Prime-Time Agenda-Setting and Priming: Television Crime Dramas as Political Cues[1]

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ABSTRACT

The effects of agenda setting and priming are well established in regards to the news media. Scholars have paid considerably less attention to these effects in regards to the entertainment media. This is in spite of the fact that entertainment media make up a much larger portion of television programming.

We suggest that measurable agenda-setting and priming effects do exist in entertainment media. Specifically, we suggest that viewing a crime drama increases 1) the probability that one will see crime as the most important problem facing the nation; and 2) the likelihood that one will use job performance in regards to addressing crime in evaluating the president. Through a controlled laboratory experiment, we demonstrate these effects in much the way Iyengar and Kinder (1987; Iyengar, Peters, and Kinder 1982) first did for news media. In the final section, we look to the future and discuss possible improvements in the statistical and experimental modeling of these media effects.

Two of the more robust findings in the study of news media influence on political attitudes have been the closely associated effects of agenda-setting and priming (Iyengar and Kinder 1987; Iyengar, Peters, and Kinder 1982; Jacobs and Shapiro 1994; Krosnick and Kinder 1990; McCombs and Shaw 1972). Agenda-setting is observed when consumers of news programming see as the nation's most important problems those issues given more prominent attention by the news media. Priming occurs when this increased attention increases the prominence of these issues when people form judgments about public officials.

What has been lacking in this body of research is a comparable examination of these effects in regards to media designed more to entertain than to inform. In spite of the fact that entertainment programs make up a much larger portion of television programming and enjoy a larger viewing audience than do television news programs, they are often treated as inconsequential in regards to the formation of political attitudes. The implicit assumption in much of this research is that viewers discount information learned as part of entertainment programming. But as the line between information and entertainment is blurred (Baum 2002), how people adapt to the changing information environment is important to our understanding of public opinion.

Focus group research suggests that people are just as apt to cite a fictional source as a non-fiction source when coming up with arguments to support their policy stances (Delli Carpini and Williams 1996, 1994). In addition, there is mounting evidence suggesting that those unlikely to turn to traditional news sources are relying on non-traditional sources for their political information (Baum 2002; Chaffee and Kanihan 1997), and that these sources exert some influence on attitudes about the government (Pfau, Moy, and Szabo 2001).

In light of this, we turn to one non-traditional source of political information that has been largely ignored in the literature: television crime dramas. This genre of entertainment television already makes up a very significant amount of entertainment television programming and appears to be growing. [3] Since most viewers of these dramas are not likely to be involved in either the perpetration or enforcement of crime, or victims of crime for that matter, they are reliant upon the media for relevant information. It is our argument that relevancy is not mediated by television format. Based on this assumption, we present data from an experiment in which participants were asked to watch either a television crime drama or a television drama containing no reference to or representation of crime as part of the plot. We show that similar to news programming, crime dramas exhibit agenda-setting and priming influences. Based on these results, we discuss more appropriate methods of examining these media effects. First, however, we turn our attention to a review of research in which these effects have been demonstrated in more traditional settings.

Agenda-Setting and Priming in News Media

For nearly forty years, the prevailing theory in the study of media and politics suggested that the media had little, if any, impact on the opinions of Americans. This "limited effects" model found its origins in some of the earliest work in political science (Lazarsfeld, Berelson, and Gaudet 1948; Berelson, Lazarsfeld, and McPhee 1954). Since the intent of these early studies was to illustrate the impact of the media on political

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[3] *Variety* recently released a list of television pilots scheduled to be picked up by the major networks in the 2003-04 season. Of the twelve dramas slated for production by ABC, eight deal with crime and/or law enforcement. Seven of eight NBC dramas and nine of ten CBS dramas will be similarly themed. (*Variety* 2003) Clearly, crime and punishment of crime will remain important topics in television drama.

attitudes (Lazarsfeld, et al 1948, 1), it has been argued that the compelling evidence and the unexpected results deterred further examination of the media for decades (Chaffee and Hochheimer 1982).

The work of Iyengar and Kinder (1987; Iyengar, Peters, and Kinder 1982) represented the first significant challenge to the limited effects paradigm in political science. Using controlled experiments in which participants viewed television news programming that had been edited to highlight specific issues, these authors demonstrated two points

First, the news media, although not particularly adept at telling viewers what to think, are persuasive in guiding viewers what to think *about*. Secondly, by virtue of steering attention to certain issues, the news media are able to determine in part the standards by which people make evaluations about politics and politicians. These two effects are respectively known as "agenda-setting" and "priming."[4] Since Iyengar and Kinder conducted this research, these two effects have found much support in studies of the news media (Iyenger 1991; Jacobs and Shapiro 1994; Kinder and Sanders 1996; Krosnick and Kinder 1990; Mendelson 1996).

Until recently, the prevailing wisdom regarding priming and agenda-setting was that they are driven by an "accessibility bias" (Iyenger 1991; Iyengar and Kinder 1987; Kinder and Sanders 1996; Zaller 1992). This bias is based on the assumption that individuals are only able to retrieve a small subset of relevant information from memory when called upon to form an impression of something or someone (Iyengar 1991; Zaller 1992).

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[4] It bears noting that agenda-setting had much theoretical and empirical support prior to the work of Iyengar and Kinder (*e.g.*, Lippman 1922; McCombs and Shaw 1972). Previous authors, however, could not make the strong causal claims Iyengar and Kinder made with the experimental method.

Presumably, some considerations are more easily or more rapidly[5] retrieved from memory based on characteristics of that information. That is, they are more accessible. An important determinant of this accessibility is the recency with which that information has been encoded or retrieved from memory. The specific argument in regards to news media messages is that those messages that have been recently and/or repeatedly aired, are more likely to be "top-of-the-head" considerations for news viewers, and thus are more likely to be enlisted in the construction of political attitudes.

