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Impact of emotional priming on attitudes towards AMBER Alerts in student and community samples.

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By

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Abstract

This experiment investigated the relationship between primed emotions and attitudes toward AMBER Alerts in samples of students and community members. Differences between respondent groups were also addressed to determine if different status (i.e., student or community member) related to responses. Respondents were 34.1% students at the University of Nevada, Reno, and 65.9% MTurk workers. Respondents were randomly assigned to one of six different conditions. Each condition had a different version of a story (i.e., the prime) involving AMBER Alerts, except for the control. Each version manipulated whether or not there was an AMBER Alert and the outcome of the abduction. Respondents answered a series of pre-test questions then read the story (prime), then answered post-test questions. Responses to the post-test questions were compared to the pre-test responses to determine if there was any change in attitudes toward AMBER Alerts. There was a significant change in respondent attitudes from the pre-test to the post-test, with the post-test scores being more positive on the responses to the AMBER Alert questions. There was also a change in emotions, as measured by the PANAS, with the level of positive emotions increasing and negative emotions decreasing, but the differences between conditions were not significant. The respondent groups were significantly different with regards to the levels of emotional change, as measured by the PANAS. Differences between respondent groups were significant on the AMBER Alert scale and the "something should be done" scale, and the results indicate a significant change in attitudes from the pre-test to the post-test. The respondent groups expressed different levels of support for the AMBER Alerts, and

different levels of support for what should be done. Results have implications for psychology and criminal justice policy.

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The AMBER Alert system (America's Missing: Broadcast Emergency Response), was signed into federal law by President George W. Bush in April of 2003. It is currently in place in all 50 states. It is named after Amber Hagerman, a nine-year old girl who was abducted in the Arlington, Texas area in 1996 while riding her bicycle. Four days later, her body was discovered. Following this, radio managers within Texas worked with local law enforcement agencies and developed a state wide warning system for situations like child abductions, known as "Plan Amber" (Griffin, 2010; Zgoba, 2004). "Plan Amber" was a result of the belief that public assistance could have assisted law enforcement in safely recovering Amber Hagerman (Griffin, 2010). In 2003, this system became a nationwide system through the enactment of the Protect Act of 2003 (Zgoba, 2004), and is now overseen by a joint venture of the US Department of Justice and the National Center for Missing and Exploited Children (Griffin, 2010).

The AMBER Alert system was originally designed to be used in cases of child abductions committed by strangers or other apparently menacing abductors. It is designed to involve the community in the search for the missing child and the offender. Currently, public support for AMBER Alerts is very high (Griffin, 2010). This level of support may be due, in part, to the emotional nature of AMBER Alerts. This experiment will determine what, if any, impact priming emotions has on a respondent's attitudes towards the AMBER Alert system. It is hypothesized, based on existing literature, that a positive emotion will result in higher levels of supportive attitudes towards the AMBER Alert system, and a negative emotion will result in lower levels of supportive attitudes. The purpose of this study is to investigate whether emotional priming (i.e., reading one of various abduction scenarios) will affect the level of supportive attitudes respondents have

for the AMBER Alert system. If emotional priming affects the level of supportive attitudes, this could indicate that people are basing their attitudes about the AMBER Alert system on their emotional state (perhaps instead of on reason and logic), which could lead to policies that are *crime control theater* (i.e., or crime control policies which give the appearance of crime control, but are empirically dubious; Griffin & Miller, 2008).

Finding that *crime control theater* type laws (like AMBER Alert) are based on emotions is a first step in finding ways to avoid adoption of *crime control theater* laws. For instance, if people can be educated about *crime control theater*, they may be less supportive of them, which would allow policymakers to adopt more reason-based crime responses which will be more effective at reducing crime compared to *crime control theater* laws and policies.

This experiment will also compare the responses of students and community members to see if there are any differences. The researchers here believe that students will be different from community members because the two groups have been found to be different in existing literature (Blanchard-Fields, Jahnke &Camp, 1995; Caprathe, 2011; Chomos & Miller, under contract; Durham & Dane, 1999; Fox, Wingrove & Pfeifer, 2011; Hosch, Culhane, Tubb & Granillo, 2011; McCabe & Krauss, 2011; McKay-Nesbitt, Manchanda, Smith & Huhmann, 2011; Miller, Wood & Chomos, in press; Senol-Durak & Durak, 2011), which will be discussed later in this paper. The results could also have policy implications because if there are differences, it may show that these two groups are distinct and would not support policies at the same level. From a theoretical perspective, it will also show whether both groups rely on emotions equally when they are making decisions about their levels of support.

AMBER Alert

AMBER Alert is a system used by law enforcement to enlist the public's help in recovering children who have been abducted. When certain criteria (e.g., a confirmed child abduction, a description of the suspect) have been fulfilled, police issue an AMBER Alert, which is disseminated through various means (e.g., television spots, radio announcements, highway light boards). AMBER Alerts have been criticized as being *crime control theater*, which is defined as "socially constructed 'solution' to a socially constructed problem, enabling public officials to symbolically address an essentially intractable threat" (Griffin & Miller, 2008, pp. 159). These policies appear to solve the crime-related issues and make the general population feel good that something is being done, but when studied, they either do not solve the problem and/or create more problems. For example, AMBER Alerts appear to assist in the successful resolution of child abductions, when they are marginally effective (Griffin, 2010), which provides support for the idea that the AMBER Alert system is *crime control theater* because they merely appear to solve a crime-related issue, in this case, child abductions.

AMBER Alerts have been the topic of a moderate volume of literature. There have been supporting and criticizing works by criminologists which discuss, the 'successes' (Griffin, 2010), whether or not AMBER Alerts are an appropriate solution to child abductions (Zgoba, 2004), ways to improve the AMBER Alert system (Miller & Clinkinbeard, 2006), the effects of AMBER Alerts (Griffin, Miller, Hoppe, Rebideaux, & Hammack, 2007) and whether AMBER Alerts are *crime control theater* (Griffin & Miller 2008). These studies are very relevant to the current study because they provide the basis for the line of inquiry that is used to form the research questions. This literature informs

the researchers as to how to properly phrase the research questions about AMBER Alerts, how to form the manipulated primes, and how to word the questions used in the survey to properly understand peoples' attitudes toward AMBER Alerts.

Psychologists have also taken note. For instance, scholars have indicated how psychological theories cast doubt on whether AMBER Alerts can work as intended (Miller, Griffin, Clinkinbeard & Thomas, 2009), noted the psychological reasons leading to AMBER Alert's popularity (Sicafuse & Miller, 2010), and indicated that learning more about the reality of AMBER Alerts from an expert can reduce positive attitudes about AMBER Alerts (Sicafuse & Miller, 2012). Scholars have also revealed that messages about AMBER Alerts can act as primes which affect perceived importance of source credibility, with respondents saying they would be more willing to look for the child if the abduction was reported as an AMBER Alert rather than just a news story (Greer, Pan, Flores & Collins, 2012). These studies are very relevant to the current study because they provide for the psychological aspect used. These studies allow for a psychological connection between AMBER Alerts and primes, as well as providing a solid grounding for the connection between attitudes toward AMBER Alerts and emotions that is being investigated in this study. Each of these studies provides a basis for this study examining respondents' attitudes towards AMBER Alerts. This study will add to this body of literature by providing a connection between emotions and attitudes as they relate to AMBER Alerts. The above mentioned studies provide the basis for the first research question (Do respondents' attitudes about AMBER Alerts change from pre-test to post-test after reading about AMBER Alerts, and is that the same across conditions?), second research question (Do the experimentally manipulated prime conditions differentially

affect attitudes about AMBER Alerts?), third research question (Does status [i.e., student or community member] influence attitudes about AMBER Alerts?), fourth research question (Are emotions related to attitudes about AMBER Alerts?) and tenth research question (Do the various priming conditions affect perceived levels of influence by the various actors in the story provided [e.g., police, abductor, AMBER Alert system, citizen]?).

This study will determine whether priming emotions will affect attitudes toward the Alert system; if so, results will suggest that people's attitudes toward AMBER Alerts are (in part) products of their emotions. This will add to the contributions made by Sicafuse and Miller (2010) by providing another measure of AMBER Alert popularity and community sentiment. This study will also support the work which investigated level of engagement of the general public, based on whether or not the child was reported missing through the AMBER Alert system (Greer et al., 2012). Respondents who read the missing child announcement called an AMBER Alert rated the abduction as more important than those who read it as merely a breaking news story. This shows that respondents' responses to AMBER Alerts are different from their responses to other types of information, even the subtle difference between calling the information an AMBER Alert as opposed to a 'missing child' news story. More importantly, Greer et al. demonstrate that AMBER Alert primes (i.e., stories about abduction) can affect people's cognitions (specifically, beliefs about the importance of the announcement style), leading to the hypothesis that reading about an abduction can also affect emotions and attitudes, as discussed in the next sections.

