

# Terror, Torture, and 24: Does Jack Bauer Raise Your Personal “Threat Level”?

By

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## **Abstract**

Past research (Hill and Holbrook 2004; Holbrook and Hill 2005) has indicated that certain prime-time television lends itself to both agenda-setting and priming effects. The long-running show *24*, with its weekly focus on terrorism, provides fertile ground for further testing of this hypothesis. Additionally, *24* has been subject to a fair amount of criticism in the popular press over its positive portrayal of torture as a tool of interrogation. These portrayals have led some human rights activists and others to theorize the existence of a “Jack Bauer Effect” (named for the series’ protagonist), in which extended exposure to the show causes one to overestimate torture’s real-world efficacy and underestimate its harmful real-world effects. Through a laboratory experiment with undergraduate students, I examine both the agenda-setting and priming question and that of the Jack Bauer Effect. Evidence is mixed on both counts: on the former question, I find evidence of agenda-setting, but not of priming. On the latter, I find some minor impact of the Jack Bauer Effect, but even that is of dubious political consequence. I discuss the meaning and limitations of this data, and suggest potential avenues for further research.

According to Joel Surnow, he and the other creators of the Fox television show *24* did not set out to make a series about terrorism. In an interview with National Public Radio's Robert Siegel (2002), Surnow revealed that the creators' first thought was simply to create a show that unfolded in real time: each hour of programming would represent exactly an hour in the fictional world portrayed on-screen, with a 24-episode season constituting a single day. The idea to spend that time foiling terrorist attacks on the American homeland came about only because such a pursuit seemed like the best opportunity to keep a single character awake and active for 24 hours at a time.

It is something of a coincidence, then, that the show ended up providing such interesting ground for popular media research. Debuting less than two months after 9/11, it no doubt benefited from its serendipitous timing,<sup>1</sup> but it is possible that the show is an independent as well as a dependent variable when it comes to public attitudes about terrorism. Simply watching the show, for instance, might result in an agenda-setting effect, wherein viewers increase the importance they place in terrorism as a problem facing the country, and in a priming effect, wherein they rate the general performance of their real-life leaders according to their perceptions of those leaders' performance on terrorism specifically. This impact might well have been invisible in the show's first days, with the pain of 9/11 still raw in the American consciousness. The further that day recedes into history, then, the more potential there is for other factors like *24* to influence American attitudes.

Such effects are theoretically plausible and scientifically interesting, but a separate *24*-related controversy has captured the imagination of the popular press: that of the Jack Bauer Effect. The show's progression, like that of most serialized drama, has been to push the envelope

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<sup>1</sup> It seems insensitive, even callous, to remark that anything about 9/11 could be seen as "serendipitous." Nevertheless, from the point of view of a television show about terror, a sudden increase in popular interest on the subject matter is just that.

a little further each season. That includes plot lines, action sequences, and (importantly) methods of interrogation: torture has long since become a regular incubator of the show's dramatic tension. Many current American television shows now use torture as a plot device, however, and the overall frequency of torture scenes has risen sharply since 9/11 (Gorman 2007, citing data from the Parents' Television Council). The special scrutiny *24* has received, then, has to do not only with the prevalence of torture (though according to the Parents' Television Council, it is the single largest source for prime-time torture scenes on television) but also with the show's positive image of said tactics.<sup>2</sup> Torture on *24* is not an instrument of the wicked, but a standard tool of interrogation employed by good-hearted people in the defense of the country they love. This "patriotization" of torture has led to considerable concern on the part of human rights activists and others that continued exposure to the show's positive portrayals of torture might lead audience members to overestimate terrorism's real-world efficacy, while inuring them to its serious negative consequences. This desensitization is what has been dubbed the Jack Bauer Effect (hereafter, JBE).

The possibility of the JBE's existence has received a great deal of attention in the popular press (see especially Mayer 2007). While some have been concerned about the JBE within the general populace, however, there has been considerably more concern about the effect on active-duty military personnel.<sup>3</sup> The anecdotal evidence cited by journalists on this score is disturbing,

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<sup>2</sup> The current season, for instance, opens with the show's protagonist, Jack Bauer, testifying before Congress about his previous uses of torture on the show. Bauer specifically waives his right to an attorney, admits to the torture (claiming it saved American lives), and then chastises the chair of the hearing for his false outrage. The monologue sets Bauer as the true voice of the American people, in contrast to the elected representative to whom he is speaking, who is more interested in creating a self-aggrandizing show trial than in defending the country from those who threaten it.

<sup>3</sup> Concerns about this group in particular came to a head in 2006, when a delegation from the US military met with the show's creative team to request the torture scenes be toned down: officials had received reports that poorly-trained military interrogators at Abu Ghraib and elsewhere were re-enacting scenes from the show in their own interrogations, while West Point cadets had begun referring to the show in class when defending the use of coercive interrogation tactics (Gorman 2007; Mayer 2007).

to be sure. However, through the entire controversy, it appears no one has attempted to explore systematically whether the JBE actually exists. Indeed, the extreme form of the argument—that watching *24* makes young soldiers more likely to torture detainees—seems unlikely, given how difficult it is for media of any form even to change attitudes, much less translate that attitude shift into behavior (*e.g.*, Berelson, Lazarsfeld, and McPhee 1954; Feldman and Sigelman 1985; Holbert, Kwak, and Shah 2003; Lazarsfeld, Berelson, and Gaudet 1948; Zaller 1992). If the JBE does exist, then, it would indicate something of a break from the extant scholarly literature.

In previous research (Hill and Holbrook 2004; Holbrook and Hill 2005), a colleague and I have examined the possibility of the existence of agenda-setting and priming effects in popular media with respect to the relationships between police procedurals and crime and between medical dramas and health care. Here, I extend that research to an examination of terrorism as an issue, as well as subjecting to empirical scrutiny the persuasive effects understood in the popular press as the JBE. Through the use of a laboratory experiment I demonstrate that, as with news media, popular media sources seem to be more gifted in telling us what to think about than in telling us what to think.<sup>4</sup> Before moving to the results, I will first place the study in its context within the literature, and then describe the study itself. After exploring the data, I will discuss its ramifications, and then close by discussing the study's limitations and what they indicate in terms of future research.