Miller and Krosnick (2000) challenge this prevailing wisdom, arguing that agenda-setting and priming are mediated not by accessibility, but by the inferred importance of a subject. Moreover, both effects are moderated by the amount of political knowledge a person has and the amount of trust that person puts in news media sources. To put it another way, conditional on a person knowing about political issues and having some faith in the ability of the news media to report fair and accurate information, that person will infer that just because the news media have devoted precious time and space to an issue, it must be an important issue and, therefore, should figure into their judgments about elected officials.

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[5] Although, theoretically, accessibility is concerned with the *ease* of retrieval, it is often operationalized as the *speed* with which considerations are retrieved from memory. An example of this is an experiment Nelson, Clawson, and Oxley (1997) used to differentiate framing effects from priming effects. Participants in this experiment were asked to indicate whether or not a word flashed on a computer screen was a word or a nonsense word (e.g. "dinrlsy") by typing a specific key on a typical computer keyboard. A computer measured how quickly each respondent was able to complete this task. Because many of the true words were associated with news frames participants had recently watched as part of the experiment, it was argued that reaction times to these words would be quicker for those individuals who had watched the appropriate frame than for those watching other frames *if* there was a priming effect associated with the frames. Nelson, *et. al.* found that there was no significant difference in reaction times, and concluded that framing is distinct from priming.

Since priming is most often operationalized as a function of time, it is perhaps more appropriate to model it as such. A working paper by the second author endeavors to model priming, as well as agenda-setting, as functions of time using duration analysis. (See Box-Steffensmeier and Jones (1997) for a discussion of this topic.) Conceivably, characteristics of a media message (as well as of an individual) determine how long it remains accessible in memory, and how quickly it is retrieved from memory. Data collected as part of this project will, hopefully, allow us to begin to model these processes more precisely.

Entertainment Media and Politics

If agenda-setting and priming are driven by accessibility, it is not too heroic an assumption to make that entertainment media that deal with political issues can have at least some effect similar to that witnessed with news media. Simply by making certain issues salient, entertainment media can determine what issues are deserving of consideration when viewers are called upon to make political evaluations. In fact there is some evidence that entertainment media are capable of doing this.

In February of 1987, ABC aired the seven-part mini-series "Amerika." This television event portrayed the United States ten years after being taken over by the Soviet Union. The program generated a great deal of controversy (see Lenart and McGraw 1989 for a summary), and a commensurate amount of interest in the impact it had on viewers' political attitudes regarding policy toward the Soviet Union. Although there was some evidence of agenda-setting associated with the program (Kim, Shoar-Ghaffari, and Gustainis 1990; Lenart and McGraw 1989; Perloff, *et. al.* 1992), these and other studies regarding this particular program (e.g. Lasorsa 1989) suffered from an inability to completely distinguish effects resulting directly from viewer ship of the program and effects resulting from exposure to the media event surrounding it.[6]

Apart from the studies on "Amerika," most of the research in this area has dealt with the possibility that entertainment generates "incidental learning" (Surlin 1978, 309).

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[6] Soroka (2000) suggests that one way popular entertainment fare is able to set the political agenda is by influencing subsequent news media stories. Using the example of *Schindler's List*, he presents evidence that television news programs in Canada devoted more attention to holocaust survivors and related issues in the months after the film. Another issue explored in studies of entertainment media and politics is the possibility of a "third-person effect" (Davison 1983) in regards to entertainment media. The argument here is that most people consider themselves uninfluenced by media, but assume that others are not insulated from media effects. As such, attitude change could result in response to the "impersonal influence" (Mutz 1998) of groups assumed to have been influenced by entertainment media. Our data do not deal with the possibility of these indirect effects of entertainment media.

That is, incidental to the intended effect of entertaining viewers, entertainment programs educate viewers by teaching them something about the characters and contexts pivotal to the story line. If that story line borrows heavily from the real world, then the possibility for "learning" is enhanced. Baum (2002) presents evidence that so-called "soft news" television programming (e.g. talk shows, MTV News) is able to "piggyback" (96) important political information in an entertaining setting that reduces the normal costs of seeking out this information. Adams, *et. al.* (1985) argue that political knowledge is often formed with the help of popular media. So long as entertainment media are congruent with pre-existing beliefs, people integrate "information" from entertainment sources into their beliefs about politics. In a study of the made-for-television movie "The Day After," Feldman and Sigelman (1985) present evidence that such learning effects occur, but only in regards to issues about which viewers do not have well-formed pre-existing attitudes.[7]

If Miller and Krosnick (2000) are correct, however, the issue is less about what information media sources convey and more about trust in the media source. This is an important distinction in regards to entertainment media because it is not entirely clear what role trust should play if information from such programming is in fact contributing to political attitudes. It is easy to see how trust would be integral in regards to the news media given their particular role in society. A reliable source of accurate information regarding the realm of politics being necessary for the proper functioning of a popular government, it stands to reason that the chief provider of that information be held to certain standards. But does trust in the media source moderate priming and agenda-setting in regards to ALL media, or are the news media solely beholden to this construct?

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[7] Interestingly, judgments of the realism of the program had no bearing on these effects.