Priming Emotions and Attitudes

There is little criminal justice research examining priming of emotions and attitudes, however there is much general research on primed emotions and how they affect certain processes, such as consumer risk taking (Mandel, 2003), jury decision-making (Kemmelmeier, 2005), and legal responsibility and blame (Feigenson & Park, 2006). From these articles, and the various methods they used, we can create a working definition of "priming of emotion," which is the process by which certain specific emotions are evoked through the use of stimuli designed to target a specific emotional response (Feigenson & Park, 2006; Kemmelmeier, 2005; Mandel, 2003). All of the studies in the following sections are moderately relevant to the current study. As a whole, these studies provide the basis for the second research question (Do the experimentally manipulated prime conditions differentially affect attitudes about AMBER Alerts?), fifth research question (Do the experimentally manipulated prime conditions differentially affect emotions?), eighth research question (Do respondents' emotions change from pre-test to post-test after reading the provided story?), ninth research question (Do the various priming conditions influence punitivity?) and tenth research question (Do the various priming conditions affect perceived levels of influence by the various actors in the story provided [e.g., police, abductor, AMBER Alert system, citizen]?). The following sections will address psychology and priming and priming of legal attitudes in more detail.

The psychology of priming emotions and attitudes

Early priming studies were designed to understand how information was stored and represented within memory (Anderson, 1983). Memories can be organized by

emotional content, among other ways. Anderson developed various models that conceptualized memory storage as a system of connected nodes, with each node representing a specific concept. The various nodes create associative paths to connect to one another. For example, "child abduction" can be a node of memory that will be linked to "sadness," but will most likely not be linked to "joy". People can be primed to experience both *positive* emotional states (Biss & Hasher, 2011), and *negative* emotional states (Zemack-Rugar, Bettman & Fitzsimons, 2007), based on what stimuli respondents experience.

Anderson's (1983) model provides for a clear understanding of information storage and memory formation. This model relates to priming research because if certain information is presented in a particular fashion, it may be stored in the brain sooner and could have an influence on decisions that a person makes after receiving certain information. For example, people store *recent* information before *frequent* information if there is a short delay between the stimuli and the mental request for categorization, but this relationship is reversed when there is a long delay (Higgins, Bargh & Lombardi, 1985). Depending on the information provided, a person may have different attitudes about what is presented to them. Attitudes can be activated by the presence of an object that the subject has been primed with, and this activation is spontaneous and automatic. This activation was dependent on the strength of association between the attitude and the object. The stronger the prime and the shorter the time between prime and measurement of the attitude, the more the prime will affect attitude (Fazio, Sanbonmatsu, Powell, & Kardes 1986). These studies are applicable to the current research because they demonstrate that a strong prime and a short delay will give the strongest connection

between attitudes and the stimuli (prime). In the current study, efforts will be made to create a strong prime, through the use of a hypothetical child abduction. It will also involve a short delay between the prime and measurement of attitudes, because the respondent will immediately fill out a survey after reading of the abduction.

Attitudes are also influenced by moods and emotional states. Schmid et al. (2011) found that priming affected how people processed information, based on their mood at the time. This was done by following the eye movements of the respondents while they were performing an emotional recognition task. This applies to the current study because it shows that people's moods will determine how they will process information given to them. While Schmid dealt with moods, which are general feelings, his results might also be applicable to emotional states, like the ones being studied here, because of the work done by Beedie, Terry, and Lane (2005). These authors investigated non-academic distinctions between emotion and mood by asking respondents to detail their opinions of emotion and mood according to such characteristics as cause. Cause was listed as a distinguishing feature between emotion and mood, with "Moods are general background feeling states, with no specific cause or direction. Emotions have a specific cause and are directed at a specific object" being the most representative non-academic response (Beedie et al., 2005, p. 863). Since emotions are different from moods, the current study combines the work done by Beedie et al., and Schmid et al., because it examines the influence of emotions and how respondents process given information differently.

Emotions and attitudes are connected in such a way that emotions can influence attitudes (Forgas, 1995). When certain emotions are primed, through the use of various methods (i.e., short stories, video clips), certain attitudes can be invoked and measured,

which is what the current study will attempt to accomplish. This applies to a wide range of fields, including legal attitudes.

Priming, emotions, and legal attitudes

The basic priming literature briefly mentioned above spurred legal psychology researchers (Boppre & Miller, in press; Bright & Goodman-Delahunty, 2006; Horowitz, Kerr, Park & Gockel, 2006; Sicafuse & Miller, 2010; Watson, Clark & Tellegen, 1988; Wiener, Bornstein & Voss, 2006) to do more specific research on emotional priming related to legal attitudes. The basis for the use of priming within the current study is based on the concept that reading a certain story (i.e., prime) will affect attitudes toward the topic discussed in the story (Sicafuse & Miller, 2010). Specifically, if one were to read a story about a child abduction in which an AMBER Alert was issued and the child was recovered safely, that persons' attitudes towards AMBER Alerts should be more positive than those of a person reading about a child abduction in which an AMBER Alert was issued, but the child was not recovered safely.

The relationship between the prime and the attitude might not be direct, however. It might be mediated by emotions. To wit, the prime causes emotions and emotions cause the attitude. Indeed, psychology-law research has indicated that legal stimuli can affect emotions. The emotions of jurors can be primed through the use of victim impact statements (VIS) and execution impact statements (EIS; Boppre & Miller, in press). In that study, the emotions of the mock jurors were measured on the PANAS (Positive Affect Negative Affect Schedule; Watson, Clark, & Tellegen, 1988); researchers found that VIS and EIS statements affected the emotions of the mock jurors, at least marginally. Respondents who read the EIS experienced more positive affect than the comparable

group who did not read the EIS. Respondents who read the VIS experienced more negative affect than the comparable group who did not read the VIS. While that study primed emotions through the use of written VIS and EIS, the current study primed emotions through the use of written manipulated prime conditions. Like Boppre and Miller, the current study uses the PANAS to measure emotions. PANAS is used here because its use by Crawford and Henry (2010), show its validity and usefulness for measuring emotions in a large sample.

There are also studies which deal with the use of evidence in a legal trial as a prime to influence jury decision-making (Bright & Goodman-Delahunty, 2006), the effects of emotional biases and juror nullification (Horowitz, Kerr, Park & Gockel, 2006), and the interactions between decision-making, obedience to the law, and eyewitness memory (Wiener, Bornstein & Voss, 2006). These studies are a good representation of emotional priming as it applies to the criminal justice field, and how emotional memories (i.e., such as those of an eyewitness) affect decision-making. The current study will further what is known about how primed emotions can affect legal attitudes by studying whether primes can affect emotions and attitudes about AMBER Alerts. The emotions evoked by primes can affect attitudes, as discussed next.

Emotions and Attitude

The field of literature on the connection between emotions and attitudes can be separated into various categories, including legal connections and psychological connections. The legal connections category includes literature on the role of emotions and attitudes towards hate crimes (Sullaway, 2004), emotional responses to sexual assault (Klippenstein & Schuller, 2012), and pre- and midtrial prejudices (Vidmar, 2002). These studies focus on how emotions are a part of the Criminal Justice field as a whole. The psychological connections category includes literature on how emotions affect cognitive judgments (Ask & Granhag, 2007), and how mood impacts the ability to process information (Schmid, Schmid, Bombari, Mast & Lobmaier, 2011). Similar psychological connections can be found in literature on emotions and political attitudes (Parsons, 2010), the role task difficulty plays in the use of affect as information (Tobin & Tidwell, 2013), and the connections between affect, information, and attitudes (Homer, 2006). These studies look at the broader connections between emotions and attitudes that do not relate to the criminal justice field. These studies are also very relevant to the current study because they provide the basis for the fourth research question (Are emotions related to attitudes about AMBER Alert?), sixth research question (Does the status of respondent differentially relate to emotions?), seventh research question (Is emotion a mediator between the prime and attitude?), and eighth research question (Do respondents' emotions change from pre-test to post-test after reading the provided story?). A psychological theory to explain the connection between emotions and attitudes can be found in the Affect Infusion Model (AIM; Forgas, 1995). The AIM can be used to explain the general phenomenon of emotions discussed next.