## **Media Effects**

Modern research on the political effects of media has its roots in the experimental method. Prior to the pathbreaking work of Iyengar and Kinder (1985, 1987; Iyengar, Kinder, Peters, & Krosnick 1984; Iyengar, Peters, & Kinder 1982), political science had to an extent

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<sup>4</sup> Here, of course, I am paraphrasing Bernard Cohen's fantastic (if grammatically unorthodox) phraseology.

written off news media as a source of political opinion formation, consigning its place to one of minimal effect (Berelson, Lazarsfeld, and McPhee 1954; Lazarsfeld, Berelson, and Gaudet 1948). Iyengar and Kinder's work represented a significant challenge to this paradigm. 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 extremely effective in guiding viewers toward what to think *about*.<sup>5</sup> Second, by virtue of steering attention to certain issues at the expense of others, 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." Since the early experiments of Iyengar and Kinder, these two effects have found much support in studies of the news media (*e.g.*, Iyengar 1991; Jacobs & Shapiro 1994; Kinder & Sanders 1996; Krosnick & Kinder 1990; McGraw & Ling 2003; Mendelson, 1996; Miller & Krosnick 2000).

Iyengar and Kinder (see Price and Tewksbury 1997 for a fuller theoretical explication) speculated these effects were the result of an alteration in the accessibility of one issue over another. Media outlets, by focusing on certain topics, tend to make knowledge about those topics more likely to be called forth from working memory, and thus more likely to be used in generating opinions about political actors and events. Because individuals are inclined to spend the least cognitive effort possible forming social judgments (Taylor 1981), they do not process all the relevant information in memory, but rather rely on a sample of convenient constructs.

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<sup>5</sup> It bears noting that prior to the work of Iyengar and Kinder, many others (*e.g.* Cohen 1973; Lippman 1922; McCombs & Shaw 1972) had done much theoretical and empirical work to flesh out this "agenda-setting" effect. Previous authors, however, could not make the strong causal claims Iyengar and Kinder made with the use of controlled experiments.

This leads to a greater probability that more accessible information will be used in the construction of those judgments.<sup>6</sup>

The great bulk of research on these phenomena—indeed, the great bulk of media research generally—has focused on news media, despite entertainment media’s solid theoretical claim on its own impact on political attitudes. The operative assumption of the discipline has seemed to be that people could separate reality and fantasy, so any political impact arising from fictional media sources would not be worth the time to explore. However, one does not need to believe in the literal truth of what is happening on-screen to be affected by it—only in its representational truth. The appropriate question, then, is whether or not it in some way reflects political reality. Moreover, assumptions about the lack of political impact ignore the related facts of exposure, psychological involvement, and viewing motive. First, the average television viewer spends considerably more time watching entertainment shows than watching news programming. Also, television writers, unmoored from the journalistic responsibility to report all the major stories each day regardless of issue, are free to spend an entire episode, an entire season’s plot line, or even (as in the case of *24*), an entire series focusing on a single issue domain, which could increase the likelihood of an attitudinal shift in the viewing audience.<sup>7</sup>

This repeated exposure can result in audience members feeling psychologically attached to a show’s characters and identifying with their struggles. If this identification increases a viewer’s sense of the show’s realism, s/he might be willing to accept the argument of the show

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<sup>6</sup> While this is the traditional explanation of agenda-setting and priming effects, Miller and Krosnick (2000) argue that these effects are actually the result of an oblique form of persuasion: that the inclusion of a disproportionate amount of material on a single topic in the context of a news program of only 22 minutes (once one accounts for commercials) convinces viewers that the issue must be of significant importance. The specific mechanism for these effects does not need to be specified here, though, as it is beyond the scope of this study.

<sup>7</sup> Delli Carpini and Williams (1996) perform a qualitative content analysis of three broadcasts on the environment—an episode of the NBC newsmagazine show *48 Hours*, a docudrama about pollution, and an ABC Earth Day special—and conclude the docudrama dealt with the issues surrounding pollution as well as, if not better than, the newsmagazine.

less critically. This possibility is only increased by the fact that most viewers watch fictional and nonfictional television for different reasons (Holbert, Kwak, and Shah 2003). While people watch news programming to be informed, they watch fictional media for the entertainment value. Thus, they approach these shows without the same mental defenses they bring to news programming. Together, these possibilities suggest that entertainment media has been an overlooked source of political attitude formation.

Indeed, a limited number of studies find some effect of fictional television on viewer attitudes. Delli Carpini and Williams (1994) provide focus group evidence that when people discuss politics, they are just as likely to cite fictional as nonfictional examples, indicating that people do not distinguish between the two with respect to the usefulness of the information.<sup>8</sup> This is an indirect indicator, however, and focus group data are only suggestive, at best. Other studies provide more direct evidence, but come with their own set of methodological problems. These studies can be broadly divided into two categories: those which focus on a single show in search of specific effects, and those which focus on the viewing habits of a larger universe of shows in search of a more generalizable impact.

The most extensive work of the latter sort has been that performed by George Gerbner and his colleagues (Gerber & Gross 1976; Gerbner *et al.* 1980) in a theoretical perspective known as cultivation analysis. Cultivation analysis examines the entire television universe in search of common themes which one might take away, unintentionally and possibly even subconsciously. By examining the differences between heavy and light viewers of television, Gerbner and his associates have worked hard to determine whether these messages are received. Chief among these is the “mean world” thesis: people who watch a great deal of television are

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<sup>8</sup> This is not to say that people cannot tell the difference, merely that they treat them similarly when providing evidence for their arguments.



more likely than their light-viewing counterparts to see the world as a dangerous place filled with crime, and necessitating aggressive measures to control.<sup>9</sup>

Holbert, Kwak, and Shah (2003) attempt to blend cultivation analysis with a uses and gratifications approach (in which people employ media to satisfy certain needs or desires) to examine the impact of television viewing on the environment. The inclusion of the uses and gratifications theory is a positive step in entertainment media research, because it deals at least in a preliminary way with the issues of selective exposure (Festinger 1957) which bedevil research on the impact of popular media. However, it also produces null results with respect to entertainment media: none of the three genres of entertainment programming they examine exhibit a statistically significant correlation with an alteration in environmental behaviors. As we consider the possible impact of the JBE, such a result is instructive.