The social function of entertainment media differs greatly from that of news media. Still, viewers could draw inferences about the importance of political topics based on the attention afforded them by entertainment media. Presumably only compelling and important issues generate enough attention to get entertainment television producers to sit up and take notice. If Jay Leno tells a political joke, it is likely to be on a topic that has often been in the news. Likewise, if NBC airs a made-for-TV movie on a political topic, it is likely that the topic has garnered a fair deal of attention in the news media[8] and is thus deserving of consideration. We are skeptical about this possibility. In fact, the evidence of incidental learning suggests that perhaps entertainment media, unlike news media, are exempt from this moderating influence by virtue of their role in society.[9]

Apart from this, we expect that the agenda-setting and priming effects in regards to entertainment media to be identical to those observed in regards to the news media. Issues receiving prominence in television dramas will be more likely to be cited as important problems facing the nation by viewers of these programs than will issues not covered by these programs (agenda-setting). In addition, the performance of political decision-makers—in the case of this experiment, of the president—in regards to these issues will play a more prominent role in viewers' general approval ratings of those decision-makers (priming). As stated above, both effects are not expected to be moderated by trust in the media source. We do, however, expect political knowledge to play some influence. Miller and Krosnick (2000), as well as Feldman and Sigelman (1985), present evidence that knowledge about an issue is vital to the possible influences of any media source. But in the case of entertainment media, we expect knowledge to

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[8] This is an empirical question that has been left unexamined by scholars of media and politics.
[9] Unfortunately, these modeling issues are beyond the scope of this paper. See the discussion section for plans to deal with this issue directly.

deter incidental learning. It stands to reason that if a viewer already has a good deal of knowledge about a subject, a fictitious portrayal of the subject will garner skepticism, if not counterargument. It has been argued that both of these responses tend to counteract priming and agenda-setting effects (Iyengar and Kinder 1985). We therefore expect that general political knowledge and specific knowledge of crime and law enforcement will deter these media effects.

Crime Dramas as Political Information

As the above discussion should make clear, it is not our contention that people are turning to entertainment media for political information. Our argument has more in common with the "incidental learning" perspective (Surlin 1978; Sigelman and Sigelman 1974). Incidental to the intended role of entertainment fare, some "learning" is necessary to understand plot and context of the story line. Since television producers do not exist in a vacuum, they often borrow from realistic situations. This representation of reality is often the closest most people will come to the real-life situations depicted on a given show.

We expect this to be the case in regards to crime. Because most people have very little personal interaction with crime—either as victim or as perpetrator—or with the enforcement of crime (Bureau of Justice Statistics), the closest that they come to the world of crime is via television. It has been argued that entertainment media assist in the construction of political realities (Adams, *et. al.* 1985; Lippman 1922), and we can think of no reason why crime dramas should differ from other entertainment media sources in this regard.

George Gerbner and his colleagues (1980) have forwarded this argument, providing evidence suggesting that portrayals of violence on television have generated perceptions of a far more violent world than actually exists. Through the analysis of survey data, they conclude that people who watch a great deal of television are more likely than those who watch little to believe in this "mean world," in which crime is considerably more prevalent than it is in reality. The shortcoming of Gerbner's research has been its reliance on correlational data. Although he and his colleagues have argued that by virtue of spending so much time depicting crime, entertainment television makes crime a more prevalent part of viewers' constructs of the real world, the causal arrow they propose could be reversed. That is, viewers of television who think the world is more violent could be the least likely to leave their homes, and so have more opportunities to watch. True causality in regards to Gerbner's argument, therefore, has never been established. It is the intent of this study to do just that.

Design

Some of the explorations of agenda-setting and priming in the news media have employed data from the "real world," charting the difference news coverage of certain issues has on viewers' attitudes (*e.g.*, McCombs and Shaw 1972; Krosnick and Kinder 1990). These studies are extraordinarily useful in demonstrating the generalizability of these effects, but are less impressive at demonstrating the effects themselves. By this statement, we mean that the difficult causal issues at stake here make isolating the specifics of agenda-setting and priming impossible in a correlational study. While these studies are tremendously useful in any field, such as voting behavior, that has the benefit of time order to help settle such causal questions, we have no such luxury here. While the

news media setting the agenda and priming political evaluation is one plausible explanation, equally plausible is the reverse causal story: citizens hone in on certain issues as important due to factors independent of news coverage, and news, acting as any good business would, covers those issues in an effort to "give the public what it wants."

For this reason, much of the most crucial evidence pointing to the existence of these effects has been that gleaned from laboratory experiments. While lacking in external validity, the twin contrivances of control and randomization insure experimentalists that any difference they observe between treatment and control conditions must be due to the presence or absence of the treatment; thus, we may confidently infer the direction of causality.[10] Most famous is Iyengar and Kinder's work (1987; Iyengar, Peters, and Kinder 1982) demonstrating robust effects both with respect to agenda-setting and with respect to priming.

We find a similarly pressing need for demonstrable causal inference in our exploration of these effects in fictional television because similar time-order difficulties exist. Gerbner and his colleagues (1980), for instance, find what amounts to an agenda-setting effect with respect to crime (see above). However, the direction of causality in this relationship is impossible to infer from their data. Given the fact that their argument cannot stand without firm causal inference, it seems obvious to us that establishing the causal relationship is important.

With these considerations in mind, we set out to design a simple, binary laboratory experiment that would remove the causal ambiguity from the relationship.

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[10] Control and randomization, of course, do not always work the way they are supposed to. Sometimes, one fails to control for factors one did not consider originally; we will make our case in this section that our experiment is properly controlled. As for randomization, there are certainly times when a fair coin flipped ten times in a row comes up heads every time. While this is an acknowledged risk of experimental research, the odds against randomization failing to even the conditions on all relevant variables is slight enough that we believe experimental research remains the most powerful tool or demonstrating these effects.

