A Film is Worth a Thousand Words:
The Impact of Film, Need for Cognition, and Experiential Thinking on Attitudes towards the Death Penalty

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Extensive research has been conducted on ways that attitudes towards the death penalty can be modified. In accordance with one of the Marshall hypotheses, it is expected that information about the death penalty should reduce public support for it, and the Elaboration Likelihood Model suggests that the attitudes of those with higher needs for cognition should be more affected by this supplemental knowledge. While most studies have used factual, classroom-based, materials to affect attitudes of respondents, the current study made use of an emotional film as a stimulus to depict a wrongful execution. Even after a full semester of factual material about forensic psychology and biases in the criminal justice system, 67 students enrolled in a Forensic Psychology course who viewed the film showed further diminished support for capital punishment. However, results failed to indicate a relationship between attitude changes and need for cognition, possibly based on the conceptual view that central route processing was deemed not necessary. These findings have implications for the use of film as a vehicle for attitude change towards substantial public policy issues. Future research with more jury-eligible samples is suggested.

The botched execution of Oklahoma’s Clayton Lockett on April 29, 2014 is one of the latest in a series of unfortunate events that has led some to question the legitimate implementation of the death penalty. During this execution attempt, Mr. Lockett’s lethal injection failed to effectively end his life and instead he died of a heart attack nearly 45 minutes after the initiation of the execution. Then in May of 2014, Delaware’s longest death row resident, Jermaine Wright, became eligible for a new trial after 23 years in prison. Mr. Wright had been found guilty of murdering a liquor store clerk during a robbery. The judge that overruled his conviction cited the fact that Jermaine had been high on heroin when he gave his confession and there was specific evidence about a similar, close-by, robbery and jailhouse informant that was...
withheld by the prosecutor (O’Sullivan, 2014). Mr. Wright has since been set free.

According to the Innocence Project (www.innocenceproject.org), 18 of the more than 300 people who have been exonerated due to DNA evidence spent at least some time on death row. Additionally, Black prisoners comprise more than a third of the prison population and more than a third of all executions despite being only about 12% of the population (Bureau of Justice Statistics, 2012). Based on these inequities and statistics, the necessity of rethinking the death penalty becomes evident. One argument in support of the death penalty rests on predictions of future dangerousness. However, some researchers have questioned the relative dangerousness of different categories of inmates and have suggested that the death penalty may be obsolete (Cunningham, Reidy, & Sorensen, 2005). Their analysis of Missouri prison incident records showed that when prisoners who were sentenced to death were integrated into the general prison population, they were no more likely to be involved in homicide attempts or other violent incidents than their non-life sentence counterparts and, thus, pose no greater threat to other institutional persons.

As more information and data-based analyses about wrongful convictions surfaces, the study of changing public attitudes towards the death penalty warrants investigation. Support for the death penalty reached a high of between 70% and 75% during the early 1990s after a period of lower support, especially during the early 1960s (Ellsworth & Gross, 1994). Despite the fact that support for the death penalty continues to decline, more than half of American adults continue to endorse it based on recent national survey data statistics (Pew, 2014). Since the death penalty is the ultimate punishment, and cannot be undone, the second Marshall Hypothesis specifies that it is important that citizens are knowledgeable about the processes involved, the effectiveness of it as a deterrent to crime, and the possible erroneous outcomes of capital punishment. This hypothesis additionally specifies that a knowledgeable populace would fail to support such a practice.

A review of existing scholarly literature on the Marshall Hypotheses, a descriptive analysis of research studies that have been conducted on changing attitudes towards the death penalty, as well as the different forms of media that have been implemented to effect such changes will be presented. The current analysis is viewed from the perspective of the role of emotion and Petty and Cacioppo’s (1986) Elaboration Likelihood Model. Then, two studies designed to test the role of need for cognition, emotional content, and visual media on attitude change are presented.
The Marshall Hypothesis

Amidst declining public support for the death penalty and acknowledgment of its arbitrary application, the Supreme Court decided in *Furman v. Georgia* (1972) that capital punishment was unconstitutional. Although there was little agreement among the 5 majority justices concerning the reasons they found the penalty to be unconstitutional, the fact that it was applied in a capricious and seemingly subjective manner seemed to strike a chord with all of them. As such, it is important to note that it was not the death penalty itself that the justices ruled against, but the lack of objective methods by which it was being applied. This decision was later overturned by the Supreme Court in a 7 – 2 vote in *Gregg v. Georgia* (1976) when Gregg appealed his death sentence for murder that occurred during his commission of an armed robbery. In his Gregg decision, one of the two dissenting justices, Thurgood Marshall, wrote that a public, fully informed about the death penalty, would not be supportive of the practice. This would later come to be called one of the Marshall hypotheses. A number of studies, conducted during the 1970s, 80s, and 90s have addressed Justice Marshall’s proposal. However, public sentiment and cultural thinking have changed since that time based on national poll data (Pew, 2014) and public opinion regarding the death penalty is influential in the election of judges. Thus, public opinion may have a strong influence on the decisions of judges in capital cases (Brace & Boyea, 2008).