Researchers have had more luck finding an impact with respect to crime (Holbert, Shah, and Kwak 2004) and trust in government (Pfau, Moy, and Szabo 2001). While Holbert and his colleagues discover little in the way of direct effects, they contend the impact of crime programming is mediated through other attitudes, such as support for police. In this way, they build the argument that, for instance, viewing police reality shows increases one's support for the police, which in turn makes one more likely to support capital punishment. Viewing habits having a measurable impact on an issue as visceral as capital punishment seems theoretically unlikely, however, and the statistical modeling of this two-stage relationship is somewhat primitive.

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<sup>9</sup> Other studies have used a similar approach to examine the cultivation of other attitudes, with mixed results. Shanahan, Morgan, and Stenbjerre (1997) take an explicitly cultivation analytic approach to the examination of environmental attitudes, but find only limited effects. Volgy and Schwarz (1980) examine attitudes towards medical personnel, sex roles, and racial politics, and find evidence for impact on all three. However, their analysis is extremely superficial, and does none of the three hypotheses justice.

Meanwhile, Pfau's team break prime-time programming down into six genres (crime procedurals, science fiction programming, newsmagazines, situation comedies, general dramas and reality television); they contend that each genre should exert a different impact on perceptions of the federal government. They find little support for a link between crime procedurals and government support, but they do find a decrease in that support among heavy viewers of science fiction and newsmagazine programming. (The other genres showed mixed results.) There is some concern here, though, that the results with respect to science fiction in particular are more a question wording effect than a true media effect.<sup>10</sup> Here again, then, asserting a causal relationship is somewhat problematic.

Those problems persist in the more specifically focused studies. Two Cold War-era miniseries, *The Day After* and *Amerika* were studied upon their release for their impact on political attitudes relating to the nature of the Soviet threat (Feldman and Sigelman 1985; Lenart and McGraw 1989). More recently, Lance Holbert led a large team (2003) to examine the political impact of the NBC series *The West Wing*. Of the three, Lenart and McGraw make the boldest claims, finding that exposure to the Cold War miniseries *Amerika* moved viewers in a more conservative direction on issues of foreign policy. The other two studies do not report such findings (though the Holbert article does not look for those sort of effects); notably, however, they do find what appear to be priming effects, with indications that the source material in both cases led to alterations in the perceptions of presidential performance. Feldman and Sigelman seem to find evidence of agenda-setting as well, though they do not refer to it by that name.

All of these studies, however, share a common flaw: they are all predicated on survey data, and hence the causal story they tell is uncertain. Indeed, it is not difficult to spin alternative

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<sup>10</sup> The survey asked, "Approximately how many hours in a 7-day week do you watch science fiction shows such as *The X-Files* or *Millennium*?" Both shows were predicated on the notion of government conspiracy, so the choice of those two particular examples may have biased the results.

explanations for any of the findings mentioned above. Those who are more conservative were more likely to watch a Cold War miniseries dramatizing the danger of the Soviet Union; those who see a “mean world” are more likely to stay home and watch television; those who distrust the government enjoy watching their views dramatized in a conspiracy-rich science fiction format. It is for this reason that experimental methodology is so important to the field of media research generally and popular media research in particular.

In two previous studies my colleague and I have examined the question of the political impact of popular media in the domains of crime (Holbrook and Hill 2005) and health care (Hill and Holbrook 2004). In each case, we have followed the example of Iyengar and Kinder’s work on news media by combining a laboratory experiment (to gain purchase on the issues of causality) with an analysis of survey research (to gain generalizability).<sup>11</sup> At the risk of self-aggrandizement, I would aver that the experimental element of these studies is essential for the confidence it gives us in the causal relationship, a confidence lacking in much other research in this area.

In our examination of crime, both the experiment and the survey supported the notion that crime procedurals increased one’s likelihood to think of crime as an important issue, and to judge political leaders (in our case, the president) on that basis. The examination of health care was mixed: the survey results generally supported the hypothesis, while (importantly) the experimental results did not. Thus, there is both reason to believe that agenda-setting and priming effects can be obtained from fictional television sources and reason to doubt that such effects are ubiquitous.<sup>12</sup>

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<sup>11</sup> In the current paper I focus solely on the laboratory experiment, though I would like to add a survey component at a later time.

<sup>12</sup> One might wonder why I have spent no time examining the scholarly literature on the Jack Bauer Effect. The answer is simple: it does not seem to exist. After extensive database searching, I was able to turn up only two

Terrorism presents a new and interesting domain in which to further explore the nature of these relationships. It is similar to crime in its appeal to fear, but is considerably more topical in our post-9/11 world. That alone makes this a more difficult test: one should expect a ceiling effect on its importance which might limit the apparent results.

The show *24* provides near-ideal source material for such an examination. In a world where entertainment is the first priority,<sup>13</sup> and much explicitly political content comes in the form of the “very special episode” on one social issue or another, *24* is, week in and week out, always about the threat of terrorism, which means its potential for impact is considerably larger. And second, as I mentioned above, the show has been subject to a great deal of speculation in the popular press as to its impacts beyond agenda-setting and priming. Thus, a sort of intuited conventional wisdom has grown up about the show which warrants systematic exploration.

In the following analysis, I will explore three hypotheses. First, watching *24* will make terrorism seem more relevant as an issue facing the country (agenda-setting). Second, that relevance will result in approval or disapproval of President Bush overall being tied more closely to approval or disapproval of him with respect to terrorism (priming). As Bush’s presidency was closely associated with the war on terror anyway, any effects here will be of particular note. Finally, there is the popular press hypothesis that the JBE will render people more favorable toward torture as a counterterrorist tool. As mentioned above, scholarly evidence is mixed on how far attitudes like these may be altered by fictional sources; the appropriate way to proceed, then, is to subject the hypothesis to empirical scrutiny.

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articles: an editorial in *The Lancet* medical journal (Venters 2008), and an essay on torture in popular culture which mentioned *24* only in passing (Hron 2008).

<sup>13</sup> Technically, of course, making money is Hollywood’s first priority. However, like any other business, in order to turn a profit they must deliver a product which people wish to buy; in this case, that means providing programming that a critical mass of consumers find entertaining.