Following Gerbner, we decided that when examining the agenda-setting and priming effects of popular media, the issue of crime was the most reasonable candidate for study, due to its omnipresence on television and its subtextual political nature. To begin with, crime dramas are among the most prevalent forms of entertainment on prime-time television, constituting (for instance) one-seventh of the total scheduled prime-time programming of the four major networks for the week of Wednesday, March 19 to Tuesday, March 25, a week in which the NCAA basketball tournament, the Academy Awards, and the Miss USA pageant all pre-empted regularly-scheduled programming.[11] While most commercial television tries to steer away from taking stands on political issues that might alienate a large segment of their audience, the networks like producing crime dramas because the stories are engaging, morally unambiguous, and translate easily into other cultures and languages. Unlike many other issues, then, crime is one that is readily studied in the context of prime-time programming because its political nature is subtextual rather than textual, and so producers are willing to dramatize it in large quantities.[12]

The prevalence of crime dramas on television also aids us in finding appropriate shows for our treatment condition. To minimize the possibility of participants' prior exposure to the shows in question (and particularly to the specific episodes used), we elected to use only shows premiering in the same season as we conducted our experiment, the fall of 2002. Since many new crime dramas debuted that fall, we were able to pick among many candidates. Ultimately, we chose to use episodes from NBC's

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[11] Astute readers will realize this was the first week of the second war against Iraq, during much of which, normal programming was suspended. For that reason, these numbers reflect *scheduled* programming, rather than what actually aired.

[12] This is not to suggest that crime is the *only* issue for which one might find these sorts of effects; indeed, we are currently working on an extension of this project that would link the importance of health care as an issue to viewing the medical drama *ER*.

Robbery Homicide Division and CBS' *Without a Trace*, since neither of these shows were in any sense spin-offs, and thus fully maintained their novelty.

It was also important to us to use episodes from two different shows, as we hypothesize any effects we find to be genre effects, rather than effects brought on by a specific episode or show. Nevertheless, we were careful to choose episodes for our control group, the family dramas *American Dreams* from NBC and *Everwood* from The WB, that had no hint of crime content in them whatever. We believe that this content control merely keeps the manipulation clean, rather than unduly exaggerating our effects.

After reviewing videotapes of episodes from each of the four shows, we chose one of each that best met our needs and used professional quality editing software to remove the commercials. We can think of no good reason why the advertisements should have any bearing on the effects we are interested in, and removing them accomplished two goals. First, it reduced the running time of the episodes to about 42 minutes, which allowed participants to complete the entire experiment in under an hour, the maximum amount of time required of them by the participant pool for any one study. Second, and more importantly, it prevented any "dating" of the episode by local news promotions, commercials for movie openings, and the like. We deemed it possible our participants would play the "guessing game" about when the episode had aired originally; if so, this might have distracted them from the content of the show. While distractions are a part of the natural television viewing experience, we had only one chance to observe an effect associated with our treatment and we wanted that treatment to be as pure as possible.

For our participants, we collected 155 students from the subject pool in the Ohio State political science department, which consists of students in political science classes

who have agreed to participate in studies for extra credit in those courses.[13] This sample is, of course, not representative of the country as a whole. As with every sample of college students, they are younger and better educated than the average American, as is apparent by the demographic breakdown in Table 1. When attempting to understand psychological effects, however, external validity issues tend not to be as important as those of internal validity are. While it may have some impact on our findings (see the conclusions section for speculation to that effect), our results are robust enough that it seems unlikely they would all be the result of the observed population.[14]

Table 1 about here

In an effort to make the situation feel as natural as possible, we invited students to sign up for sessions in groups of eight people or less at a time. We judged this to be the maximum number for which a fairly organic television experience could be maintained; above eight, a "classroom" feeling might set in, detracting from the mundane realism of the experience. At the predetermined time, the participants entered the room, set up to feel as much as possible like an ordinary living room, complete with a couch and coffee table. They were encouraged to relax and behave in the same way they would at home; most responded to these requests. Each session had earlier been randomly assigned one of the four shows above, so that participants in each session watched their show communally, much as they would do with family or roommates.

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[13] For aesthetic reasons, we will use the words "participant" and "subject" interchangeably.

[14] Even if it were a result limited to the young, our data would still be interesting. The questions posed by this study are interesting both to public opinion scholars and to educated laity regardless of the answers generated. Just as null results would still be interesting here, then, results limited to one age group would be worth mentioning. However, we have little reason to believe they *will* be limited, and so behave in this paper as if they are not.

Prior to beginning the videotape, we provided the participants with a cover story to mask the true nature of the experiment. In order to prevent them from divining the actual reasons for the study and altering their answers, they were told it was research into selective perception and selective recall. Using a memory-related cover story had the added advantage of giving participants added incentive to pay attention to the episode, further purifying the effect of our treatment. In our post-experiment debriefing, no students guessed the true nature of the study, so we are confident this cover story held.

Immediately after the videotape ended, participants filled out a self-administered, paper-and-pencil questionnaire that asked questions on a variety of topics, from importance of problems facing the nation and evaluations of the president on various issues to political knowledge and attitudes about fictional television. To maintain the integrity of our cover story, we also asked a number of recall questions about the content of the show. Finally, we collected information on the standard demographic variables. (For the exact wording of the questions used in our analysis, see the appendix.) When all the participants in the session had completed the questionnaire, we engaged them in an oral debriefing in which we satisfied ourselves that they had not guessed the true nature of the study, revealed our actual purpose, and dismissed them.

In our post-experiment questionnaire, we included both open-ended and closed-ended questions to test for agenda-setting effects. The first question they answered on the questionnaire requested their views on "the most important problems facing the country today": they were then given three opportunities for open-ended responses.

Two first-year graduate students, blind to the purpose of the study, coded the open-ended responses, in accordance with the National Election Study most important problem codes. Intercoder reliability was extremely high—Pearson's $r = .81, .90,$ and $.90$

for the three response opportunities. The few disagreements which affected the results of this study were resolved by the researchers without reference to the experimental condition of the subjects in question.