Research Investigating the Marshall Hypotheses

Most of the studies investigating the Marshall hypotheses have involved students enrolled in college courses on the death penalty and have used a pre/post-test design. During the 1980’s and 90’s, Robert Bohm conducted a number of studies on the effects of academic courses about the death penalty on student support for it (Bohm, 1989; Bohm, 1990; Bohm & Vogel, 1991). In one study, students enrolled in a criminal justice course at a medium sized college in Alabama read *The Death Penalty in America* (Bedau, 1982), which consists of a series of readings presenting both positive and negative aspects of the death penalty. Students also were exposed to the typical elements of a college course; discussion, lectures, and speakers with varied points of view. A pre-test/post-test design showed that exposure to this type of material, where both sides were offered, was ineffective in reducing support for the death penalty (Bohm, 1989). This is perhaps not surprising as other research has found that when media publicizes contradictory points of view, these disparate trends tend to neutralize each other (e.g., Chong & Druckman, 2013). Another study by Bohm (1990) also failed to find significant changes in support for the death penalty over the course of a
A third study was conducted to attempt to identify which, if any, course content would affect attitudes (Bohm & Vogel, 1991). Students in the experimental condition of this study also read Bedau’s book and participated in other typical course activities. Student opinions about the death penalty were collected at the beginning of each class which afforded the researchers the ability to match, on any given day, student opinions with the syllabus topic. Overall, there was a significant decrease in support for the death penalty from the beginning to the end of the semester, and this decrease was more pronounced for the Black than the White students. Black student opinion seemed to have been influenced substantially by viewing a video about the execution of a Black man who may well have been innocent. However, no other specific topic was shown to produce significant change on its own and at the end of the class a majority of both males and females still supported the death penalty (Bohm & Vogel, 1991).

A more recent study by Bohm and Vogel (2004) showed that exposure to material that highlighted the lack of effective deterrence effects and miscarriages of justice in the form of wrongful execution lowered student support for the death penalty, although follow-up data showed these attitude changes lessened over time in a process they labeled the “rebound” effect. Sandys and McGarrell (1995) found similar effects, but these changes persisted at follow-up nearly a year later. More recently, Cochran and Chamlin (2005) and Brand and Anastasio (2005) have also investigated the role knowledge plays in shaping student attitudes towards the death penalty. Brand and Anastasio (2005) followed a methodology not unlike Bohm, investigating the relationship between increases in knowledge through a course on violence and aggression and changes in opinions about the death penalty. Students in this study completed the Violence-Related Attitudes and Beliefs Survey (V-RABS) pre- and post-course. This survey consisted of a number of subscales, one of which specifically measures attitudes towards the death penalty. Students also read a course text and attended lectures. The instructor did not always present herself as an opponent of the death penalty, but took different sides on the issue from time to time. Results showed a significant decrease in support for the death penalty from pre- to post-test and a substantial number of students migrated from being in the highest third of possible scores supporting the death penalty to more moderate attitudes, providing some support for Justice Marshall’s hypothesis (Brand & Anastasio, 2005).

Cochran and Chamlin (2005) used a similar method whereby students enrolled in a course on the death penalty took a pre-test about their knowledge of the death penalty, listened to lectures and read articles about the death penalty and afterwards completed a knowledge post-test.
In this course, the instructor was quite obvious about his unfavorable opinions regarding the death penalty. Results of this study were mixed. Analyses did not uncover a relationship between pre-class death penalty knowledge and support for capital punishment, which is contrary to a major facet of Justice Marshall’s hypothesis. However, this relationship was present at the conclusion of the course with high levels of knowledge being associated with lower levels of death penalty support. In addition, support for the death penalty was found to decrease over the course of the semester. Interestingly, students who showed this decrease had significantly higher GPAs than students who became stronger supporters of the death penalty over the course of the semester, suggesting perhaps that those students who have stronger academic skills, and are perhaps more critical thinkers, are more accepting of attitude change. (It should be noted that despite the size of the sample of seventy students, most of the correlations obtained by these researchers were very small and few were significant; Cochran & Chamlin, 2005.) One measure that focuses on styles of thinking and how these relate to persuasion is Petty and Cacioppo’s (1986) Need for Cognition.