Generally, emotions affect a variety of attitudes about oneself. For example, emotions affect respondents' self-reported performance ratings of how well the respondents complete various tasks (Tobin & Tidwell, 2013). When respondents use emotions based on advertisements to make decisions about specific brands, positive affect impacts attitudes and negative affect impacts utilitarian and hedonistic attitudes toward known and unknown brands (Homer, 2006). These studies tie into the current study because they illustrate how affect impacts attitudes and attitudinal formation. Emotions have a direct effect on attitudes toward political candidates that could lead to more political involvement (Parsons, 2010). These findings apply to the current study because they show that emotions affect attitudes, albeit political ones. All of the articles mentioned above share one very important idea that is crucial to this study: emotions affect attitudes. In general, people's emotional state will affect their attitudes on relevant topics (Homer, 2006; Parsons, 2010; Schmid, et al, 2011; Tobin &Tidwell, 2013).

The idea that emotions affect attitudes can be investigated by use of the AIM. The AIM put forward by Forgas (1995) uses four judgmental strategies (i.e. direct access, motivated, heuristic, and substantive processing) to account for situations in which affect impacts decisions. The current study uses the basic idea of this model that emotions affect attitudes. However, the current study does not go into the specific strategies discussed by Forgas (1995). This model is based on the affect-as-information model which posits that "rather than computing a judgment on the basis of recalled features of a target, individuals may…ask themselves: 'How do I feel about it?'… [I]n doing so, they may mistake feelings due to a pre-existing state as a reaction to the target" (Schwarz, 1990, p. 529). This model essentially hypothesizes that individuals use their feelings

about a specific situation or object to determine their course of action, as opposed to using the specifics about the situation or object. The AIM can be used as a basic conceptual underpinning for this study because the current study investigates how emotions affect attitudes. The AIM would predict that respondents will use their emotional states as information to form their attitudes. Specifically, positive emotions would lead to positive attitudes about AMBER Alert, while negative emotions would lead to negative attitudes about AMBER Alert, according to the AIM. Because of this, the AIM, while not directly used, is very relevant to the current study in order to create the connection between emotions and attitudes that is used as the basis for the second research question (Do the experimentally manipulated prime conditions differentially affect attitudes about AMBER Alerts?), fourth research question (Are emotions related to attitudes about AMBER Alerts?), and seventh research question (Is emotion a mediator between the prime and the attitude?).

In the previous section, the connection between priming and attitudes was discussed. Emotions act as a moderator between the two. Priming will result in a specific emotional state being aroused within an individual. This emotional state will potentially change an individual's attitudes toward a specific topic. However, the topic of emotions and attitudes has not been studied when applied to AMBER Alerts. This study will add to the current literature by bridging this gap. It is important to note, however, that the relationship between emotions and attitudes might not be the same for college students as they are for community members.

Students versus Community Members

Within various areas of research, including legal attitudes, processing (e.g., priming, Need for Cognition [NFC]), and emotions, differences between undergraduate students and members of the community have been found and discussed. This is relevant to this study because this study will be comparing students to community members in their change in attitudes. All of the studies mentioned in the following sections are very relevant to the current study. Not only do they show the differences between students and community members, they provide the basis for the third research question (Does status [i.e., student or community member] influence attitudes about AMBER Alerts?), and sixth research question (Does the status of respondent differentially relate to emotions?).

Legal attitudes

Caprathe (2011) discussed the differences between students and community members acting as mock jurors. Caprathe noted that students represent a small portion of the population; as such, results from student mock jurors may not be representative of the population at large. Fox, Wingrove, and Pfeifer (2011) found jury panelists were more punitive than students. Most students were found to be in favor of a split recovery solution in civil trials. These findings would indicate that the use of student samples would not be a true reflection of the general populations' behaviors. This would support the differences discussed by Caprathe (2011). However, Hosch, Culhane, Tubb and Granillo (2011) found that students would be more punitive in their decisions than general community members. These results are in opposition to the findings of Fox, Wingrove, and Pfeifer (2011). A possible reason for this difference is that while Fox,

Wingrove and Pfeifer (2011) examined the differences between students and jury panelists using a medical malpractice vignette, Hosch, Culhane, Tubb, and Granillo (2011) used a videotaped criminal trial. Additionally, the different methods may account for the differing results, due to one study using a medical story and the other study using a videotaped criminal proceeding. The differences between students and community members, and their legal attitudes, can be better understood by examining the differences between each group in how they process information.

Processing

Information processing affects how that information influences attitudes. Miller, Wood, and Chomos (in press), found that students had lower rational processing (as measured by the Need for Cognition [NFC] scale) and experimental processing (as measured by the Faith in Intuition [FI] scale) scores than community members, but the students had higher scores on the Cognitive Experiential Self-Theory logic problems than the community members did. These results support the findings by McCabe and Krauss (2011). McCabe and Krauss found that community members would score higher on the NFC and FI scales, but these findings were the result of separate studies and did not include a statistical comparison. McKay-Nesbitt, Manchanda, Smith and Huhmann (2011) investigated how individual characteristics interacted with each other to influence attitudes, involvement, and recall. Their results revealed that older adults preferred rational and positive messages over negative-emotional messages and that younger adults recalled emotional messages better than rational ones. These results can be interpreted as support for the idea that college students, who are traditionally young adults, differ from community members, who are traditionally older adults. Durham and Dane (1999)

investigated the differences between students' and typical prospective jurors' knowledge of eyewitness identification factors. Their results showed that the knowledge of students was statistically higher than that of the more typical prospective jurors. This applies to processing because the knowledge a person has will influence how they process new information. Chomos and Miller (under contract) investigated how individual differences are related to community sentiment, specifically towards Safe Haven laws. Their results found that individual differences significantly predict support for Safe Haven laws. These results further the idea that individual differences influence how people make decisions and respond to various questions.

Emotions

Emotionally, students also differ from community members. Blanchard-Fields, Jahnke and Camp (1995) investigated emotional differences with regards to problem solving styles between students and community members. Their results showed the style of problem solving differed based on how emotional the situation was. Older adults used certain strategies, such as passive-dependent and avoidant-denial, more than younger adults. This means that younger adults are more emotional, and use more emotional strategies, than are older adults. Senol-Durak and Durak (2011) investigated the Emotional Approach Coping Scale (EACS) using a group of community members and a group of university students. Their results showed enough differences between the two groups on emotional coping to show that the various properties of the EACS support it as a useful scale. It also supports the concept of differences between college students and community members.

Studies such as these describe a variety of differences between college age students and community members. The groups will differ, not only in their decisions, but also in their emotions and decision-making processes. This shows why it is important to determine whether attitudes are related to support for the AMBER Alert system, and if this is the same relationship for students and community members.

Overview of Study

This study determined if being primed by a certain story (i.e., the prime) affects respondents' attitudes toward the AMBER Alert system; it will also determine if this relationship is mediated by emotions. Respondents answered various questions which measured their baseline level of supportive attitudes towards the AMBER Alert system and their emotions. Additionally respondents answered various questions about their general knowledge of the criminal justice system. The general questions were included as distraction questions so as to not make the purpose of the study too obvious. Following this, respondents were instructed to read a randomly selected story (i.e. prime) about an abduction designed to evoke emotions. The instructions indicated that the purpose of the story is a test of the respondents' editing skills. This deception task was used so that respondents do not figure out that we are specifically trying to affect their responses by having them read a story about AMBER Alerts. Deception was purposefully used here in an effort to avoid testing effects on the part of the respondents. The researchers believe that the benefits of avoiding testing effects outweigh the potential harm of respondents being upset or aggravated at being lied to. However, this may not be the case in every study, so researchers should weigh the costs and benefits of deception before using it in their studies. Following the story, respondents indicated their attitudes

about the Criminal Justice system generally and the AMBER Alert system specifically, along with their current emotions, using the same series of questions they answered prior to reading the story. This was done to determine the influence, if any, of certain emotional states on attitudes toward the AMBER Alert system. This research was designed to answer the following research questions:

1) Do respondents' attitudes about AMBER Alerts change from pre-test to post-test after reading about AMBER Alerts, and is that the same across conditions?
2) Do the experimentally manipulated prime conditions differentially affect attitudes about AMBER Alerts?
3) Does status (i.e., student or community member) influence attitudes about AMBER Alert?
4) Are emotions related to attitudes about AMBER Alert?
5) Do the experimentally manipulated prime conditions differentially affect emotions?
6) Does the status of respondent differentially relate to emotions?
7) Is emotion a mediator between the prime and the attitude?
8) Do respondents' emotions change from pre-test to post-test after reading the provided story?
9) Do the various priming conditions influence punitivity?
10) Do the various priming conditions affect perceived levels of influence by the various actors in the story provided (e.g., police, abductor, AMBER Alert system, citizen)?