 For the purposes of this study, the codes were then combined into crime-related and crime-unrelated groupings. The crime-related grouping consisted of NES coding numbers 320 (narcotics), 340 (crime), and 360 (law and order issues). Any problems judged by the coders to fall into these three categories are considered crime-related issues for the purposes of our analysis. All other issues are considered crime-unrelated.

Later in the survey, participants also answered closed-ended questions asking them how important, in their estimation, four separate issues were: the economy, foreign relations, crime, and education. While the potential for ceiling effects exists in these variables, the wide array of potential concerns one could express in an open-ended format gave us enough pause that we thought it prudent to include both formats so that each could compensate for the weakness of the other. In point of fact, we find a significant agenda-setting effect associated with both the open-ended and close-ended questions.

We measure priming via the relationship between evaluations of President Bush's record on crime and overall evaluations of his job performance. While comparing the difference in this relationship between the treatment and control groups might be sufficient, we have also included evaluations of the president's performance on the other issues about which we asked closed-ended importance questions. We included these questions both as further points of comparison and to mask the true purpose of the study.[15]

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[15] We realize that this measure of priming does not fully capture the theoretical richness of the term. However, the current measure has been an accepted method for discerning priming effects since Iyengar, Peters and Kinder's original paper on the topic (1982).

The chief independent variable of interest is the treatment itself. While we wanted to make our results as generalizable as possible by using more than one show from each of our two genres, this decision brings with it the risk of using one show of the four that drives all the effects one sees. While our design is in theory binary, then, we can only claim that status in actuality if there are no within-genre differences. Happily, that appears to be the case. In fact, there do not appear to be any statistically significant effects between shows of the same genre. We feel confident, therefore, labeling the effects below as genre effects, rather than effects tied to specific shows or episodes.

The results of this experiment indicate that the concepts of agenda-setting and priming may, indeed, have been heretofore too narrowly applied. The impact of the crime programming on participants' attitudes appears to have been both robust and substantively significant. We will now turn our attention to a description of the data they provided.

Results

As mentioned above, both the open-ended and the closed-ended questions provide evidence of an agenda-setting effect associated with crime drama. Both methods present data-oriented challenges, so finding significant effects via both measures indicates a robust impact worthy of further consideration.

Since the open-ended questions, by definition, allow respondents to answer the question any way they wish, there is no guarantee that enough of them within either condition will mention crime to render a significant effect. It makes sense, then, to combine the three responses into a larger pool of important problems and examine the difference in the number of times participants receiving the treatment condition

17

mentioned crime-related issues to the number of times those in the control group did so. This is the approach we took in calculating the results reported in Table 2. Clearly, the programming exposure had some impact. While just under thirteen percent of participants who viewed a family drama mentioned crime or related issues at least once among their three choices for the most important problems facing America, almost 38 percent of those watching a crime drama mentioned these issues, a more than threefold increase.

Tables 2, 3 about here

While the approach taken above is the more cautious, most of the participants in the treatment condition who mention crime-related issues do so at their first opportunity, making this relationship by far the strongest of the three when the variable is disaggregated into its components. As table 3 shows, while the relationship between experimental condition and the most important problem listed is strong and highly significant, the relationship between condition and the second-most important problem is less so, and the third fails entirely, although this could be partially a product of the shrinking cell size. Since these problems were not explicitly rank-ordered, these data carry two possible interpretations. The first possibility is that crime was not only more likely to be mentioned by those in the experimental condition, but that it was given more urgency in the minds of those already inclined to mention it. Alternately, it could mean simply that crime-related issues were most accessible and so were the first items pulled from the "top of the head." While the mechanism may be in doubt, however, the agenda-setting effects themselves are not. Clearly, those exposed to crime drama were more

likely to mention crime of their own volition than those not exposed to such programming.

The open-ended responses are not the only evidence of agenda-setting effects, however. We can corroborate the results through the use of a series of closed-ended questions. In part to mask the true nature of our study, we asked subjects to rate the importance of the issues of the economy, foreign relations, and education on a four-point scale ranging from "very important" to "not at all important" in addition to rating the importance of crime on this scale. All of these issues, with the exception of crime, were hot-button topics in the time and place the experiment took place, and so all of them received high importance marks from our sample. Indeed, without controlling for experimental condition, crime is judged to be the least important of the four by our sample, with only 56 percent of them claiming it "very important," thirteen points below the third-most important, foreign relations. It is significant, then, that crime is the only issue of the four even to approach traditional levels of significance in a chi-square test, and is the only significant result in an independent samples t-test (Table 4). In fact, this is the very definition of agenda-setting—an issue considered relatively unimportant by those in the larger social context is made important through exposure to coverage of that issue. Agenda-setting theory has long held that the content of this coverage does not matter—simply the fact that exposure has occurred is enough to activate the issue's importance. Our data suggest that coverage need not even be factual or intended to inform to create these effects.

Table 4 about here

19

Priming effects are likewise independent of content. And like agenda-setting, we find that priming is possible even when the content is fictional and the intent is to entertain. To examine the question of priming effects here, we use the technique first described by Iyengar, Peters, and Kinder (1982) and examine the relationship between evaluations of the president on the four issues mentioned above to his overall job approval. By examining the difference between the partial correlations (controlling for party identification) between the treatment and control conditions, we can observe whether or not there is a measurable priming effect.[16]

The results here are more ambiguous than those we discussed with respect to agenda-setting are. Table 5 shows that while there is a substantively significant increase in the strength of the relationship between evaluations of crime performance and evaluations of overall job performance, it is not the only increase of this kind. The relationship between economic performance and job performance also increases significantly, and the relationship between education performance and job performance almost doubles in size—the largest percentage increase of the four. It would appear from this evidence alone to be a general state of political arousal that is primed by these crime dramas, and not crime as a specific issue. However, a more classic understanding of priming emerges when we control for more factors.