**Need for Cognition**

A large body of research regarding styles of thinking and their relationship to academic success and problem solving is available in the extant literature. A popular method of characterizing differences in thinking style is in line with Petty and Cacioppo’s notion of Need for Cognition. According to the Elaboration Likelihood Model (Petty & Cacioppo, 1986) there are two possible paths through which persuasive or other material can affect attitude changes; central and peripheral. Central path processing involves a high degree of cognitive effort. Data may be critically examined and the logic of a persuasive argument may be analyzed. A listener’s prior knowledge may come into play and become integrated into the presenter’s argument, hence elaboration takes place. Peripheral path processing requires much less effort. The material is not considered deeply, nor is it evaluated with respect to the listener’s world view. When a person is highly motivated or aroused, the central path is more likely to be used. Uninterested or incapable persons are more likely to use the peripheral path basing their judgments on tangential or superficial information such as a speaker’s looks or reputation. When a trial or other information-laden event is long and tedious, interest is likely to wane. And when trial evidence is difficult to comprehend, even the most interested juror may have trouble processing the information deeply leading to decisions based on a shallow understanding of the facts.
Consistent with Justice Marshall’s hypothesis, listeners presented with factual information about the death penalty, who use central processing to evaluate it, will likely experience strong and long-lasting attitude changes. When an argument is strong, the listener should be encouraged to process and thus elaborate on it deeply. If an argument is superficial or weak, distracting the listener will prevent a careful analysis and thus prevent one from finding the large holes in the case. Not everyone is willing or able to evaluate logical arguments against the death penalty through the central path, however, and changes to these listener’s attitudes may be short lived, if they occur at all. This may explain why researchers typically find the effects of information on attitude change to be transient.

Another explanation for the inconsistent findings regarding attitude change may be due to confirmation bias. Confirmation bias is “the tendency to seek out evidence consistent with one’s views, and to ignore, dismiss, or selectively reinterpret evidence that contradicts them” (Lilienfeld, Ammirati, & Landfeld, 2009, p. 390). If some of the samples used in the research noted thus far had very strongly held beliefs regarding the death penalty prior to becoming informed, then their attitudes may have been more resistant to change because these respondents failed to properly consider the contradictory information or may have been basing their attitudes more on emotion than facts.

The Role of Emotion

Attitudes have both cognitive and affective (emotional) components. The cognitive component is based on knowledge about an object or action. This is the component Justice Marshall was referring to when he wrote that an informed populace would not support the death penalty. The affective component, however, consists of a person’s emotional feelings about an object or action. Since emotional information may not be processed as critically (i.e., through the central path) as cognitive information in order to be effective or remembered (Mulligan & Habel, 2013), it may be easier for this type of information to alter attitudes. These different types of information might differentially affect an individual’s attitudes towards a defendant or his or her sentence. In fact, Kramer, Kerr, and Carroll (1990) conducted a study comparing the relative effectiveness and duration of factual and emotional pre-trial publicity on mock jurors’ decision-making in a case against a young black man accused of robbing a grocery store. In their study, both student and non-student jury eligible adults participated in 6-person juries. Prior to arriving at the experiment, participants were exposed to either biasing factual information (e.g., incriminating evidence had been found at the suspect’s girlfriend’s house) or biasing emotional information (e.g., a
little girl had been hit and injured by a car that resembled the getaway car used in the robbery). When they arrived at the study location, they were questioned in a realistic *voir dire* process and heard a judge’s pretrial instructions. They then viewed a videotaped reenactment of the trial. Afterwards they heard a judge’s standard instruction which either did or did not contain explicit instructions to ignore any pre-trial publicity. Instructions to disregard the pre-trial publicity actually increased the impact of the factual information on evaluations of defendant guilt, consistent with the rebound effect specified by Wegner’s ironic process theory (1994). Additionally, their findings showed that those exposed to emotional publicity were more likely to convict than those exposed to factual publicity and, when there was a delay between exposure to this biasing information and jury deliberation, the memory for and biasing effect of the factual information decreased more substantially than that of the emotional information (Kramer, Kerr, & Carroll, 1990). When Ellsworth and Ross (1983) asked people which factors supported their opinion about the death penalty, they concluded that emotional rather than factual reasons were at the root of most people’s attitudes and that “the ‘reasons’ are determined by the attitude, not the reverse” (as cited in Ellsworth & Gross, 1994, p. 26).

In nearly every study that has been conducted to date, a pre-test post-test design was used. One concern with this design is that exposure to the survey items during pre-test might have sensitized students to these specific items and influenced their subsequent responses. In addition, collection of the pre-test and post-test scores were typically separated by a semester making it difficult to know what experience specifically led to the attitude changes (see Bohm & Vogel, 1991) and to rule out other events as the cause for the shift in attitudes. Special attention to procedure is needed in the Cochran and Chamlin study where the instructor expressed strong opinion; it could have been this passionate, emotional, information, rather than the factual information that changed student attitudes. “We know that emotion focuses attention, has a major effect on what we remember, and is more closely linked to behavior than cognitions” (Beattie, Sale, & McGuire, 2011, p. 109). “Numerous studies have shown that emotional stimuli make far more effective prompts than purely rational arguments when it comes to changing opinions and provoking a response” (Storey, 2008, p. 23 as cited in Beattie, Sale, & McGuire, 2011).