Method

Procedure

Respondents completed an experiment posted on the website SurveyMonkey.com. The survey will involve a mixed design (i.e., both a pre-test post-test design and an experimental design). Respondents answered the survey questions, including a questionnaire measuring emotions and attitudes about AMBER Alerts, without any priming to establish a baseline of their attitudes and emotions. The questions were presented in a randomized order in an attempt to remove any testing effects from repetition of the questions. Following the first series of questions, they read one of six short manipulated prime conditions, determined at random by computer. There were between 39 and 57 respondents in each condition. These short manipulated prime conditions were specifically drafted to elicit an emotional response from the respondent. Following the reading of the manipulated prime condition, the respondent answered the same set of questions as before the reading. This procedure determined how reading the story impacted their emotions and attitudes, through the use of a pre-test, post-test design. This study was also an experimental design. The manipulated prime conditions varied in their content by changing the outcome and circumstances of a child abduction. By manipulating the content of the priming conditions in this manner, the experiment determined how the various primes differentially affect post-test responses. This mixed design was chosen in order to provide researchers with a baseline level of attitudes and emotions (i.e., the pre-test) to compare the post-test scores to. This allowed the researchers to evaluate any potential change which may be attributable to the experimental section (i.e., the manipulated prime condition). The experimental design

was also chosen in order to provide for statistically similar conditions through the use of random assignment to each of the six conditions used. This helped to strengthen the internal validity of the current study.

Respondents

Respondents (N = 267) were college students at the University of Nevada, Reno. Students received credit in their classes for taking this survey. Additional respondents participated through the MTurk system (i.e., community members). MTurk has been found to be a viable alternative method of gathering respondents. Berinsky, Huber, and Lenz (2012) found that respondents recruited through MTurk are often a better representation of the U.S. population than other samples. It is important to note at this time that MTurk does not fully generalize to the rest of the population. Because MTurk is an online service, poor people, the elderly, the computer illiterate and other groups who do not have access to the MTurk system are excluded from this voluntary service. Because people willingly sign up for MTurk, the respondent base cannot be considered a random sampling, primarily because of the voluntary aspect and the fact that there are some groups excluded from using MTurk. Casler, Bickel, and Hackett (2013) concluded that for some tests, online recruitment, such as through MTurk is a valid supplement to in-person data collection. Buhrmester, Kwang, and Gosling (2011) found that MTurk can be used reliably to obtain high-quality data. The use of compensation for respondents is a benefit because it provides incentive for the respondents to provide quality data. Compensation can be a limitation, however, if the amount offered is too large or too small of an amount. Researchers should be aware of this and offer appropriate compensation based on the length of their studies and through the use of

guidance from appropriate review boards to ensure the amount of compensation is not coercive.

The ratio of respondents was split; 34.1% of the overall respondents were students and 65.9% of respondents were community members. For the community members, 52% were female, 87.2% Caucasian, 21.0% Protestant, and they ranged in age from 19 to 72 (M = 39.59, Mdn = 36.00). For the student respondents, 59.3% were female, 67.4% Caucasian, 31.9% Catholic, and they ranged in age from 18 to 38 (M = 21.14, Mdn = 20.00).

Conceptualization

Each measure was selected specifically, based on what was being investigated. The dependent measures designed by Sicafuse and Miller (2012) were chosen because researchers believed they would provide the best representation of respondents' attitudes toward the AMBER Alert system. The PANAS was chosen because previous research into AMBER Alerts (Boppre & Miller, in press) showed its validity to measure emotions at a specific time.

Materials and Measures

The materials and measures used in this study were specifically chosen and designed based on the information being investigated, as directed by the research questions. The manipulation check questions, experimental conditions, and dependent measures will all be discussed in more detail.

Manipulation check questions. The last set of questions respondents answered were manipulation check question, "What was the outcome of the abduction?" which was answered by a multiple choice question with 5 choices given, one for each outcome. This

question can be found in Appendix F. The purpose of a manipulation check question is to make sure the respondents understood what they read. Each answer to the manipulation check question corresponds to one specific condition. If the respondent actually absorbed the story they read, they will select the answer that is the correct outcome of the story they read.

Experimental stimuli conditions. The manipulations used in this study are the different manipulated prime conditions, found in Appendix A. The short manipulated prime conditions are identical, with regards to the basic facts of the situation. The only differences between priming conditions are the manipulated portions: outcome of the case and the presence/absence of an AMBER Alert.

The manipulated prime conditions that the respondents will read were designed to evoke positive or negative general emotions and attitudes, depending on the condition of the story given. The first condition (e.g., AMBER Alert is issued and seen by a citizen who sees the child and reports the sighting to police, which leads to the safe recovery of the child) is described as an AMBER Alert "success" because the child is successfully recovered, and is designed to evoke a positive emotion, which would also give them a positive attitude about the AMBER Alert system. This is the intended procedure and outcome of the AMBER Alert system. The researchers believe that respondents who are in this condition will show high levels of support for the AMBER Alert system, score high on the positive PANAS and low on the negative PANAS.

The second (e.g., AMBER Alert is issued but does not play a role in the recovery of the child; the child is safely recovered through standard police procedures) and third (e.g., AMBER Alert is NOT issued and the child is safely recovered) conditions will be

called AMBER Alert "no-effect" conditions with positive outcomes. These two manipulated prime conditions are intended to give the respondent no specific emotion about the program, which would also result in no effect on their attitude towards the Alert program, but a positive affect because the child was safely recovered. These are they typical outcomes of AMBER Alerts (National Center for Missing & Exploited Children [NCMEC], 2013). The researchers believe that respondents who are in these conditions will score high on the positive PANAS and low on the negative PANAS. Respondents in the second condition should express higher levels of support than respondents in the third condition, but both conditions will express generally high levels of support for AMBER Alerts.

The fourth condition (e.g., AMBER Alert is issued and seen, but the child is not recovered safely) is described as an AMBER Alert "failure," which would lead the reader to a negative emotion and lead to negative attitudes about the AMBER Alert system because it did not work. The researchers believe that respondents in this condition will express low levels of support for AMBER Alerts, score high on the negative PANAS and low on the positive PANAS.

The fifth condition (e.g., AMBER Alert is NOT issued and the child is not safely recovered) is given as an AMBER Alert "no-effect" with a negative outcome, which is designed to lead the respondent to experience negative emotions, but potentially positive attitudes about the AMBER Alert system because they might feel that an alert, if issued, could have saved the child. The researchers believe that respondents in this condition will express high levels of support for AMBER Alerts, score high on the negative PANAS and low on the positive PANAS.

The sixth and final condition is a control condition story that does not deal with AMBER Alerts or child abduction. The control story deals with an elderly lady interrupting a shoplifting at a store where she is shopping. The researchers believe that respondents in this condition will have moderate levels of support for AMBER Alerts, and score medially on both the positive and negative PANAS. Following the short story, the respondent will be asked to describe any typographical errors they may recall. This is part of the deception, which was intended to prevent respondents from figuring out that the researchers were specifically trying to affect their responses by having them read the story.

Dependent measures survey. The dependent measures used in this study were the attitudes towards the AMBER Alert system (Sicafuse & Miller, 2012). There are 9 filler questions added to these which will assist in the deception. These questions were about general Criminal Justice topics and were answered across the same Likert scale as used by Sicafuse & Miller (2012). Other dependent measures included level of punishment (punitivity) for the criminal; if something should be done to help recover abducted children even if it is not always effective, it costs a lot of money, or there is a negative outcome ("something should be done" scale); and how much impact the various entities, such as the police, the abductor, the citizen, and the AMBER Alert, have on the outcome of the abduction case, and the PANAS (Positive and Negative Affect Schedule; Watson, Clark, & Tellegen, 1988) measure.

The scales were created through the use of averaging and a factor analysis. Averaging items together to create scales ensures that the data remains on the same measure as the individual items as well as accounting for any missing data. Missing data

is accounted for because averaging better reflects the most likely level based on the data present. Adding would not provide a proper reflection of the most likely levels based on the data present. The factor analysis process provides for the Cronbach's Alpha, which is a representation of the reliability of the scale. Alphas close to one indicate a high level of reliability, while alphas close to zero indicate a low level of reliability.

There were two measures of attitudes/support for the AMBER Alert. First was the measure for supportive attitudes towards the AMBER Alert system (Sicafuse & Miller, 2012) (Cronbach's Alpha = .893[pre-test] .905 [post-test]). Based on the Cronbach's Alpha, these were acceptable measures to use. These 8 questions, found in Appendix B, were measured on a Likert scale from one ('Strongly Disagree) to five ('Strongly Agree'). Questions included whether or not the respondents support increasing AMBER Alert funding, as well as if they believe the AMBER Alert helped solve the case. These items were averaged together into a scale. Averaging was used to provide a succinct amount of data that was easy to analyze.