Table 5 about here

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[16] This approach is a problematic one, since it models priming as an independent consequence of the treatment, rather than an end-stage which follows from agenda-setting. We are currently taking steps to reflect statistically this intuitive model (see discussion for details). However, this is an accepted method of finding priming effects, so we use it in the meantime, albeit with some caution.

Miller and Krosnick (2000) suggest that the effects of priming are moderated by political knowledge and trust in the media source. We included a battery of eleven items testing general and specific knowledge about politics and the political system. Since our experiment is designed around crime, we focused a disproportionate share of our attention on the courts. (See the appendix for the specific questions used.) Trust in the media source requires a bit more translation in a project based around a different kind of media, however. Since the primary purpose of prime-time television is to entertain, not inform, trust should not be interpreted as it is with respect to news media; rather, we conceptualize trust as trust to deal with social issues in a responsible manner, and included a question on our questionnaire to that effect.

It does appear as though these items moderate the relationship somewhat. When we control for the knowledge index and trust in addition to party identification, the crime coefficient only increases by 45.1 percent when moving from the control to the treatment condition, rather than the 61.9 percent achieved when controlling for party identification alone. This finding is particularly interesting because neither the size nor the magnitude of the change is appreciably different for any of the other three policy areas.

Disaggregating these effects, we find that, contrary to our hypotheses, trust in television to deal with social issues responsibly appears to drive the bulk of the effect (Tables 6, 7). When we control for party identification and knowledge, the percentage increase in the correlation between evaluations of crime performance and evaluations of overall performance is not appreciably different from the original model, which controlled for party identification alone. However, controlling for party identification and trust creates a percentage increase almost identical to the model that controls for all three. While this analysis contradicts our secondary hypotheses, then, we have reason to believe

this is a problem with the statistical methods used here, rather than the hypotheses themselves. (See the discussion section for a more complete treatment of the modeling problems associated with priming work.)

Tables 6,7 about here

On the basis of this evidence, then, we cautiously suggest crime dramas are capable of having a political impact by shaping the criteria by which we evaluate our leaders. We admit freely that the evidence presented here does not make the strongest case for this argument. As we discuss below, however, using more appropriate modeling strategies to capture the effects of agenda-setting and priming, a stronger case could be made regarding the effects of entertainment television.

Discussion

Our data show clear evidence for agenda-setting and more ambiguous evidence for priming, though even it is worthy of guardedly optimistic conclusions. Still, no research design is perfect, and we do not believe one study, no matter how well-crafted, can demonstrate conclusively the need for such a dramatic redefinition of focus as we are proposing here. We need further, and better, evidence if we are to argue plausibly that fictional media sources successfully "tell us what to think about," in McCombs and Shaw's immortal, albeit grammatically incorrect, phrase (1972). We see the need for further development as breaking down in three distinct areas: a need for increased generalizability, a need to understand the temporal limits of the effects, and the need to reflect statistically what the model suggests theoretically.

Generalizability is always an issue when dealing with experimental data, since the expense and rate of refusal make filling a laboratory with citizens picked via a random sample all but impossible. Most experimentalists do not even try to overcome this hurdle, instead using an even less representative sample, that of the students at school around them. We, of course, are also guilty of this. While we do not believe that the lack of representativeness discounts the validity of our findings at all, we cannot be sure. It is possible, for instance, that the naïveté of youth and the complacency of middle-income life made our participants more suggestible, and so exaggerated the effects beyond their normal range (Sears 1986). While they would still, in our estimation, be worth reporting, the new context would give them a completely different meaning than the one we have ascribed them here. Therefore, we are interested in expanding this project beyond the college student sample reported here, and including a broader cross-section of society. While we do not agree, then, that college students are not "real people," we do believe that the potential impact of a non-representative sample in any experiment is a large enough problem to work to minimize the unrepresentative aspects whenever possible.

We cannot rid ourselves of the problem fully, however, while remaining in the laboratory. Issues of causality may be confidently settled there, but to demonstrate a generalizable effect, one needs survey data. Here we follow the lead of Iyengar, Peters, and Kinder (1982), who used both experimental evidence and survey evidence to demonstrate the consequences of news media, allowing each to compensate for the weaknesses of the other. In the 1996 National Election Study (NES), interviewers asked several questions about viewer ship of various television programs in an effort to track exposure to political advertisements. Unfortunately, they did not ask about any crime dramas; nevertheless, these questions are useful to us. One question they did ask

respondents was how often they watched the hospital drama *ER*. We are currently examining the responses to this question to see if it places health care-related issues on respondents' agendas and primes them to evaluate candidates on the basis of their performance on these issues. This is in many ways a more difficult test of our hypotheses, since the immediate stimulus is somewhat removed and health care is a much more complicated issue than crime.[17] Nevertheless, the earliest statistical runs look promising.

The second weakness of our design is the immediacy with which we administer our post-condition questionnaire. Since they begin answering questions as soon as the lights come on in the room, we have no sense of how long this effect might last. Whereas participants in Iyengar and Kinder's (1987) studies waited 24 hours after their final exposure to a condition to fill out the questionnaire, we were only allowed one session with our participants, and so had to give them the questionnaire on the spot. However, social psychologists who wish to study these sorts of effects generally include a distracter task between the condition exposure and the final measurement in order to put some mental distance between the two. These tasks are almost always designed to be both benign and boring; the only requirement is that it have no connection to the research question whatever. In the next iteration of this project, assuming we cannot separate the treatment from the measurement like Iyengar and Kinder, we will at least attempt to distract respondents for a few minutes before proceeding to the measurement phase.