**Films as Teaching Tools**

A majority of the studies that have been conducted on attitude change have utilized factual, textual, materials as one might find integrated in a full semester college course. Other research, however, has shown film to
be an effective medium for attitude change (e.g., Beattie, Sale, & McGuire, 2011; Kennedy, Senses, & Ayan, 2011). In an attempt to increase interest in social and political issues in Turkish college students, Kennedy, Senses, and Ayan (2011) used three movies as teaching tools. These authors argued that using movies as teaching tools is effective because it enhances students’ interest, is practical, and, under most circumstances, is pleasurable. During different semesters, students watched one of three films and then wrote an essay integrating the theory they had learned in class with the movie content. The qualitative results suggested that A Short Film about Killing, Ten, and Hotel Rwanda, were effective in encouraging students to reflect on capital punishment, women’s issues, and prejudice, respectively. Students were also asked to evaluate the practice of using movies as teaching tools and a majority rated the method as very useful. These authors did not provide any inferential statistics, nor did they have an objective measure of attitude change or critical thinking.

In contrast, Beattie, Sale, and McGuire (2011) used an experimental design to determine whether viewing informational clips from An Inconvenient Truth could affect viewers’ moods and attitudes about climate change. These clips concerned human contributions to climate change, and its effect on natural resources and wildlife (Guggenheim, 2006). Participants completed a mood questionnaire and an attitude towards climate change inventory before and after each clip was viewed randomly. Results showed substantial decreases in happiness and calmness, and corresponding increases in sadness. Motivation to effect change increased significantly as did attitudes about personal empowerment suggesting that brief exposure to informative and emotional film clips can impact affective and cognitive components of attitudes (Beattie, Sale, & McGuire, 2011).

In a field study, Adams, Salzman, Vantine, Suelter, Baker, Bonvouloir, Brenner, Ely, Feldman, and Ziegel (1985), tested what they termed the docudrama effect. This refers to the potential for a Hollywood production that is a mixture of drama and news to affect viewers’ opinions about important social topics. The combination of fact and emotion was speculated to be especially potent in changing attitudes. Results demonstrated the effects of watching The Right Stuff on viewers’ attitudes towards John Glenn as a person and politician. The film is about the original Mercury 7 astronauts, of whom John Glenn was one. At the time of the movie’s release, John Glenn was campaigning for president against the incumbent Ronald Reagan. Adams, et al. interviewed a sample of movie goers as they entered the movie and a different sample as they exited the theater. Those exiting the theater had an improved perception of Glenn as a person and as someone capable of beating
Reagan in the national election. On a 100 point scale, ratings were about 8 points higher for each question after viewing the film.

In more recent studies (Adkins & Castle, 2013; Mulligan & Habel, 2013), film was used to affect attitudes towards two more contemporary political topics, health care and abortion. Adkins and Castle found that viewing *The Rainmaker* (1997) shifted a largely conservative sample of students to adopt a more liberal attitude towards certain aspects of government run health care. In this film, a young man is denied treatment for a disease by his insurance company based primarily on considerations of profit. Mulligan and Habel (2013) had students watch *Wag the Dog* (1998), a movie in which an American president fakes a war in a Hollywood studio to distract the populace from a scandal in which he is embroiled. Compared to control subjects, those who watched the film were more likely to believe that a president had faked a war in the past and would be likely to fake a war in the future, thus showing that a fictitious film could have an impact on viewers’ political beliefs (Mulligan & Habel, 2013). These researchers also found that students who perceived the movie to be realistic were more likely to have their political beliefs altered. Mulligan and Habel (2011) have also showed that viewing a movie such as *The Cider House Rules*, can affect attitudes towards a contentious cultural issues like abortion. The movie tells the story of a young man, Homer, brought up in an orphanage under the guidance of a medical doctor who performs abortions for young women. Not wanting to follow in the doctor’s footsteps, Homer leaves the orphanage to pick apples for a cider house. Circumstances present a young woman, pregnant by her incestuous father, for whom Homer reluctantly performs the procedure. Students were randomly assigned to either watch or not watch the film. Those who watched the film had more favorable attitudes towards abortion than those who did not (Mulligan & Habel, 2011), despite the fact that abortion is a topic about which people generally hold strong and stable views.

**STUDY 1**

Based on prior research showing the potent impact of emotional material (e.g. Kramer, Kerr, & Carroll, 1990), it was hypothesized that the disturbing content of the film would significantly reduce support for the death penalty. Additionally, based on the findings of the Cochran and Chamlin (2005) study, it was hypothesized that students high in need for cognition, those further along in their college careers, and those with higher GPAs would show a larger change in attitude as a result of increased critical thinking. Lastly, based on the confirmation bias, the tendency to remember information that is consistent with already held beliefs, it was also hypothesized that those students with strong support
for the death penalty would be less likely to have the anti-death penalty content of the film change their attitudes.