## Methods

### *Experimental Design*

The experiment was a two-condition, post-treatment design, in which students watched one of two television shows and then filled out a self-administered questionnaire.<sup>14</sup> In Spring 2008, 101 undergraduate students took part in the experiment in exchange for extra credit in a social science class.<sup>15</sup> (For a full accounting of the experimental procedure, see Appendix A.) I made no effort to create a demographically representative sample: in addition to the normal “college sophomore” issues, Doane College is predominantly white and draws students primarily from the state of Nebraska. Thus, a sample broadly representative of America was not a realistic goal. However, students were generally representative of those found in the College.<sup>16</sup>

Students signed up for times when they could fit the hour-long experimental sessions into their schedules; these sessions had been randomly assigned to either one of two episodes of *24* or one of two episodes of another action series, *NCIS*.<sup>17</sup> *NCIS* provides a useful control condition to *24* for its similarities to the treatment condition.<sup>18</sup> Like *24*, it is a fast-paced action series with a military flavoring. The protagonists of both series are men willing to “do what’s necessary” to catch the bad guys. Indeed, *NCIS* even deals regularly with terrorism as a plot device. This indicates a close relationship between the two series, but also a danger; the two episodes of *NCIS* chosen for the experiment had to be screened carefully to avoid any reference to terrorism or

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<sup>14</sup> The use of a post-treatment only design was necessary to avoid priming participants via the questionnaire itself.

<sup>15</sup> Students were informed they would receive credit merely for showing up, regardless of what happened later. Three students took advantage of this promise and left before the distribution of the questionnaire. Thus, 104 students showed up for the study, but only 101 are counted here as participants.

<sup>16</sup> I did not ask which participants were members of the Armed Forces, a variable which bears on the validity of the test of the JBE, as I mention in the Discussion section below. Doane College has very few students who are military personnel, so it is extremely unlikely that controlling for military experience would have produced enough cases to draw any statistically valid conclusions.

<sup>17</sup> Two episodes of each show were used to reduce the possibility that any effects were the unique product of a single episode.

<sup>18</sup> It is important that the control group have some kind of viewing experience; else, one cannot distinguish between the effects of *24* specifically and the effects of watching television more generally.

torture. Meanwhile, terrorism pervades every episode of *24*, so treatment episodes were chosen for their positive depiction of torture as a counterterrorism tool.

Since agenda-setting and priming involve the impact of an issue's prevalence, it was necessary to develop a cover story about the nature of the research. Accordingly, students were informed they were participating in a study about the impact of political attitudes on memory, a standard deception in media studies. I should note that several students in the treatment condition guessed something of the true nature of the experiment—at least that it had to do with terrorism. Any difficulties with the cover story from those in the treatment condition should only weaken the agenda-setting and priming effects, however, so this should not present problems for that portion of the analysis. No students mentioned torture as a subject for study, indicating that the cover story held with respect to the JBE.

### *Measurement*

The chief independent variable here is of course the experimental manipulation itself. I have operationalized all the dependent variables as questions on the post-treatment questionnaire.<sup>19</sup> For the agenda-setting hypothesis, the questionnaire asks participants to state what they believe are the most important issues facing the country. This was an open-ended question, with space for up to three responses. These responses were recorded verbatim in the data set. Two coders without knowledge of the nature of the study then independently coded them 1 for terrorism, 2 for war (excepting the “war on terror”), and 0 otherwise. For each of the three response opportunities, intercoder reliability rated a Pearson's *r* above .95. I resolved the very few disputes while remaining blind to how they would affect my results.

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<sup>19</sup> For the exact wording of these items, see Appendix B.

As a corroborating measure of agenda-setting, participants also answered a series of closed-ended questions asking them to rate the importance of terrorism as an issue. This was included in a series of four issues (the economy, education, terrorism, and war) to mask the true intent of the study.

Priming was measured as the correlation between presidential approval on terrorism and presidential approval overall. Again, participants answered approval questions about four issues to mask the intent of the study. In this case, it also provides a nice baseline to see how political issues not primed by the experiment affect presidential approval.

Finally, there is the measurement of the JBE. In the popular literature, the JBE has never been precisely defined: must it be behavioral in addition to being attitudinal? Is it merely a desensitization effect, or does it actually alter attitudes in a pro-torture direction? I have chosen to focus solely on the attitudinal issues here: it would, of course, be unethical to attempt to induce torturing behavior, and hypothetical scenarios have notoriously limited validity.

I have tried to capture the attitudinal shift with three different measures which should cover any of the major understandings of the JBE. First, as a measure of desensitization, I presented participants with five coercive interrogation techniques—sleep deprivation, stress positions, sexual humiliation, waterboarding, and the exploitation of individual phobias—and asked them to mark the ones they considered to be torture. I then summed these five techniques into a scale of torture sensitivity which ran from 0 (least sensitive) to 5 (most sensitive).

To assess a broader attitudinal shift, I also asked two other torture-related questions, one about torture's justifiability and one about its efficacy. Given that *24* depicts torture as a measure which is necessary to save lives, one that always gets the needed results,<sup>20</sup> it is not unreasonable

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<sup>20</sup> In one of the episodes used in this experiment, in fact, a lawyer from a thinly fictionalized version of Amnesty International shows up to block the torture of a prisoner. Quickly, the counterterrorism team discovers he is the

to expect that any JBE discovered might include elements of these two variables. These also provide some purchase on the behavioral questions I am unable to assess directly, as it is not an heroic assumption that interrogators are more likely to use torture if they believe it to be both justifiable and effective.

Of course, the JBE is generally conceptualized as a cumulative effect that builds up over time. A lack of evidence here, then, does not definitively rule out a more cumulative effect resulting from repeated exposure. It would, however, indicate that such effects (if they do exist) have a lower-slung ceiling to their impact than has been widely hypothesized.

## Results

### *Agenda-Setting and Priming*

The data I obtained from this experiment does appear to show evidence of agenda-setting. Table 1 shows the prevalence of mentions of terror to the open-ended “most important problems” question. The proportion of participants mentioning terror was three times higher in the treatment condition versus the control. Moreover, they are also three times as likely to mention it in the first response blank, indicating a fairly strong association between viewing *24* and seeing terrorism as an important issue. These findings were confirmed through a one-way ANOVA (overall mentions:  $F = 7.512$ , 99 df,  $p < .01$ ; first response blank mentions:  $F = 4.217$ , 99 df,  $p < .05$ ).