Finally, the standard theoretical model assumed to relate issue exposure to agenda-setting and priming is not modeled by the statistics reported above. In our defense, however, we do not know of any studies to date which model the theoretical

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[17] In Carmines and Stimson's (1980) parlance, health care is a "hard" issue (or set of issues), while crime is an "easy" one (or set).

assumptions correctly. Specifically, the theory suggests that the effects of exposure on priming will be mediated through agenda-setting (Figure 1A). After all, why would one decide to evaluate one's leaders on a certain criterion if that criterion were not first given some importance in one's mind? Despite this obvious point of logic, most media research we have seen, including our own, models priming as if it were an independent consequence of exposure, unrelated to agenda-setting in any way (Figure 1B). Those that do include it in their models include it as a co-predictor, rather than as the mediator the theory suggests it is (Figure 1C).

Statistically speaking, then, the effects of agenda-setting are endogenous to any model of priming. That is, many of the same factors (*e.g.*, exposure to a specific media message, political knowledge, and trust in a media source) that influence priming, also influence agenda-setting. Treating agenda-setting as exogenous guarantees biased estimates. On this count alone, previous analyses of these effects warrant reconsideration to account for imprecise modeling strategies. In light of the Miller and Krosnick (2000) findings, however, reevaluation is especially warranted because of the moderating effects they aver political knowledge and trust in media to have. Although these authors only address the influences of trust and knowledge on priming, it seems reasonable to suggest that they are also important factors in agenda-setting effects. If, in fact, these variables do have such effects, then treating them as exogenous to the priming model is also inappropriate, as some of their importance is determined by agenda-setting.

In order to resolve some of these modeling issues, we have begun exploring the use of a three-stage least-squares model in estimating these effects. Three-stage least-squares regression allows us to deal with the multitude of endogeneity issues, and generates unbiased results. Our preliminary analysis suggests that knowledge does

mitigate agenda-setting effects, but enhances priming effects. As to trust in the media source, this does not seem to have an impact on either of the two media effects. We are unprepared to discuss fully the implications of this preliminary analysis, and offer it simply as a glimpse of what the future of this project holds.

Whenever one engages in scientific research, one is faced with the necessity to draw the most appropriate conclusions one can from the data available. In this instance, that data indicate that in limiting agenda-setting and priming effects to news media, the field has applied them too narrowly. Fictional sources, such as crime dramas, appear also to impact the citizenry's judgments about what issues are important and on what criteria to evaluate political leaders. Clearly, however, there are a number of steps we could take to make that indication stronger. As our time horizon opens up and our access to resources increases, we intend to implement as many of these changes as we can in an effort to understand better this heretofore largely unexplored relationship.

APPENDIX: The Questionnaire

After viewing one of the four programs, participants were invited to complete a
questionnaire containing the following questions.

Greeting:

"Thank you for participating in this study. Now we would like to ask you a few questions
about yourself, just for statistical purposes. Your answers are entirely confidential and
cannot be traced back to you. Please answer all questions in the order that they appear."

Dependent Variables**.**

Agenda-setting (open-ended): "What do you think are the most important problems
facing the country today? (Please list up to three problems.)" Coding: 1 = mention of
crime or crime related issues (NES open-ended codes 320 (narcotics), 340 (crime), and
360 (law and order issues)), 0 = no mention of crime or crime related issues.

Agenda-setting (closed-ended): "How important an issue do you consider the economy to
be?" "How important an issue do you consider our relations with foreign nations to be?"
"How important an issue do you consider crime to be?" "How important an issue do you
consider education to be?" All four questions are coded as follows: 1 = "Very important,"
2 = "Somewhat important," 3 = "Not very important," and 4 = "Not at all important."

Priming: "In general, do you approve or disapprove of the way George W. Bush is
handling his job as president?" Coded: 1 = "Strongly approve," 2 = "Approve," 3 =
"Neither approve nor disapprove," 4 = "Disapprove," and 5 = "Strongly disapprove."

Issue-specific Approval.

"Do you approve or disapprove of the way George W. Bush is handling the economy?"
"Do you approve or disapprove of the way George W. Bush is handling our relations with
foreign countries?"
"Do you approve or disapprove of the way George W. Bush is handling crime?"
"Do you approve or disapprove of the way George W. Bush is handling education?"
All four questions are coded as follows: 1 = "Strongly approve," 2 = "Approve," 3 =
"Neither approve nor disapprove," 4 = "Disapprove," and 5 = "Strongly disapprove."

Political Knowledge.

Open-ended: "What job or political office is now held by Richard "Dick" Cheney?"
"What is the name of the U. S. Attorney General?" "How much of a majority is required
for the U.S. Senate and House to override a presidential veto?" "What are the first ten
amendments to the Constitution called?" "Based on the results of the November election,
which party will have more members in the U. S. House of Representatives?" "Which of
the major parties is generally considered to be more conservative than the other at the
national level?"

Closed-ended: "True or False: A district attorney's job is to defend an accused criminal who cannot afford a lawyer." "True or False: In a criminal trial, it is up to the person who is accused of a crime to prove his/her innocence." "True or False: Every decision made by a state court can be reviewed and reversed by the U.S. Supreme Court." "Who has the responsibility of determining if a law is constitutional or not? Is it the President, the Congress, or the Supreme Court?" "Who has the responsibility of nominating judges to the federal courts? Is it the President, Congress, or the Supreme Court?"

Coded: 1 = A correct response, and 0 = All other responses. The knowledge index was created by summing the eleven knowledge questions.