The second measure of attitudes was the "something should be done" scale. This scale was comprised of 3 questions (Cronbach's Alpha = .757). These questions asked for respondents to indicate their level of agreement with statements such as, "Something should always be done to recover abducted children even if there is a negative outcome." The responses to these questions were averaged together to create the "Something should be done" scale. Averaging allowed for a succinct amount of data that was easy to analyze. The Cronbach's Alpha indicates that this was an acceptable scale to use. The questions about whether something should be done to recover abducted children with the

three conditions are measured on a Likert scale from one (‘Strongly Disagree’) to five (‘Strongly Agree”). These 7 questions can be found in Appendix D.

The PANAS was separated and averaged into positive (Cronbach’s Alpha = .898[pre-test] .918[post-test]) and negative (Cronbach’s Alpha = .894 [pre-test] .918 [post-test]). The Cronbach’s Alpha indicates that the PANAS was an acceptable scale to use, both pre-test and post-test. The PANAS is a 10 item self-report scale, which is designed to provide measures of both positive and negative. The test items are single mood descriptors (e.g., happiness, sadness, anger, etc…) and respondents are asked to rate the extent to which they have experienced these feelings within a specified time frame, using a five point scale ranging from one (‘very slightly or not at all’) to five (‘very much’) (Crawford et al., 2009). Crawford et al, found that the PANAS scale was an effective self-report mood scale. The PANAS used can be found in Appendix C.

The punitivity question, “How much punishment should the criminal receive?” was measured on a Likert scale from one (‘Least allowed by law’) to five (‘Most allowed by law’). This question can be found in Appendix D.

The question about the impact of the various entities (i.e., police, abductor, citizen, AMBER Alert) on the outcome of the provided situation was measured on a Likert scale from one (‘Very Low’) to five (‘Very High’). This question can be found in Appendix E.

Likert scales are linear, are used as a structure for measures, and are used in conjunction with a number of techniques to increase their validity. Within any survey, the scales themselves usually run from left to right (Nicholls, Orr, Okubo, & Loftus, 2006). Within the current study, the Likert scales are formatted from left to right, with

one on the far left and five on the far right. This format was chosen to ensure that all the scales were in the same format and to reduce confusion for the respondents.

Results

Statistical information

All of the statistical information provided was derived through the use of SPSS. The statistical process used for each question was determined by the types of variables being investigated, the number of levels of each variable, and any relation between variables. ANOVA was used when the IV(s) were categorical and the DV was continuous. If there were multiple related DVs, a MANOVA was used instead of an ANOVA. Correlation was used when the variables being investigated were both continuous, and t-testing was used when the IV had only one level as there was only one IV being used at a time, and when the IV being investigated was categorical and the DV being investigated was continuous.

Post hoc testing was also utilized during the analysis of the data. A post hoc test is used after a previous test, such as an ANOVA, that indicates significance when there are multiple levels to the IV. The post hoc test allows researchers to determine which level of the IV, if any, is driving the significance in the ANOVA.

Manipulation check

Of the 267 respondents, 8 did not answer the question, while 34 selected the wrong answer. Based on this analysis, it can be assumed that the manipulation did work. The wrong answers to the manipulation check question were primarily found in conditions 4 and 5, with 31.6% and 26.7% responding wrong, respectively. Of these 42 respondents, 26 were community members and 16 were students. These respondents

remained in the sample because statistical analyses were similar whether they were included or not.

Change in respondents' attitudes about AMBER Alerts

Research question one investigated the change in attitudes about AMBER Alerts between pre-test and post-test after reading the various manipulated prime conditions. A repeated measures ANOVA was conducted with pre-test and post-test attitudes as within subject factor and condition as between subject factor. The change in attitudes from pre-test to post-test was significant (F (1, 254) = 4.34, p = .038, ηp^2 = .017). The post-test scores were more positive (M = 3.89, SD = .726) than the pre-test scores (M = 3.85, SD = .688). The interaction with condition was not significant (F (5, 254) = .511, p = .768, ηp^2 = .010). See Table 1 for means for all conditions.

A repeated measures ANOVA was not conducted for the "something should be done" scale because it was only used during the post-test questionnaire.

Table 1

Means and Standard Deviations for all Variables

	Pre-test Attitudes		Post-test Attitudes		Pre-test Positive PANAS		Post-test Positive PANAS		Pre-test Negative PANAS		Post-test Negative PANAS		Something should be done scale	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Community Members	3.93	.658	3.99	.677	2.81	.824	2.70	.881	1.34	.544	1.29	.555	4.11	.809
Students	3.67	.714	3.69	.776	2.75	.911	2.63	.987	1.64	.711	1.52	.731	3.86	.731
Condition 1	3.68	.706	3.78	.789	2.81	.926	2.68	.983	1.42	.638	1.37	.660	4.00	.791
Condition 2	3.90	.724	4.00	.686	2.85	.699	2.69	.757	1.44	.591	1.34	.585	4.17	.801
Condition 3	3.87	.596	3.86	.627	2.78	.901	2.70	.974	1.30	.458	1.30	.603	3.80	.734
Condition 4	3.86	.672	3.90	.775	2.72	.864	2.74	.869	1.50	.743	1.44	.754	4.07	.798
Condition 5	3.78	.750	3.78	.808	2.64	.864	2.49	.948	1.49	.601	1.40	.553	4.01	.802
Condition 6	3.97	.669	4.03	.618	3.01	.820	2.70	.992	1.46	.612	1.32	.546	4.11	.816

Condition and status related to attitudes about AMBER Alerts

Research questions two and three investigated the effects of different manipulated prime conditions and respondent status on the attitudes about AMBER Alerts, using the attitudes scale developed by Sicafuse and Miller (2012) measuring levels of supportive attitudes for AMBER Alerts. A two way ANOVA using the different priming conditions and the status of the respondent (i.e. community member or college students) as IVs and the post-test attitudes as DV was conducted. The differences between conditions were not significant (F (5, 248) = .642, p = .668, ηp^2 = .013). The status of the respondent were significant (F (1, 248) = 8.96, p = .003, ηp^2 = .035). Community members (M = 4.00, SD = .677), expressed more positive attitudes toward the AMBER Alert system than college students (M = 3.89, SD = .776). The interaction between the condition and status of the respondent was not significant (F (5, 248) = .745, p = .591, ηp^2 = .015).

An ANOVA using the different priming conditions and the status of the respondent as IVs was conducted and the "something should be done" scale as DV. This was done to answer research questions two and three. The differences between conditions were not significant (F (5, 246) = .896, p = .484, ηp^2 = .018). The status of the respondent was marginally significant (F (1, 246) = 3.27, p = .072, ηp^2 = .0.13). Community members (M = 4.11, SD = .809) indicated more support for something being done to recover abducted children than college students (M = 3.86, SD = .731). The interaction between condition and status of respondent was not significant (F (5, 246) = 1.29, p = .271, ηp^2 = .025).

Emotions related to attitudes

Research question four investigated if emotions are related to attitudes about AMBER Alerts. A correlation showed that the post-test attitudes were positively related to the positive PANAS, both pre-test PANAS (r (259).175, p = .005) and post-test PANAS (r (259).258, p <.001). A correlation also showed that the post-test attitudes were negatively related to the negative PANAS, both pre- (r (259)-.169, p = .006) and post-test (r (259)-.211, p = .001).

A correlation of the "something should be done" scale showed that these attitudes were positively related to the positive PANAS, both pre-test PANAS (r (258).070, p <.001) and post-test PANAS (r (258).137, p = .05). A correlation also showed that these attitudes were negatively related to the negative PANAS pre-test (r (258)-.162, p = .01) and post-test (r (258)-.202, p = .001).

Priming condition and status of respondent and emotion

Research questions five and six investigated whether the different conditions and the status of the respondent related to emotions. A MANOVA was conducted with positive and negative post-test PANAS as DVs and the status of the respondent and condition as IVs. The main effect for the conditions was not significant (F (10, 494) = .437, p = .931, ηp^2 = .009). The interaction of status and condition was not significant (F (10, 494) = .672, p = .751, ηp^2 = .013). The difference between community members and students was significant (F (2,246) = 5.11, p = .007, ηp^2 = .040). A univariate analysis indicates this effect was driven by post-test negative PANAS (F (1, 247) = 8.36, p = .004, ηp^2 = .03). Community members expressed less negative emotion on the post-test negative PANAS (M = 1.29, SD = .556) than students (M = 1.52, SD = .731).