Table 1 about here

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unwitting dupe of the terrorists currently threatening the country, and by episode’s end, his legal maneuvering has been thwarted, and the ensuing torture has again revealed information crucial to stopping their plot.



With only 101 participants in the sample, my ability to analyze subgroups is limited, but we can glean some information by comparing male and female participants. In this case, that comparison reveals this agenda-setting to be a phenomenon more pronounced among the men than among the women. Of the ten times men mentioned terror as an important problem facing the country, nine of them—including all five of the mentions in the first blank—occurred in the treatment condition. By comparison, the women were spread more evenly, though their pattern (12 of the 17 mentions were in the treatment condition, including 7 of the 10 mentions in the first position) also indicates an effect. The chi-square statistic for the women, unlike the men, was statistically insignificant in both cases; however, this appears to be more the result of the small sample size than of any serious interaction effect between sex and experimental condition.

Interestingly, this agenda-setting effect appears to extend only to the home front. This is not entirely surprising since *24* focuses on the ticking time-bombs in our own backyards. Still, given the Bush administration's concerted effort over the years to link the wars abroad, and particularly the war in Iraq, to the overall war on terror, one might expect a residual impact from the priming of the larger war on terror schema. And while a minor increase in mentions of war does occur (48 percent of participants mention war in the treatment condition, only 41.2 percent in the control condition), it does not come remotely close to traditional levels of statistical significance ( $F = .016, 99 \text{ df}, p > .75$ ).<sup>21</sup>

Thus, the agenda-setting effect seems to extend only as far as the immediate focus of the show at hand. Even that effect has its limits: while participants were more willing to list terrorism as one of the most important problems facing the country, they were not willing to rate it, on a closed-ended basis, as being any more important after watching *24* than they were after watching *NCIS* (see Figure 1). Of course, it would have been difficult for it to be rated any more

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<sup>21</sup> For the sake of brevity, I have not displayed these data in tabular form.

importantly than it already was: over 95 percent of participants in both conditions rated terrorism as either somewhat or very important; about two-thirds of participants gave it the “very important” rating, the highest on the scale.<sup>22</sup> This ceiling effect was even stronger than I had anticipated, and appears to have interfered with the closed-ended results. In the future, a ranking task might be more suitable to picking up on agenda-setting effects in a closed-ended context.

Figure 1 about here

Despite the closed-ended results, however, the evidence for agenda-setting still appears solid. Oddly, the same may not be said of priming. This is particularly noteworthy since agenda-setting is often conceived as merely a special form of priming, with the attitude shift simply occurring in the judgment of important problems facing the country rather than in the criteria for evaluating political leadership. Table 2 displays the Pearson’s  $r$  correlations between overall presidential approval and approval on terrorism in each of the two experimental conditions. The other three issues listed in the questionnaire are also included for purposes of comparison.

Table 2 about here

As with the closed-ended agenda-setting questions, the correlations are generally high regardless of the question or the condition. This is not entirely unexpected: one would hope that overall evaluations would be based on evaluations of issue-level concerns. What is more surprising, and more troubling, is that all of the correlations are actually substantially *larger* in the control condition than in the treatment one. Here again, the men seem to be more affected

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<sup>22</sup> Similar ceiling effects were apparent in each of the other three issue domains.

than the women: when only the men are included in the analysis, the correlation in the control condition is a muscular .735,  $p < .01$ ; in the treatment condition it drops to .057 and loses all claim on statistical significance.<sup>23</sup> As the relationship between the two conditions is roughly similar across issue domains—regardless of how unrelated to the show’s content the issue is—the difference between the two conditions is probably a statistical fluke. The null results, however, are still puzzling. It is not clear why participants might be influenced such that they are more likely to claim an issue is an important political problem, yet less likely to evaluate their political leaders on the basis of their attempts to solve it.<sup>24</sup>

### *Jack Bauer Effect*

I tested three aspects of the JBE in this research: a general sensitivity to torture, a sense of its efficacy in the name of fighting terror, and a sense of its justifiability in doing the same. Overall, I found little evidence to support the existence of the JBE, but the results were not entirely null. I will take each aspect of the JBE in turn.

First, there seems to be no evidence here for a general desensitization to torture, at least after a single viewing.<sup>25</sup> The torture sensitivity scale displays only a marginal, and statistically insignificant, increase in the mean number of techniques judged to be torture (3.91 versus 3.76,

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<sup>23</sup> Miller and Krosnick (2000) argue that priming is moderated by political knowledge—that high knowledge individuals are more likely to pick up on the priming signal, and so are more susceptible to its effect. Using the “DC & K five” (Delli Carpini and Keeter 1993), I divided the sample at the median between low knowledge (0-3 correct responses) and high knowledge (4-5 correct responses) participants. This did nothing to attenuate the perverse results. Indeed, the high knowledge participants were driven *further* in the wrong direction than were the low knowledge ones.

<sup>24</sup> It is theoretically possible the correlations for *NCIS* are stronger because participants perceive it as more realistic than *24*, and so are better able to make the link between it and the real-world president. However, this would not account for why the effect persists across unrelated issue domains. Additionally, the data does not support such an interpretation: there is no appreciable difference in the perceived realism of one show over the other.

<sup>25</sup> The experiment itself is based on the viewing of a single episode, but I did ask participants about their previous exposure to the series to which I had exposed them. My confidence in the lack of desensitization effects is bolstered by the apparent lack of statistically significant differences between those who had previous exposure to the television shows I employed in the experiment and those who had none.

with a t-value of 0.636). Nor do any of the individual techniques which make up that scale demonstrate a statistically significant decrease in participants' likelihood to see them as torture. Table 3 shows the t-tests and one-way ANOVA scores for each of the five techniques which make up the scale. Two of the five t-tests actually run in the wrong direction, including the use of stress positions, the technique which comes closest to meeting traditional levels of statistical significance.

Table 3 about here

If one wished to salvage the JBE from this finding, one could argue that the shock of watching torture dramatized might initially heighten one's sensitivity to it, resulting in something like the pattern seen here, and that only over time might the "mental calluses" develop. While that explanation appears superficially valid, there are at least two problems with using it to explain the present data pattern. First, such an argument would lead not to the null results reported here, but to a complete inversion of the JBE hypothesis, in which (in the context of a single-exposure experiment) watching 24 made one significantly more sensitive to torture as an investigative technique. And second, each of the techniques which participants were asked to rate as torture or not torture were mild compared to the forms of torture depicted in the episodes of 24 used in this experiment (electrocution, the breaking of bones, and the simulated execution of a suspect's child). Once faced with the dramatic extremes of interrogative brutality, one might reasonably expect participants to find sleep deprivation or sexual humiliation "not that bad." That they had no increased tendency to do so provides important evidence that the JBE's desensitization potential has been considerably overstated.