Trust in Media Source.

"How much confidence do you have in prime-time television to deal with social issues responsibly?" Seven point scale. Coded: 1 = "A great deal of confidence," and 7 = "No confidence at all."

Party Identification.

"Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?" Coded: 1 = "Strong Democrat," 2 = "Democrat," 3 = "Independent Leaning Democratic," 4 = "Independent," 5 = "Independent Leaning Republican," 6 = "Republican," and 7 = "Strong Republican."

Demographic Variables.

Gender: "Please indicate your gender." Coded: 1 = female and 0 = male.

Race: "Please indicate your race." Coded 1 = "Asian/Pacific Islander," 2 = "Black," 3 = "Hispanic,"
4 = "Native American," 5 = "White," and 6 = "Other (Please specify)."

Class rank: "What year of college is this for you?"

Age: "How old are you?"

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Table 1: Demographic Comparison of Sample to U.S. Population

Category	Experimental Sample	U.S. Population
Gender		
Male	52.3%	49.1%
Female	47.7%	50.9%
Race		
White	83.2%	75.1%
Black	9.0%	12.3%
All Other Categories	7.8%	12.6%
Median Age	21.0	35.3
Party Identification		
Strong Democrat	6.5%	19.1%
Democrat	17.4%	15.2%
Ind Leaning Democratic	15.5%	14.9%
Pure Independent	13.5%	11.4%
Ind Leaning Republican	15.5%	12.7%
Republican	23.2%	11.9%
Strong Republican	5.2%	13.1%
Something Else	3.1%	1.7%
Class Rank		
Freshman	9.0%	N/A
Sophomore	21.3%	N/A
Junior	31.0%	N/A
Senior	29.7%	N/A
Fifth-Year Senior	8.4%	N/A
N/A	0.6%	N/A

N = 155   Sources: U.S. Census Bureau, 2000 NES

Table 2: Number of Mentions of Crime by Condition

	Family Drama	Crime Drama
no mention of crime	87.2%	62.3%
one mention of crime	9.0%	32.5%
two mentions of crime	3.8%	5.2%

N = 155 χ^2 = 13.710, p < .01

Table 3: Increase in Mentions of Crime by Open-Ended Blank

	Pct Increase in Mentions	Chi-square Value	p	Total Mentions of Crime
First Blank	513.2	9.228	0.002	18
Second Blank	253.2	4.597	0.032	21
Third Blank	-23.5	0.136	0.712	7

N = 155

Table 4: Importance of Four Issues by Treatment

	Chi-square Value	t
Crime	4.926+	2.201*
Economy	0.611	-0.778
Foreign Relations	0.015	0.121
Education	3.494	0.183

N = 155   +p < .10, *p < .05

Table 5: Partial Correlations of Issue Performance to Job Performance, Controlling for Party Identification

	Treatment	Control	Treatment Minus Control	Percent Change
Crime	0.468	0.289	0.179	61.9
Economy	0.605	0.431	0.174	40.4
Foreign Rltns	0.603	0.663	-0.060	-9.0
Education	0.311	0.167	0.144	86.2

N = 155

Table 6: Partial Correlations of Issue Performance to Job Performance, Controlling for Party Identification and Knowledge

	Treatment	Control	Treatment Minus Control	Percent Increase
Crime	0.463	0.287	0.176	61.3
Economy	0.602	0.426	0.176	41.3
Foreign Rltns	0.597	0.658	-0.061	-9.3
Education	0.299	0.157	0.142	90.4

N = 155

Table 7: Partial Correlations of Issue Performance to Job Performance, Controlling for Party Identification and Media Trust

	Treatment	Control	Treatment Minus Control	Percent Increase
Crime	0.459	0.315	0.144	45.7
Economy	0.600	0.428	0.172	40.2
Foreign Rltns	0.595	0.660	-0.065	-9.8
Education	0.292	0.161	0.131	81.4

N = 155

Figure 1: Models of the Relationships Between Exposure, Agenda-Setting, and Priming

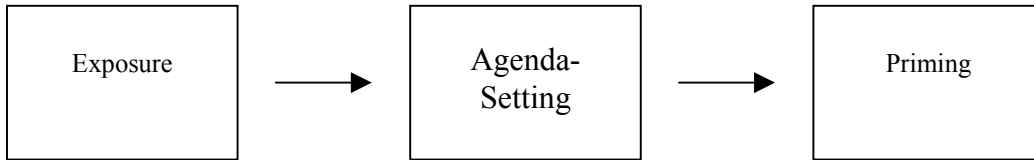*Figure 1A: Theoretical Model Implicit in Most Media Research*
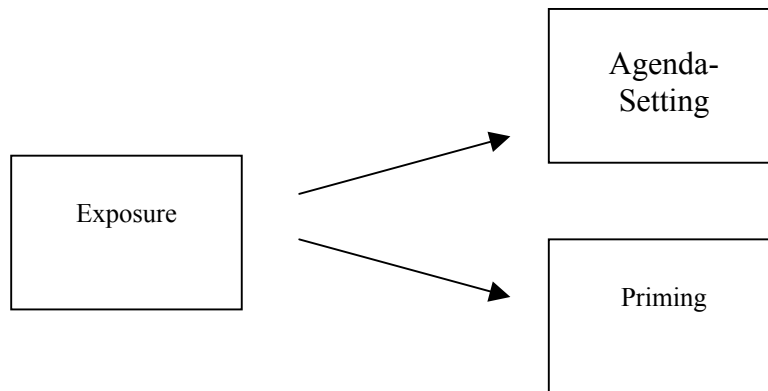

Figure 1B: Statistical Model Tested Most Often

Figure 1C: Alternate Statistical Model Tested