Emotion as a mediator

Research question seven investigated if emotion acted as a mediator between the different priming conditions and attitudes about AMBER Alerts. Step one of mediation is to determine whether there is a relationship between priming condition and emotion. Because of the answers gathered for research question five did not show any such relationship, there cannot be any mediation.

Change in respondents' emotions

Research question eight investigated whether respondents' emotions changed from pre-test to post-test. For this analysis, the control condition was removed because the focus was on how reading about AMBER Alerts changes emotion. The control condition does not relate to AMBER Alerts. A repeated measures ANOVA was conducted for both the positive and negative PANAS scales. There was a change in positive emotions from pre-test to post-test scores on the positive PANAS (F (1, 217) = 12.50, $p < .001$, $\eta p^2 = .054$). This means that emotions became less positive (pre-test PANAS $M = 2.79$; post-test PANAS $M = 2.68$), so positive emotions started higher and became less positive. The interaction between the variables was not significant (F (4, 217) = 1.75, $p = .139$, $\eta p^2 = .031$). There was a change in negative emotions from pre-test to post-test test scores on the negative PANAS (F (1, 217) = 13.71, $p < .001$, $\eta p^2 = .059$). This means that emotions became less negative (pre-test PANAS $M = 1.44$; post-test PANAS $M = 1.37$), so negative emotions started at a high level and became less negative. The interaction between the variables was not significant (F (4, 217) = .96, $p = .429$, $\eta p^2 = .017$).

Punitivity

A t-test was conducted to compare the levels of punitivity between the two conditions in which the abducted child is not recovered. There is no difference between the two conditions in which the child is not recovered (t (90), .084, p = .934). An ANOVA was conducted to compare the levels of punitivity between the three conditions in which the abducted child is recovered. In the conditions in which the child is safely recovered, there is a significant difference (F (2, 121) = 3.24, p = .043, ηp^2 = .051). Tukey's post-hoc tests reveal that the respondents who read that the AMBER Alert was issued but not seen (M = 4.25, SD = .841) were more punitive than those who read about no AMBER Alert issuance but a safe recovery (M = 3.70, SD = .992).

Impact of entities to emotions and attitudes based on respondent group and condition

A MANOVA was conducted with the questions about the various entities as DVs and experimental condition and status (e.g., student or community member) as IVs. The control group was not included because the control story did not have a question about the impact of the AMBER Alert system. Results were not significant (F (16, 828) = 1.027, p = .425, ηp^2 = .019).

Discussion

The purpose of this study was to determine if emotions had any significant impact on attitudes toward AMBER Alerts, and to test differences between community members and students. The results fall in line with existing literature at times, while other results do not agree with previous research. At this time, it is important to note a series of distinctions between beliefs, attitudes, and decisions. Beliefs are a determination of

existence. A person may believe in a higher being or not, as an example. An attitude is a measure of support towards an object. A person can like or dislike something, which is an expression of their attitude toward that specific object. Finally, a decision is a choice made regarding an object or situation. This is relevant to understand for the current study because, while these terms may seem interchangeable, they are not necessarily. This study investigated beliefs in the AMBER Alert system by presenting a series of statements and asking for the respondents' level of agreement with that statement. While the current study technically used 'beliefs' it is called an 'attitude scale' because Sicafuse and Miller (2012) called it an attitude scale. The 'something should be done' scale was considered a second measure of attitudes for simplicity sake (although it also is technically a belief measure as well). In addition to Sicafuse and Miller, other authors have coined similar scales as 'attitudes', including Greer et al. (2012) and Fazio et al. (1986). Thus using the general term 'attitudes' is a common practice.

The first two research questions investigated whether respondents' attitudes changed from the pre-test to the post-test (research question 1) and whether the conditions differentially affected attitudes (research question 2). The results showed a significant change in attitudes overall, however, the differences between priming conditions were not significant. This means that respondents' attitudes toward AMBER Alerts changed, with their level of positive attitudes increasing and their level of negative attitudes decreasing, regardless of the story they read. The different priming conditions had no effect on responses. This means that the respondents may not have been using the primes to influence their attitudes, or that the direction (i.e., positive or negative) of the emotions does make a difference but was not manipulated by the prime. The emotions of

the respondent may have been influenced by something outside of the study. The respondents may have been using the attitudes toward AMBER Alerts that they had before reading the primes to influence their attitudes, as measured by the post-test questions. They may have expressed support for AMBER Alerts because it provides the illusion of "doing something," even if it does not work out as intended. This could also be because the AMBER Alert system is such a large system that short term emotional and attitude changes are not feasible. In other words, the results of a study that took the respondents an hour or less to complete may not be enough to change attitudes for a long enough period of time to cause legal changes to come about. The AMBER Alert system may not be exactly the same in every region, and as such, it could be hard for a large enough group of people to get together to propose changes to the system, especially based on any change in attitudes that may have occurred by respondents completing this study. This is in line with the concept of *crime control theater* proposed by Griffin and Miller (2008). This may be because respondents can ignore the "failures" of the AMBER Alert system and only look for the "successes." Because of the *crime control theater* aspect of AMBER Alerts, people may be motivated to like the system because it can be seen as "doing something" (Sicafuse & Miller, 2010). Because of this motivation to focus only on the "successes" of AMBER Alerts, the priming used here may have been ignored if the prime was of an AMBER Alert "failure."

Past research (Greer et al., 2012; Sicafuse & Miller, 2012) has found that priming has had an effect on peoples' attitudes and decisions. While their studies used different manipulations and different measures, it should be noted that their priming worked. This could be for a variety of reasons, but, based on literature, the researchers of the current

study believe that the reason priming did not work here is because of the motivation people have to focus on the "successes" of AMBER Alerts and to ignore, or pay less attention to, the "failures." Participants in other studies may not have had this motivation due to the specific content of the manipulated prime conditions in this study. The reason for this lack of motivation could be because of the material covered within the primes. Because the manipulated prime conditions were about child abductions, the respondents may not have been motivated to fully read and comprehend the primes because they may not have wanted to read about a child being abducted. The topic of the story itself may have been off-putting for some respondents. The topic of child abduction is a very emotional topic, and some respondents may have psychologically shut themselves down so they did not have to think too much about the horrors of a child abduction situation. This may have affected this study because the respondents would have shut themselves off from thinking about the situation, which may have resulted in their answers not being true reflections of their attitudes. This current study differs from other AMBER Alert studies in that the primes used for this study were made up entirely, while the primes used for other AMBER Alert studies may have taken information from real-life AMBER Alert situations. This disconnect with reality may have led to a lack of motivation for the respondents because the respondents could have known that these situations were not real and did not need to be fully comprehended for the study.

The third research question investigated whether status influenced attitudes about AMBER Alerts. Results indicated that the status of the respondent, whether student or community member, had statistical significance for post-test attitudes. This means that respondent attitudes toward AMBER Alerts, as measured by the attitudes scale developed

by Sicafuse and Miller (2012), were more supportive of AMBER Alerts during the post-test. The increase is support was greater for community members that in was for students. This could be due to the fact that community members are more likely to have their own children (or nieces and nephews), compared to students. This could lead community members to picture their child being abducted, which could lead them to having higher levels of support for AMBER Alerts, and being willing to spend whatever money is necessary to see their children returned safely. The differences between students and community members in this study supports the differences found in past research (Fox, Wingrove, & Pfeifer, 2011; Miller, Wood, & Chomos, in press; McKay-Nesbitt et al., 2011) because there is statistical evidence showing differences between community members and students in terms of their attitudes toward a topic of inquiry, which was the AMBER Alert system for the current study. Students supported policies which would cost the general public less money, while the community members showed more of a willingness to spend however much was necessary to see a child safely returned. This could also indicate that community members were thinking more rationally about the situation than students, and that community members were using less emotion in their decisions, while students used more emotion than rational thought with their decisions, similar to the results of Senol-Durak and Durak (2011). Findings indicated that community members had less negative emotions than students. This means that the emotions that the community members were using were generally more positive than the emotions being used by the students when they made their decisions.

The fourth research question investigated if emotions were related to attitudes about AMBER Alerts. Results indicated that post-test attitudes were positively related to

the positive PANAS and negatively related to the negative PANAS, both pre-test and post-test. This means that emotions relate to attitudes about AMBER Alerts. This supports the overarching use of the AIM (Forgas, 1995), that was discussed earlier. To wit, emotions affect attitudes. While the current study did not use the differential strategies used by Forgas, the current study does provide support for the basic idea that emotions affect attitudes, albeit without mentioning or investigating how this process occurs.

