance. Independent of media exposure, the belief that politicians think the issue is important for the nation also leads citizens to think the issue is nationally important. Emotional reactions also affect importance judgments. Negative emotional reactions signal to respondents that there is an important problem that needs to be fixed. And independent of emotional valence, emotional arousal also leads people to think an issue is important.

This research also contributes to our understanding of the relation between agenda setting and priming. Putting together the results of the current studies and the results of Miller and Krosnick (2000), the following causal hypothesis can be derived: when media exposure to an issue causes negative emotional reactions about the issue, increased importance judgments will follow. And, as a result of increased importance, the issue will be weighed more heavily when making evaluations of political leaders (i.e., media exposure → negative emotions → importance (agenda-setting) → increased weight given to the issue in evaluations (priming)). The current research does not directly test this entire causal process, nor does it examine its moderators (e.g., Miller and Krosnick (2000) found that agenda setting mediated priming only among people high in knowledge and media trust). Future research could flesh out these causal relations and boundary conditions.

This study also makes an important contribution, both methodologically and theoretically, to our understanding of the agenda-setting effect by distinguishing between content and accessibility. Methodologically, this is an important innova-
tion for future media studies. In much of the previous research on the impact of the media on most important problem judgments, the independent variable has been the amount of exposure, rather than the content of the exposure. This confounding of content and dosage has made it difficult to test the mechanisms underlying the agenda-setting effect and the limits on the power of the media to set the public agenda. The current research provides a way to effectively disentangle content and exposure.

Theoretically, distinguishing between content and accessibility contributes to our understanding of the role the media play in influencing public opinion. Iyengar and Kinder (1987) refer to citizens who evidence agenda setting as “victims” and the media as a “primordial power.” This terminology stems, in part, from the evidence of the ubiquity of agenda setting (at least among certain subsets of the population) and the theory that the mechanism underlying the effect is accessibility. It is quite rational for citizens to rely on the media to help them make decisions about the most important problems of the day, especially if the media focus on important issues. However, since past research confounds exposure and content, we see many instances of agenda setting and conclude that people are victims and the media is all-powerful.

Finally, these findings contribute to the literature that suggests media effects on public opinion are not evidence of an incompetent electorate (e.g., Druckman, 2001a, 2001b; Miller & Krosnick, 2000; Nelson & Oxley, 1999). By distinguishing between content and accessibility, my research provides convincing evidence that accessibility is not the fundamental cause of agenda setting. There are limits to the media’s ability to influence the public agenda. Citizens are responsive to variations in content, and they act accordingly. They are not unthinking victims of the architecture of their minds. People may use the media to help them narrow down the issues to consider when making judgments, but the news media is not a primordial, hypodermic power.11

ACKNOWLEDGMENTS

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11 Two caveats to these conclusions are in order. First, the present studies rely on a single-shot exposure to media content. It is possible that the cumulative effects of media exposure may increase accessibility to the point that it does become sufficient or that accessibility may be the sole mediator for some people, but not others. Second, the present studies focus on one issue, crime, and find that negative emotions mediate agenda setting. Other determinants of relevance might mediate agenda setting with regard to other issues (e.g., inference might be a more powerful mediator for “hard” issues, Carmines & Stimson 1980). Future research could explore these possibilities.
REFERENCES


APPENDIX: Word Completion Task, Study 2 and
Word Search Task, Study 3

Fragments that could be completed as a crime-related word:
- UN (gun; fun; run)
- _H_FT (theft; shift; shaft)
- RA_E (rape; race; rate)
- PRI_ _ (prison; prices)
- P_LI_E (police; polite)
- M_R_ER (murder; merger)
- _AL_ (jail; bail; pail)
- CR_ _ E (crime; crate)
- R_BB_R_ (robbery; robbers; rubbers)
- VI_ _ _ _ (violent; violence; virtual)

Fragments that could not be completed as a crime-related word:
- F _ _ DDER (folder; fodder)
- _ IN_ (wine; fine; dine)
- W_T_ _ (water; watch)
- _OUS_ (house; mouse)
- _U_NY (funny; bunny)
- _IT (fit; sit; bit)
- G_ _ SS (grass; glass)
- _ _ L_OW (yellow; follow; hollow)
- O _ _ ER (other; otter)
- D_G (dog; dig)

Word Search: Famous Criminals and Crimes

BOMBERIEMGAQSHOMICIDE        Bonnie and Clyde        Steal
OWUMAHTLTCIYENJSDRETX         Charles Manson        Mugging
NOGSTJESSEJAMESDCJIFT         Jesse James        Arrest
NFGADIDYCADEIBKIDNAPEI         Ted Bundy        Homicide
ILJRABNEFMTOMROCSLM           OJ Simpson        Kidnap
EPNOJLUKNIFEVTPEGKLC0         Drug Dealer        Bomber
AMGGOENLKNROSMSGPTURT         Son of Sam        Assault
NCIRHSDWRQEXINODMHQOH         Timothy McVeigh        Rape
DLNGNKYSOOYJUINEOELAV         Jack the Ripper        Knife
CCENGNULJIALDLSIACRBWM         John Gacy        Car Theft
LFCHARLESMANSONLAIHNC         Bank Robber
YMAMCWOCISIHFNNEIPSRT         ymamcwocisihofnnemon
DHROYCIRATMOARRPPKAE          dhroyciramotharmrap
ETTCYEADUPEMLFILOEAIH          ettcyeadupemlfiologue
RSHEFDNILARRESTLNREOG         rshefdnilarrestlnreog
STEALNCGTAVORAPETEDIH         stealncgtavorapedehi
MPFUISUHGREDAMBANJVGGM         mpfuisuhgregdanjv
EPTABANKROBBERZNAIBPS