Method

Participants

Forty-two undergraduate students at a small metropolitan university participated in this study. These students were enrolled in two sections of the first author’s 200-level Forensic Psychology class. Section A was an Honors section consisting of 19 students; 10 psychology majors, 3 nursing majors, 4 engineering students and 2 from other majors. A student must be a member of the Honors Program in General Education in order to be admitted to this section. Section B was a psychology course open to all majors. There were 23 students; 12 psychology majors, 9 nursing majors, and 2 from other majors. The large number of nurses is a result of the nursing curriculum requirement that nursing majors take a psychology elective. Section A consisted of 9 Freshmen, 2 Sophomores, 1 Junior and 7 Seniors. Section B consisted of 4 Freshmen, 11 Sophomores, 5 Juniors and 2 Seniors. One student in Section B was unsure of class standing. Information about gender and race were not collected as there were no hypotheses about differences based on gender or race, however both sections were predominantly Caucasian and female.

Materials & Procedure

One class completed a pre-test and post-test survey on attitudes towards the death penalty. The other class completed the post-test only. In addition, the only classroom event to occur between the pre- and post-test was the viewing of a film in which an innocent man is executed, making it easier to pinpoint the event that triggered the attitude change. Thirdly, the instructor did not make herself known as a death penalty opponent, but simply told the students prior to viewing the film “mistakes do happen.”

Students in Section A, the Honors section, first completed the Attitudes toward the Death Penalty (ATDP) questionnaire (Hingula & Wrightsman, 2002). All students were then asked to watch The Life of David Gale, a 130 minute film about a college professor who tricks the justice system into wrongfully executing him to demonstrate that mistakes can and do happen in administering the death penalty. Students then completed a demographic questionnaire about their major, year in school and estimated GPA, and the ATDP questionnaire. They also completed the Need for Cognition (NFC) Short Form (Cacioppo, Petty, & Kao, 1984) and the Rational-Experiential Inventory (REI-10; Norris, Pacini, & Epstein, 1998). Only the experiential items were included since the NFC, which contains the rational items, was already being administered.
The ATDP questionnaire contains 23 items such as “If there is any doubt about a defendant’s guilt, he or she should not be executed.” Students were to respond on a 5-point scale from strongly agree (1) to strongly disagree (5). Higher scores indicate a more favorable view of the death penalty. ATDP scores can range from 23 – 115. The NFC contains 16 items such as “I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.” Students were to respond on a 4-point scale from strongly disagree (1) to strongly agree (4). NFC scores can range from 16 – 64. Higher scores indicate a stronger need for cognition and the tendency to think deeply rather than superficially about problems. Responses on the short form have been shown to be highly correlated with responses on the original form (r = .95) and to have excellent reliability; Cronbach’s alpha = .90 (Cacioppo, Petty, & Kao, 1984). The 12 experiential items of the REI contain statements such as “I trust my initial feelings about people.” Students were to respond on a 4-point scale from strongly disagree (1) to strongly agree (4). Experiential scores can range from 12 – 48. Higher scores indicate more dependency on, and trust in, an individual’s intuitive prowess. This scale has been shown to have modest reliability; Cronbach’s alpha = .77 (Epstein, Pacini, Denes-Raj, & Heier, 1996).

In order to be able to match the pre-film and post-film questionnaires for the Section A students, and maintain their anonymity, they were instructed to draw a small picture at the top of the pre-film questionnaire and to repeat this picture on the questionnaires they completed-post film. After the surveys were complete, they were scored.

Results

Demographics regarding college major, participation in the university Honors in General Education program, student-reported GPA, and estimated number of credits completed were entered directly into SPSS. The NFC scale was scored such that original items and reverse scored items all had higher scores indicating higher need for cognition. Each participant received an NFC score which was the sum of their responses on all NFC items. Similarly, the ATDP survey was scored such that original items and reverse scored items all had higher scores indicating more support for the death penalty. Each participant received an ATDP score which was the sum of their responses on all ATDP items. The Experiential items of the REI were scored such that all items had higher scores indicating a higher reliance on experiential and intuitive processes. Each participant received an Experiential score which was the sum of their responses on all Experiential items.

Table 1 contains the means and standard deviations of the variables mentioned above.
TABLE 1 Participant Demographics for Study 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
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<tbody>
<tr>
<td>GPA</td>
<td>3.29</td>
<td>.45</td>
</tr>
<tr>
<td>College credits</td>
<td>56.12</td>
<td>38.25</td>
</tr>
<tr>
<td>NFC*</td>
<td>45.60 (49.00, 42.78)**</td>
<td>6.25</td>
</tr>
<tr>
<td>Experiential*</td>
<td>33.45 (31.95, 34.70)**</td>
<td>4.36</td>
</tr>
<tr>
<td>ATDP-pre</td>
<td>67.81</td>
<td>9.17</td>
</tr>
<tr>
<td>ATDP-post</td>
<td>59.00 (60.32, 57.91)</td>
<td>9.91</td>
</tr>
</tbody>
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* The means for the honors and non-honors sections are represented in parentheses.
** The difference between honors and non-honors is significant, \( p < .05 \).