The fifth research question investigated whether the various primes differentially affected emotions. Results indicated that the various primes did not significantly affect emotions. This does not agree with existing literature (Feigenson & Park, 2006; Kemmelmeier, 2005; Mandel, 2003) which has stated that priming does affect emotions. This could be because the previously mentioned studies examined topics which were not inherently emotional, such as consumer risk-taking (Mandel, 2003), as compared to the very emotional subject of child abductions. The current study's focus on AMBER Alerts, which is a topic of some emotion, may have led to priming not working because respondents were already in an emotional state.

The sixth research question investigated whether the status of the respondent differentially affected emotions. Results indicated that the difference in status of the respondent was significant. This significance means that community members were more emotional than students were. This could be due to the fact that community members are more likely to have their own children (or nieces and nephews), compared to students. The results for research question six are in line with current literature on differences between the two respondent groups (Fox, Wingrove & Pfeifer, 2011; Hosch

et al., 2011; Miller, Wood & Chomos, in press), because the existing literature and the current study all found emotional differences, with the current study using the PANAS to quantify the emotions for this study. Specifically, the existing literature found emotional differences between the two respondent groups on the topics of punitivity in a medical malpractice case, punitivity in a criminal trial, and processing, respectively.

The seventh research question investigated if emotion was a mediator between the prime and attitudes. Results did not indicate any mediation. This does not support current literature which provides for a mediational relationship between emotions, primes, and attitudes (Watson et al., 1988). The results are in line with the literature that does not provide for mediational relationships (Boppre & Miller, in press), so the results are mixed for the existing literature on mediation between emotions, primes, and attitudes. This could be a result of the extremely emotional nature of the manipulated prime conditions, or that priming specific emotions, such as happy or sad, instead of priming for general mood groups, such as positive and negative, would make a difference and allow for mediation. The manipulated prime conditions could have been too emotional for the respondents, which led to them not using their emotions, and just basing their attitudes on the primes themselves.

The eighth research question investigated whether respondents' emotions changed from pre-test to post-test after reading the provided story. Results provide a statistical change from pre-test to post-test. This relates well with previous research that also found emotions changed from a pre-test to a post-test (Beedie et al., 2005; Fazio et al., 1986; Schmid et al., 2011), even those these studies used concepts such as cause for an emotion, emotional recognition tasks, and other objects as their primes instead of

AMBER Alerts. These results indicate that provided material does have an influence on emotions, furthering the literature on that issue.

The ninth research question investigated whether the different priming conditions affected punitivity. Results indicate that respondents were punitive in scenarios in which the child was safely recovered, regardless of the presence of an AMBER Alert. One comparison was between the three scenarios in which the child was recovered safely; in this comparison, respondents who read that the AMBER Alert was issued but not seen were more punitive than the respondents who had read that no AMBER Alert was issued. This may be because the respondents felt that, since an AMBER Alert was issued, the abductor must be a bad guy who needs to be punished, as opposed to the scenario in which the AMBER Alert was not issued, where respondents may have believed that because there was no AMBER Alert, the situations may not have been incredibly serious, and thus less worthy of punishment. A second comparison was between the two scenarios where the child was not recovered safely; in this comparison, there was no significant difference in the level of punitivity between conditions. This means that, when a child is not safely recovered, people will generally be supportive of harsh punishments for the abductor.

The tenth research question investigated whether the various priming conditions and status affected the perceived influence of various entities, such as the police, the citizen, the abductor, and the AMBER Alert system, on the outcome of the given scenario. These results are not significant. This may be because respondents, regardless of their status, did not perceive any one entity to have a large amount of influence, or that multiple entities worked together to influence the outcome of the given scenario.

Implications

This study has a wide range of implications, primarily for the fields of psychology and criminal justice. Some aspects of these implications apply to both fields and others are specific to one field or the other. First, the psychological implications will be discussed, followed by the implications for criminal justice.

Implications for psychology. The implications of this study for psychology are that it provided support for the concept of differences between students and members of the community. This is the biggest implication the current study offers for the field of psychology. These differences further the existing literature and theories on differences between students and community members, based on the statistical findings discussed above. Findings indicated some level of differences in how emotions played a role in attitudes, meaning that there was some degree of different emotions playing a role in attitude formation. However, these findings were not significant. Future research investigating the relationship between emotions and attitudes could investigate why this is. Results also showed a psychological relationship between attitudes and emotions, but this relationship was not significant. What this indicates is that, while there is a relationship between attitudes and emotions, it is not a strong relationship, at least on the basis of this study. This means that this relationship may not exist or have any impact on attitudes. Future research could look into this to see if there is an actual significant relationship between attitudes and emotions. This study also has implications for emotions and psychology. This study furthers the literature on emotions and attitudes, which attempts to show the connections between the two. The findings of this study do not provide for a relationship between emotions and attitudes, but is still useful because it

provides a different avenue for research to follow. Future research can investigate the relationship between emotions and attitudes as they relate to AMBER Alerts, and attempt to see if the relationship is significant in certain situations or not. While this study does not provide a very strong connection, future research can continue to examine this relationship and attempt to provide strong statistical support for this relationship.

Implications for criminal justice. The implications of this study for criminal justice are more for the area of criminal justice policy than the field at large. The findings provided support for an emotional connection between attitudes on AMBER Alerts and related topics, such as level of support. Results indicated that respondents thought that something should be done to recover abducted children, even if it is expensive or if it does not work. Table 1 provides the means for all conditions. The mean for the "something should be done" scale was over the median, which was the response for maintaining the current level, for community members (M = 4.11) and students (M = 3.89), indicating that people support the AMBER Alert system so much that they will continue to support it, regardless of cost and statistics providing evidence for the effectiveness, or lack thereof, of the system. This is a good example of peoples' support for *crime control theater* (Griffin & Miller, 2008), despite all of the problems inherent in the system. With regards to AMBER Alert policy, the results could provide statistical support for the concept of AMBER Alerts as *crime control theater* (Griffin & Miller, 2008). If this is the case, policymakers could use this information to create more effective policies that are not based on emotions, or use emotional responses to policies in such a way as to maximize public support for a policy that actually reduces crime instead of just appearing to reduce crime. While this study can be used to advocate of

policy changes, it must be noted that this is a short survey. Respondents were given stories designed to make them think about AMBER Alerts and their attitudes towards them. As will be discussed in the limitations section, this does not necessarily apply to the real world. People may not necessarily pay attention to AMBER Alerts unless they are made to, as the current study did. People may not care, nor express strong feelings, about AMBER Alerts when they are not exposed to AMBER Alerts.

Limitations and future directions

There are various limitations to this study that must be addressed. The first limitation is found in the manipulation check question. Since most of the incorrect choices to this question were made by respondents in conditions 4 and 5, this may indicate that respondents did not understand the question or the answer choices as they related to the condition that the respondents were in. Another possible reason for this is, because these conditions dealt with the a child who was not safely recovered, the respondents may have just selected the outcome where the child was dead, without recollecting whether or not an AMBER Alert was issued. Future studies should address this by making the distinctions between the choices clearer, so respondents can pinpoint the exact outcome of the story they read.

Another issue that needs to be addressed is that other studies that used manipulated primes (Greer et al., 2012; Sicafuse & Miller, 2012) were successful, while the current study's manipulation was not. This may be because this study used a pre-test while the above mentioned studies did not. It could also be due to the fact that the manipulated primes, the procedures and the methodologies used were different in the current study. While Greer et al., (2012) used the same story with a different method of

presentation (i.e., AMBER Alert or a standard missing child story), and Sicafuse and Miller (2012) used information about AMBER Alerts that was provided by an expert, the current study used stories that were created for the sole purpose of eliciting an emotional response. The current study also used a pre-test to establish a baseline, while Greer et al., (2012) and Sicafuse and Miller (2012) did not use pre-tests. Future research could address this by following the procedures and methodologies of studies that had successful manipulations.

Another issue that needs to be addressed in this study is the joint issue of verisimilitude and consequentiality. Since the respondents were making decisions based on fictional material, the opinions provided may not be how they would view things in a real life scenario, affecting the external validity of this study. This could mean that the findings of this study are not entirely relatable to the real world because people were not expressing their real opinions, which would also affect the external validity of this study. Future research could address this issue by providing manipulated prime conditions that are real instead of conditions that have been made up for the purpose of the study.

Thirdly, the issue of generalizability needs to be addressed. While the results from the respondents who took the survey through MTurk can be generalized to the population, as shown in the study conducted by Berinsky, Huber, and Lenz (2012), as a whole, the results from the student respondents may not be generalizable to the rest of the U.S. population because students are not inherently the same as the general populace or the same as students at other universities. Future studies could address this issue by gathering respondents only through MTurk and focusing on community member only, instead of the split focus on students and community members.