Evidence of any increased faith in torture's efficacy is likewise difficult to locate. Table 4 shows the crosstabulation of efficacy and condition. There is a slight increase in the percentage of participants claiming that torture is "often effective" in "learning useful information from those suspected of terrorism," but this increase does not translate into a statistically significant difference ( $F = 0.976, 100 \text{ df}, p > 0.3$ ). In order to be sure the effect was not merely hidden due to the small case count in each cell, I dichotomized the measure to isolate those who said torture was "often effective" from everyone else. This dichotomization produced no better results. One could make arguments that one of the other two possible dichotomizations are more theoretically appropriate, so I examined each of those in turn as well; neither of those produced statistically significant results either. Participants, then, were not persuaded by Jack Bauer's exploits that torture was a useful and effective anti-terror tool in real life.

Table 4 about here

The one area in which one can make even a weak argument for 24's persuasive abilities, according to the current data, is in the question of torture's justifiability. As with the question about torture's effectiveness, one category stands out in the basic crosstabulation: the number of those claiming that torture is "never justified" is cut by more than half from the control condition to the treatment (see Table 5). This difference pushes the ANOVA to just miss traditional significance levels ( $F = 3.44, 99 \text{ df}, p < .07$ ). From a human rights perspective, the difference between those who claim that torture is never justified and everyone else is the theoretically appropriate one, so I dichotomized the justification question to isolate these purists from their

peers. This improved the chi-square value ( $\chi^2 = 3.214$ ,  $p < .08$ ), but did not appreciably affect either the t-test or the ANOVA.

Table 5 about here

The overall results for the JBE, then, are hardly overwhelming. No doubt the small sample size prevents the justifiability question from meeting traditional levels of significance; for the same reason, its substantive power is hard to gauge. One can cautiously conclude that the dramatic portrayal of the “ticking time-bomb” scenario, which is the fundamental conceit of *24* as a program, does call to viewers’ minds situations in which they can conceive of torture being a justifiable counterterrorism tool. That they would be more likely to find it justifiable without being any more likely to find it effective is a somewhat counterintuitive result: the show promotes both, and one might expect them to rise or fall together. On the whole, though, neither efficacy nor desensitization seems to perform well here, leaving justifiability as the sole remnant of the JBE with any empirical validation, at least after this single exposure.

### **Discussion**

Clearly, *24* can exert an impact on the attitudes of its audience. The data in the current study suggest, however, that said impact is more circumscribed than either my own prior research (agenda-setting and priming) or the musings of the popular press (the JBE) might indicate. While participants were more likely to see terrorism as an important problem facing the country after watching *24* than after watching *NCIS*, this increase in issue salience did not translate into an increased willingness to judge President Bush’s overall performance on the

basis of the issue. They were, if anything, somewhat less likely to do so, though the fact that a similar decrease occurred across three other, unrelated issue domains attenuates the oddity of this finding to some extent. It seems most likely that this decrease is a random occurrence that would wash out in a larger sample. Still, the disconnect between assessment of importance and assessment of leadership remains a puzzling one.

Regardless of the priming results, the agenda-setting effect remains on solid footing, though I would certainly like to see the results from the closed-ended questions mirror those from the open-ended ones. Still, a threefold increase is significant, both statistically and substantively. As the most important problem question was the first one on the questionnaire, one can be most confident that the results it produces are the product of the experimental treatment alone, and were in no way contaminated by considerations brought to mind in the questionnaire itself. As with previous research on the agenda-setting power of crime procedurals, then (Holbrook and Hill 2005), we see that Iyengar and Kinder's contention about agenda-setting holds even truer than they perhaps understood: content does not matter. Even fictional content, if it ties in directly to a political issue facing the country, is enough to increase its salience in viewers' minds.<sup>26</sup>

The hypothesized power of the Jack Bauer Effect finds less support here. Of the three aspects of attitudinal shift I examined, only one was statistically significant to even a marginal degree. It seems highly probable that the justifiability of torture would have achieved traditional levels of statistical significance had the sample been larger, though its philosophical significance remains open to interpretation. If the size of the effect held up, it would certainly be an interesting finding, but given the utter failure of the JBE to influence either perceptions of

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<sup>26</sup> Our difficulty in making the same connection in the laboratory between hospital dramas and health care (Hill and Holbrook 2004) only further indicates the need for the connection between programming content and political content to be direct and obvious.

torture's effectiveness or participants' overall sensitivity to torture, about all one can say with respect to the JBE is that exposure to *24* allows one to imagine a scenario in which torture might be a morally justifiable act. As that is precisely what the show purports to dramatize, that effect by itself is underwhelming. If that is indeed the extent of the JBE, then it would seem the show's critics have maligned it unfairly.<sup>27</sup>

This conclusion is at odds with news reports of soldiers, including those at Abu Ghraib, mimicking techniques from the show on the prisoners they oversaw (Gorman 2007; Mayer 2007). Such reports have been cited as evidence that the JBE is a real phenomenon, detrimental both to our national sense of morality and to our standing in the Muslim world. My experiment was performed on undergraduates, not soldiers, and it is possible that military personnel differ from my participants on some crucial dimension which makes them more attitudinally susceptible to the JBE than the college students with whom I was working. I find this possibility extremely unlikely, however. Much more reasonable is the explanation that such incidences of mimicry are exactly that: they are an aping of a specific technique on the part of an interrogator who already believes both in torture's morality and in its efficacy. By this reading, *24* is not evincing any attitudinal shift, and certainly not a behavioral one, because the attitudes that led to the behavior were already in place. All that the program adds is creativity. This may well be enough to warrant concern, but it is considerably less than has been claimed.