To test the first hypothesis that viewing the film would reduce support for the death penalty, a paired samples \( t \)-test was conducted on the before and after ATDP scores. Results indicated a significant decrease (\( M_{after} = 60.19, SD = 10.96 \)) in support for the death penalty, \( t(15) = 4.15, p = .001 \). In addition, Pearson correlations (see Table 2) showed that ATDP pre and post-scores were significantly correlated, and the degree to which a participant experienced a change in attitude was

TABLE 2 Correlations between Variables for Study 1

<table>
<thead>
<tr>
<th></th>
<th>ATDP-pre</th>
<th>ATDP-post</th>
<th>ATDP-change</th>
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<tbody>
<tr>
<td>ATDP-pre</td>
<td>.69*</td>
<td>-.56*</td>
<td></td>
</tr>
<tr>
<td>NFC</td>
<td>-.16</td>
<td>-.11</td>
<td></td>
</tr>
<tr>
<td>Experiential</td>
<td>-.07</td>
<td>.09</td>
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</table>

* \( p < .05 \)

significantly correlated with their original support for the death penalty, such that those who were more strongly in favor of the death penalty prior to viewing the film experienced less of a change in attitude than those who held more moderate or unsupportive attitudes, supporting hypothesis three. However, as shown below, no students in this sample
expressed very strong support for the death penalty even prior to viewing the film. Neither NFC, nor Experiential scores were correlated with ATDP either before or after the film, failing to support hypothesis two.

Following the method developed by Brand and Anastasio (2005), participant responses on the pre-film ATDP were categorized as either the highest, middle or lowest third of possible scores. At pretest, 12.50% of students were in the lowest third (least support) and 87.50% were in the middle third. After viewing the film, 38.10% of the students were in the lowest third and 61.90% were in the middle third. None of the students scored in the possible highest range of ATDP scores. A chi-square showed this result to reflect a significant shift in attitudes from modest to waning support, $\chi^2(1) = 5.14$, $p < .05$. Major in school was related to attitudes towards the death penalty. A chi-square with major in school (psychology, nursing, and other) and ATDP (middle or lowest third of ADTP scores after the film) showed more psychology students ($N = 10$) and nursing students ($N = 6$) to be in the lowest third of scores than would be expected by chance, while there were fewer engineering and other majors ($N = 0$) in the lowest third than would be expected by chance, $\chi^2(2) = 6.15$, $p < .05$.

As shown in Table 1, students in the honors section scored significantly higher on NFC than those in the other section, and these respondents scored significantly lower on Experiential than those in the other section. In fact, a multivariate analysis of variance with type of scale (NFC vs. Experiential) as a within-subject factor and type of program (honors or not) as a between subject factor showed a significant interaction, $F(1, 40) = 23.04$, $p < .05$. There was no significant difference between the honors and other section in ATDP scores after having viewed the film.

To test a facet of hypothesis two, that college experience would result in more critical thinking, participants were split into two groups based on their number of credits. Those with 60 or fewer credits were placed in a “lowerclass” group ($N = 29$) and those with more than 60 credits were placed in an “upperclass” group ($N = 12$). As expected, these groups differed significantly in NFC ($M_{lowerclass} = 44.43$, $SD = 5.73$ and $M_{upperclass} = 48.63$, $SD = 8.92$), $t(39) = 2.01$, $p < .05$, however class standing was not related to Experiential scores. Class standing was not related to ATDP scores either before or after the film, or change in attitude, all $ps > .05$.

**STUDY 2**

The following semester, the pre-test/post-test portion of the first study was replicated in the same academic setting. During this semester, the ATDP pre-test and NFC instruments were administered during the first
week of class and the post-test was administered immediately after viewing the film during the last week of the semester. In addition, these students completed a one-page reflection paper about the film. The purpose of this second study was to determine whether the amount of time between the pre-test and the post-test would affect a shift in death penalty attitudes, and to determine whether students were conscious of any shift in their views as reflected in their papers. It was hypothesized that the course content combined with the film would produce lower support for the death penalty. A second attempt was made to identify a relationship between NFC and attitude change in a non-honors sample. Third, additional support for the presence of confirmation bias in this domain was sought.

Method

Participants Twenty-five students in the author’s forensic psychology course participated. All students were psychology majors and 62% of the students were female. Once again, students were asked to use identity codes to keep their responses collated and anonymous. Due to four students forgetting their identity code, their data could not be included.