Of course, this is only one (relatively small) study, and none of these findings are definitive. Throughout this paper, I have made reference to the experiment's relatively small sample size. While there were certainly enough cases to permit a basic analysis, discussion of

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<sup>27</sup> In the interest of full disclosure, I should reveal that I consider myself a former fan of the show. I watched every episode of the first four seasons; by that time, however, the torture scenes had become so pervasive (and so graphic) that I had become uncomfortable watching it, and stopped doing so. I have not seen a total of more than ten minutes of the program since the fourth season ended in the spring of 2005.



subgroup effects was compromised by cells with few (and sometimes no) cases in them. A sample twice the current size would allow me to draw conclusions with more confidence. The size issue is, unfortunately, one of the difficulties of attempting experimental research at a small college: the participants of this study represent something more than a tenth of the entire student population of the school, so it is difficult to see how recruitment could have gone any better than it did. Still, future research should look to expand the scope of the project to see if the effects demonstrated here still obtain.

The study also suffers from the standard “college sophomore” issues that come up whenever one attempts experimental research with a sample of convenience. These are well known, and I need not re-recite the litany here. In this case, samples more representative of two separate (if overlapping) populations would be of particular use. First, a sample that is more broadly representative of the population at large would help illuminate the scope of the agenda-setting and (if any are found) priming effects the show may have on its audience. It would also provide interesting evidence on how the JBE might be affecting, or not affecting, broader public opinion on issues of coercive interrogation in the war on terror. And second, sampling military personnel in particular, and especially those who have contact with detainees and prisoners of war, would illuminate more directly whatever links might exist between the JBE and coercive interrogation attitudes and behaviors. I find it theoretically unlikely that such changes would make a substantial difference—I have no reason to suspect that the psychological mechanisms involved here would vary with age, social status, or occupation—but science does not proceed by hunches. For that reason, affixing a survey research component to this study is essential to moving the research agenda forward.

Finally, I have made no attempt here to judge the “half-life” of the effects I have reported here. This is crucial: it is one thing to note an effect immediately upon completion of an experience, be it a television show, a political rally, or a skydiving expedition, but it is something quite different to demonstrate that the experience has caused a lasting impact on those involved. Unless the impact *24* has on its audience on Monday night extends in some meaningful way into Tuesday morning and beyond, that effect is not likely to have any serious consequences for public opinion. This flaw is a common one in popular media effects research, and (after the over-reliance on survey data mentioned above) probably the one the most in need of correction.

That said, the field of popular media research has the potential to be a fertile one in the coming years. In a way, the systematic research into popular media effects is following the example of the systematic research into news media effects, about sixty years behind schedule. We have just begun testing empirically the armchair theorists’ notions that popular media have important political effects. And just as news researchers did, the initial empirical tests demonstrate considerably less impact than those theorists have contended. We should not make the mistake, however, made by news researchers in their time—simply because we do not find precisely what we expect, that does not mean there is nothing to be found. Such an attitude may well have delayed important discoveries in news media research for years (Chaffee and Hochheimer 1982). Instead, we should continue to ask new and different questions, whether that means looking for agenda-setting and other non-persuasion effects; or looking for more indirect impacts, such as those filtered through the lens of culture. Inasmuch as this study indicates that *24* does have an impact on its audience, but that impact is not primarily through the JBE, it provides evidence that popular media researchers are doing important work, but that we may have to think creatively to find the empirical connections we seek.

## **Appendix A: Experimental Procedure**

I made every effort to make the viewing experience of the experiment as naturalistic as possible. Participants attended their viewings in groups of between one and six people to facilitate a sense that this was a normal television experience. Also in service of this end, the “laboratory” was actually the common room of an unoccupied dorm suite, which provided a comfortable and familiar viewing space. (Special thanks to my research assistant Seth Bingham for negotiating the use of this space.) My research assistant and I moved furniture around, hung posters on the walls, brought in a lamp and a dorm refrigerator, and provided snacks to participants, all in an effort to provide as organic an experience as possible.

When participants arrived at the room, they were informed they would receive extra credit merely for showing up and signed a statement of informed consent. They were encouraged to partake of the snacks available, and told to behave however they would if they were simply watching television with friends. They appear to have taken this instruction to heart: many put their feet up, chatted during the episode, and otherwise made themselves at home.

The episodes themselves were part of the DVD box sets of the shows; they were selected from the on-screen menus prior to the first participant arriving, and then paused before the initial fade-in, so that participants would not know what they were watching until it began. Upon providing them with the cover story, my research assistant or I started the episode, dimmed the lights, and left the common area for one of the suite’s bedrooms, to avoid contaminating the viewing with our presence. At the end of the episode, we emerged from the back room, turned off the episode, brought up the lights, and distributed the questionnaire. When everyone had completed the questionnaire, we debriefed the participants and thanked them for their time. The entire process typically took just over an hour.

## Appendix B: Question Wording

### *Agenda-Setting: Open-Ended*

What do you think are the most important problems facing the country today? (Please list up to three problems.)

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### *Agenda-Setting: Closed-Ended*

How important an issue do you consider the economy to be?

Very important          Somewhat important          Not very important          Not at all important

How important an issue do you consider education to be?

Very important          Somewhat important          Not very important          Not at all important

How important an issue do you consider terrorism to be?

Very important          Somewhat important          Not very important          Not at all important

How important an issue do you consider the war in Iraq to be?

Very important          Somewhat important          Not very important          Not at all important

### *Priming*

In general, do you approve or disapprove of the way George W. Bush is handling his job as president?

Strongly approve          Approve          Neither approve nor disapprove          Disapprove          Strongly disapprove

Do you approve or disapprove of the way George W. Bush is handling the economy?

Strongly approve          Approve          Neither approve nor disapprove          Disapprove          Strongly disapprove

Do you approve or disapprove of the way George W. Bush is handling education?

Strongly approve      Approve      Neither approve nor disapprove      Disapprove      Strongly disapprove

Do you approve or disapprove of the way George W. Bush is handling terrorism?

Strongly approve      Approve      Neither approve nor disapprove      Disapprove      Strongly disapprove

Do you approve or disapprove of the way George W. Bush is handling the war in Iraq?

Strongly approve      Approve      Neither approve nor disapprove      Disapprove      Strongly disapprove

*Jack Bauer Effect*

In your opinion, is the use of torture against those suspected of terrorism in order to gain important information often justified, sometimes justified, rarely justified, or never justified?