Materials and Procedure The ADTP and NFC instruments were the same as those used in the first study. Additionally, students were given an assignment to write a one page paper “reflecting” on the movie immediately after its viewing. During the first week of class, students completed the ADTP and NFC instruments. They were instructed to draw a picture or write a number meaningful to them at the top of each instrument (their identity code) and to write this in the back of their notebooks. This was done to maintain anonymity as the professor did not have access to the identity of the students. During the course of the semester, students were exposed to a number of topics regarding wrongful conviction, mistaken eyewitness identification, false confessions, faulty polygraph procedures and jury decision-making. In addition, these students viewed a number of factual videos focused on these topics. During the last week of class, students viewed the highly emotional film, The Life of David Gale, depicting a fictitious wrongful execution and completed the ATDP instrument again.

Results

Each student received a pre-test and post-test ATDP score as well as a NFC score. The means and standard deviations for these variables are shown in Table 3.

In this sample, the correlation between their pre and post-death penalty attitudes was only marginally significant, \( r(19) = .41, p = .07 \). However, the change in attitude was statistically reliable, \( r(19) = 6.44, p \)
<.01. Support for the death penalty before the course was substantially higher, once again supporting the hypothesis that knowledge would significantly impact attitudes. This reduction in support is twice that found in Study 1, perhaps due to the more homogeneous sample of solely psychology majors. Additionally, the results from this study were directly in conflict with those from Study 1 in that those students with the strongest support for the death penalty prior to the course showed larger shifts in attitudes than those with lower initial support. The Pearson correlation between pre-test support and change in attitude was \( r(19) = .74, p < .01 \) contradicting hypothesis three. Once again, NFC failed to correlate significantly with attitudes or change in attitudes. However, when all participants from both studies were split into a high and low NFC group by mean split and into high and low ATDP group by median split, the chi-square was marginally significant, \( \chi^2(1) = 3.51, p = .053 \). Students in the low NFC group were more likely to show high support for the death penalty, as expected.

Interestingly, when attitudes were compared across semesters, support for the death penalty before the movie was equivalent in both classes, \( t(36) = .34, p = .74 \), even though in the first study the class had already been exposed to the course material prior to completing the scale for the pre-test. Students in the second study showed lower death penalty support than students in the first study after viewing the film, \( t(61) = 2.07, p = .043 \), and students in the two semesters differed significantly in their attitude shift, \( r(35) = 2.20, p = .035 \), with those in the first study experiencing less of a shift (\( M = 8.53, SD = 8.04 \)) in attitude than those in the second study (\( M = 15.50, SD = 10.76 \)). Although many of the student reflection papers consisted of summaries rather than true reflections, a small portion of the students were keenly aware of how the film changed their opinions. A sample of their writing demonstrates this point which is illustrated below.

“The [movie] definitely changed my thoughts on the death penalty. Originally, I was slightly for capital punishment for crimes like rape and murder especially involving child victims. However, the movie proves...
that even such crimes where much of the evidence is clear, there can still be a chance that the accused has been innocent.”

“I feel that I have an entirely different view of the death penalty due to this movie and this course. Before this class my view of the death penalty was conflicting. Is it right for our government to have the power to execute convicted defendants of murder? Our system says if twelve jurors unanimously come up with a guilty verdict for a defendant facing the death penalty for murder charges then this is suitable punishment. I find myself struggling with the moral use of using or not using the death penalty as punishment for a guilty verdict. However, after acknowledging the amount of reasonable doubt that can be presented, I believe the death penalty should come off the table for punishment options.”

“Before this class, I did not understand how the system could fail us at times. After this class, I was able to know how the system could fail a non-guilty convict. I also did not have much knowledge on the death penalty and after learning about it and watching this movie my understanding about it grew. I did not think that the death penalty was easily used and could kill someone who was innocent. It is just astonishing to me.”

“The movie was a movie about the death penalty and the people of Texas who are trying to get rid of it in their state. It was a movie that opened my eyes to this issue and how even people who are innocent could be put to death.”

DISCUSSION

Despite the small sample size used in both studies, significant and robust reductions in support for the death penalty were found, supporting hypothesis one. It appears that a highly emotional film is effective in reducing support for the death penalty, even among students who maintain substantial factual knowledge. According to the elaboration likelihood model, personal relevance and telling a story foster central processing as material is elaborated by the viewer’s experiences. Since this movie was primarily about the struggles and persecution of a college professor, and the story was intriguing, the use of central processing by these students cannot be ruled out.

The first study sought to address a potential confound possibly present in previous research. That is, interpretations of the traditional pre/post-test studies may have been compromised due to student sensitivity to the measurement instrument. In study one, half of the students did not receive a pre-test, yet their post-test scores were not significantly different from those who did take a pre-test. In addition, the only intervening material between pre and post-test for study one was the film, largely eliminating other potential factors responsible for this shift in support. The shift in attitudes in study two was notably larger, but
based on a full semesters’ worth of material. The impact of the film probably added considerably to attitude change. This difference in timing between pre and post-test might also help to explain the contradictory findings of study one and two regarding the relationship between death penalty support and degree of attitude change. In study one, those with strong support of the death penalty showed less of a change of attitude as a result of viewing the film. One could argue that if an entire semester of factual information left them still supporting capital punishment, one Hollywood feature film would do little to change this. In study two, where there was a large gap between the pre and post-test, those with strong support for the death penalty at the beginning of the course had many experiences that might have lessened their support, not the least of which may have been the film.

The lack of support for hypothesis two regarding the relationship between NFC and attitude shift was initially surprising. Other researchers (Haugtvedt & Petty, 1992) have found that, when evaluating arguments for the safety of a food additive, students with high NFC have attitudes that are less resistant to change than those low in NFC. Haugtvedt, Petty, and Cacioppo (1992) found similar results when they had students evaluate the quality of arguments contained in advertisements for a fictitious typewriter. In both of these studies, students low in NFC were found to be unaffected by the quality of the arguments presented. It could be argued that in those studies the arguments required a substantial amount of central processing. Thus, study participants required deep thought to evaluate the arguments being presented. In the present study, students had already worked throughout the semester to master the factual material of the course. They had already considered the possible flaws in administering the death penalty and the film merely added the emotional, memorable, component to support their attitude shift. In hindsight, then, it is not surprising that the present study failed to find correlations between NFC and death penalty attitude change.

Cardaba (2013) investigated the role NFC might play in students’ reaction to messages designed to persuade them to be more supportive of South American immigrants. He found that scores on NFC were not related to attitude change. Students both high and low showed a change in attitude, becoming less prejudiced after the message. However, those attitude changes for high NFC students were more persistent over time. Although the present study found no significant relationship between NFC scores and attitude change, perhaps a long-term study on these attitude changes would yield significant NFC differences in the robustness and longevity of such attitude changes. Another reason that the current analysis may have failed to find a relationship between NFC and other variables is that, relative to scores reported by other researchers
(e.g., Haugtvedt & Petty, 1992) the current scores were quite low; scores could range from 16 to 64 and our participant scores averaged near 45.

Failure to find support for a second facet of hypothesis two, that those with more college experience would be more amenable to attitude change, is also perplexing. This hypothesis was based in part on the findings of Cochran and Chamlin (2005) but also on Mandracchia, Shaw, and Morgan (2013). These investigators found that when comparing high school students to college students, college students rated fewer crimes as being eligible for the death penalty than high school students. This suggests a more thoughtful consideration of the application of capital punishment as a function of education. However, it is difficult to evaluate whether this difference is attributable to years of education or to pre-existing differences between college-bound and non-college bound samples. To test this alternative explanation, high school students who do and do not plan to attend college could be compared.

The finding of study one, that those with the most strongly held supportive attitudes towards the death penalty changed their attitudes the least is consistent with the findings of Vidmar and Sarat (1976). In their study, very few participants with very strong or strong support for the death penalty attitudes changed them towards opposition after reading informative essays about the death penalty. “Most people care a great deal about the death penalty but know little about it, and have no particular desire to know. This is not surprising, as their attitudes are not based on knowledge” (Ellsworth & Gross, 1994, p. 40).

The two studies presented here showed how a small awareness activity can have a significant effect in changing attitudes. This was a more stringent test of change than previous studies since students’ attitudes had presumably been changing all semester as we watched clips of false confessions, mistaken eyewitness identification, police interrogation techniques and visited the innocence project website. Despite the fact that students in this and other studies spent a considerable amount of time reading about and discussing factual material about capital punishment, the emotional content of the film was still powerful enough to affect additional change.

Students in all of the change studies have had the knowledge, presented through coursework, to allow them to construct death penalty attitudes using the central route, however your typical juror has no little or no knowledge. Hence, an emotional appeal may be more effective at encouraging an affective and peripheral-route based change. In the case of actual jurors, long lasting attitude transformation is not necessary as long as the shift lasts throughout deliberation. Unfortunately, if the individual jurors are low in need for cognition, some research suggests their attitudes may be less resistant to any modification at all.
A major limitation of the present study is that the sample consisted of college students. It has been repeatedly demonstrated that white males are those most likely to support the death penalty, and are least likely to consider mitigating factors in the case of black defendants (Lynch & Haney, 2009), so it is probably more difficult and important to effect change in their attitudes. A study using a non-student sample, and collecting information about level of education, age and race would be a logical next step.

Clearly the impact of the film in the present study was robust. Almost all students showed decreased support for the death penalty and, although they did not start out in the higher support categories, many experienced enough change to be placed in a lower support category after watching the film. Of course, there is a problem of self selection because these students voluntarily chose to take a course in forensic psychology and, thus, probably had an existing interest in, and perhaps knowledge of, the topics that were taught. A study in which students in an unrelated, control, course also completed the ATDP pre and post-film would help to address this issue. Finally, in terms of addressing the generalizability of this particular mode of attitude change, additional films with similar content should also be used.

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