Often justified      Sometimes justified      Rarely justified      Never justified

Regardless of your feelings about whether or not torture is justified, do you believe it can be an effective means of learning useful information from those suspected of terrorism, or not?

Often effective      Sometimes effective      Rarely effective      Never effective

Below is a list of interrogation techniques reportedly used by Americans on terror suspects. Please indicate which of these techniques you believe constitutes torture. (***Please check all that apply.***)

- Sleep deprivation \_\_\_\_\_
- Forcing suspects to stand in stressful positions for extended time periods \_\_\_\_\_
- Sexual humiliation \_\_\_\_\_
- Waterboarding/simulated drowning \_\_\_\_\_
- Exploiting suspects' individual phobias \_\_\_\_\_

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**Table 1A: Mentions of Terrorism as an Important Problem by Condition**

	24	NCIS
Mentioned terrorism	37.5%	13.6%
Did not mention	62.5%	86.4%
N =	56	44

$\chi^2 = 7.119, p < 0.01$

**Table 1B: Mentions of Terrorism in the First Response Position by Condition**

	24	NCIS
Mentioned terrorism	21.4%	6.8%
Did not mention	78.6%	93.2%
N =	56	44

$\chi^2 = 4.125, p < 0.05$

**Table 2: Pearson's r Correlations Between Issue Approval and Overall Approval by Condition**

	24	NCIS
Terrorism	0.527**	0.627**
Economy	0.160	0.667**
Education	0.341*	0.664**
War in Iraq	0.447**	0.620**
N =	56	45

\* p < 0.05    \*\*p < 0.01

**Table 3: T-Tests and One-Way ANOVAs for Evaluation of Techniques as Torture, by Condition**

	T-Test Values	ANOVA Values
Sleep deprivation	-0.067	0.004
Stress positions	1.407	1.980
Sexual humiliation	0.701	0.491
Waterboarding	-0.208	0.043
Exploiting individual phobias	-0.070	0.005

N = 101 in all cases; ANOVA df = 100 in all cases

**Table 4: Perceptions of Torture's Efficacy by Condition**

	24	NCIS
Often effective	32.1%	24.4%
Sometimes effective	51.8%	55.6%
Rarely effective	16.1%	17.8%
Never effective	0.0%	2.2%
N =	56	45

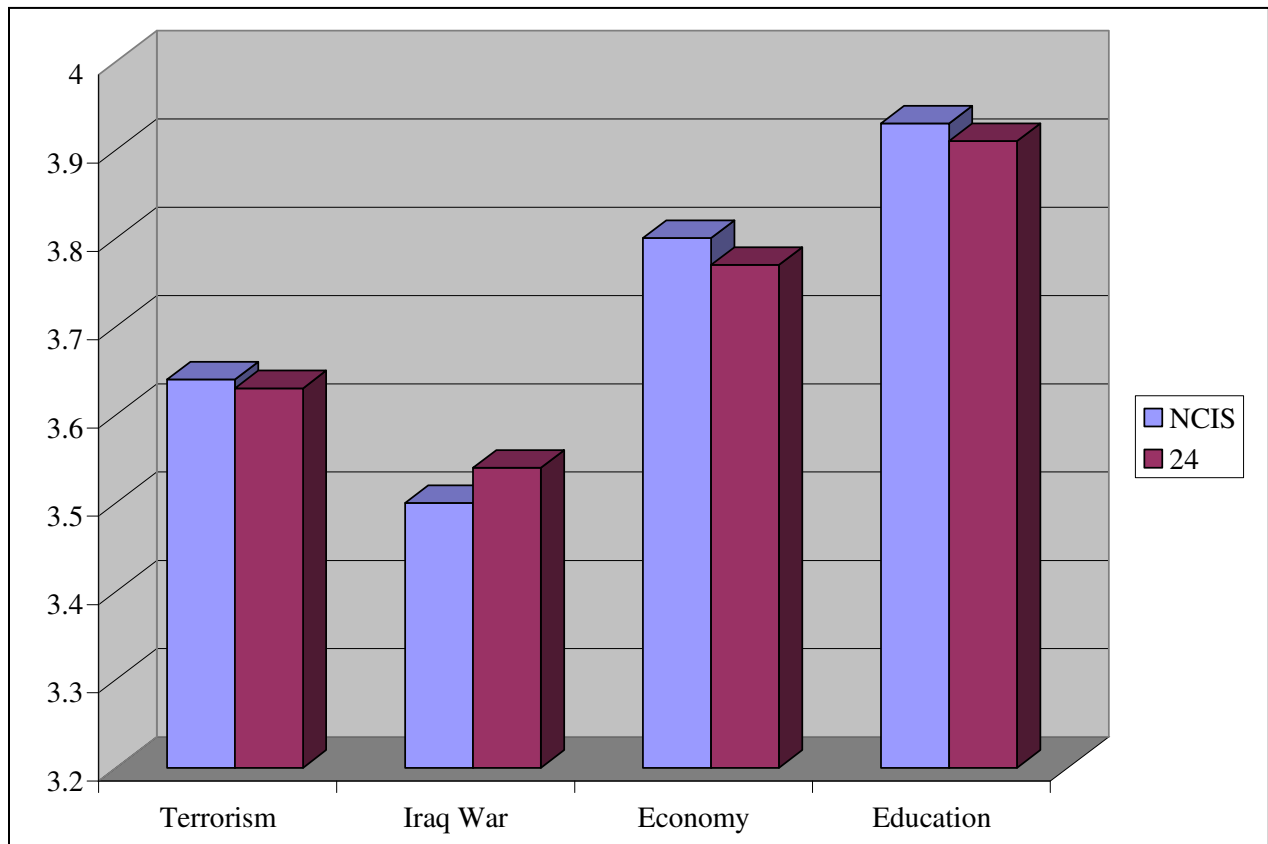
$\chi^2 = 1.869, p > 0.5$

**Table 5: Perceptions of Torture's Justifiability by Condition**

	24	NCIS
Often justified	9.1%	6.7%
Sometimes justified	49.1%	35.6%
Rarely justified	30.9%	33.3%
Never justified	10.9%	24.4%
N =	55	45

$\chi^2 = 3.949, p > 0.25$

**Figure 1: Means of Perceived Importance of Four Issues, by Condition\***



\*Four-point scale: 1 = not at all important; 2 = not very important; 3 = somewhat important; 4 = very important