Fourthly, the use of the same questions on the pre-test and post-test may have led to testing effects. While the questions were randomized, some respondents may have remembered the specific questions. Then, they might have answered them similarly on the post-test. Future studies could address this by using questions in the post-test that address the same topics as questions in the pre-test, yet are worded differently, or by changing the ordering of question groups to decrease the chances of respondents remembering the individual questions. Another possible option could be that future researchers organize the study to provide a greater lag time between the pre-test and post-test questions.

Finally, there may be an issue of ceiling effects to be addressed. Because pre-test attitudes had a moderately high mean for students (M=3.67) and community members (M=3.93), their attitudes may not have been able to increase significantly because they were close to the top of the scale to begin with. This could be a result of the respondents already having very high attitudes with regards to AMBER Alerts. Future research could address this by using a different prime, or attempt to moderate the chance of ceiling effects by using less direct questions about AMBER Alerts.

Conclusion

The AMBER Alert system can be viewed as *crime control theater* (Griffin & Miller, 2008). The program sounds good and makes the public feel good, but it might not be the best program. If emotions are the basis for legislation and various programs, such as AMBER Alert, the programs may not be the best for the situation they are created to address. If emotions can change after reading a short story, basing wide-sweeping legislation on emotions might not be the best course of action. Situations may require an

approach that is thoroughly grounded in logic and reason in order to effectively and appropriately deal with the given situation and potentially solve the problem instead of merely making it seem as if the problem is solved. The results of this study have shown that priming can work in influential ways, at least to a small degree when it comes to attitudes about AMBER Alerts, that emotions do influence attitudes, and that these influences occur differently for students than they do for members of the community at large. Once these aspects are accepted by policy makers, more effective solutions to a wide variety of problems can be undertaken to better serve the U.S. population as a whole.

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Appendix A: The six manipulated prime conditions (primes)

Instructions: Read the following story and review it for any typographical errors. You will be asked to list as many errors as you can remember.

Condition 1—AMBER Alert issued and seen, Child safely recovered

In Anytown, U.S.A., a 7 year old girl is abducted from their neighborhood while riding on their bicycle. The parents hear their child scream and run outside. The parents saw a white male, about 5'9" with black hair and wearing jeans and a short sleeve shirt lure their child into a blue Toyota Camry. The parents notify their local police department about the abduction.. After determining that 1) there is a confirmed abduction, 2) there are details about the abductor, and 3) the child missing is under the age of 18, the police then follow their procedures and issue an AMBER Alert. a woman receives the AMBER Alert on her mobile phone while shopping at the local grocery store. As she is leaving the store, she recognizes abductor, child, and vehicle from the AMBER Alert notification. When she gets back to her own vehicle, she notifys the police who arrive on scene and apprehend the abductor and return the child safely to her parents.

Condition 2—AMBER Alert issued but not seen, Child safely recovered

In Anytown, U.S.A., a 7 year old girl is abducted from their neighborhood while riding on their bicycle. The parents hear their child scream and run outside. The parents saw a white male, about 5'9" with black hair and wearing jeans and a short sleeve shirt lure their child into a blue Toyota Camry. The parents notify their local police department about the abduction.. After determining that 1) there is a confirmed abduction, 2) there are details about the abductor, and 3) the child missing is under the

age of 18, the police then follow their procedures and issue an AMBER Alert. while on patrol, an officer spots the offender vehicle in a grocery store parking lot and approaches the offender. The offender is arrested and the child is returned safely to her parents.

Condition 3—No AMBER Alert issued, Child safely recovered

In Anytown, U.S.A., a 7 year old girl is abducted from their neighborhood while riding on their bicycle. The parents hear their child scream and run outside to see a blue car speeding away. The parents notify their local police department about the abduction.. the police do not have enough information to release an AMBER Alert, so do not notify the public. During routine police investigation, officers find the child and safely return her to her parents.

Condition 4—AMBER Alert issued, Child not recovered safely

In Anytown, U.S.A., a 7 year old girl is abducted from their neighborhood while riding on their bicycle. The parents hear their child scream and run outside. The parents saw a white male, about 5'9" with black hair and wearing jeans and a short sleeve shirt lure their child into a blue Toyota Camry. The parents notify their local police department about the abduction.. After determining that 1) there is a confirmed abduction, 2) there are details about the abductor, and 3) the child missing is under the age of 18, the police then follow their procedures and issue an AMBER Alert. a woman receives the AMBER Alert on her mobile phone while shopping at the local grocery store. As she is leaving the store, she recognizes the vehicle and the abductor from the AMBER Alert notification. When she gets back to her own vehicle, she notifys the police who arrive on scene and apprehend the abductor. While searching the abductors car, the police find the body of the child in the trunk of the vehicle.

Condition 5—No AMBER Alert issued, Child not recovered safely

In Anytown, U.S.A., a 7 year old girl is abducted from their neighborhood while riding on their bicycle. The parents hear their child scream and run outside to see a blue car speeding away. The parents notify their local police department about the abduction.. the police do not have enough information to release an AMBER Alert, so they do not notify the public. During routine police investigation, police stop a speeding blue vehicle. They apprehend the driver of the blue car, and while examining his vehicle, they locate the body of the missing girl in the trunk.

Condition 6—Control Story

In Anytown, U.S.A., a 65 year old woman stopped a shoplifting in progress by attacking the thieves with her purse. according to the store manager, without the assistance of the woman, the thieves would have made off with "hundreds of dollars worth of merchandise." The woman is to be honored by the store later this week

Appendix B: Attitudes measure (Sicafuse & Miller, 2008)

Instructions: Please indicate your agreement with the following statements on the scale provided, with 1 being "Strongly Disagree" and 5 being "Strongly Agree."

	1- Strongly Disagree	2	3-Neutral	4	5-Strongly Agree
The AMBER Alert crime control system makes America a safer place for children.	○	○	○	○	○
The federal government should continue to fund the AMBER Alert crime control system.	○	○	○	○	○
I personally support the AMBER Alert crime control system.	○	○	○	○	○
I would support a politician who wishes to abolish the AMBER Alert crime control system.	○	○	○	○	○
AMBER Alerts increase the likelihood that an abducted child will be safely recovered.	○	○	○	○	○
The AMBER Alert system may not be the most effective means of addressing the problem of child abductions.	○	○	○	○	○

	1- Strongly Disagree	2	3-Neutral	4	5-Strongly Agree
State legislatures made the right decision when they implemented the AMBER Alert crime control system.	○	○	○	○	○
Since its implementation, the AMBER Alert crime control system has helped save the lives of many children.	○	○	○	○	○

Appendix C: PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel each emotion at this current moment. Use the following scale to record your answers.

	1-Very Slightly or Not at All	2-A Little	3-Moderately	4-Quite a Bit	5-Extremely
Active	○	○	○	○	○
Attentive	○	○	○	○	○
Strong	○	○	○	○	○
Determined	○	○	○	○	○
Hostile	○	○	○	○	○
Distressed	○	○	○	○	○
Interested	○	○	○	○	○
Proud	○	○	○	○	○
Guilty	○	○	○	○	○
Afraid	○	○	○	○	○
Alert	○	○	○	○	○
Scared	○	○	○	○	○
Excited	○	○	○	○	○
Inspired	○	○	○	○	○
Upset	○	○	○	○	○
Ashamed	○	○	○	○	○
Enthusiastic	○	○	○	○	○
Jittery	○	○	○	○	○
Nervous	○	○	○	○	○
irritable	○	○	○	○	○

Appendix D: Dependent Variable questions

"Something should be done" scale

Please indicate your level of agreement with the following statements on the scale provided.

	1-Strongly Disagree	2	3-Neutral	4	5-Strongly Agree
Something should always be done to recover abducted children even if it is not effective.	○	○	○	○	○
Something should always be done to recover abducted children even if it costs a lot of money.	○	○	○	○	○
Something should always be done to recover abducted children even if there is a negative outcome.	○	○	○	○	○

Punitivity

Please read and answer the following question.

	1-Least Allowed by Law	2	3	4	5-Most allowed by law
How much punishment should the criminal receive?	○	○	○	○	○

Appendix E: Level of Influence question (Not used for the control condition)

Please indicate the level of impact the following entities have on the outcome of the abduction case.

	1-Very Low	2	3-Moderate	4	5-Very High
Police	○	○	○	○	○
Abductor	○	○	○	○	○
Citizen	○	○	○	○	○
AMBER Alert system	○	○	○	○	○

Appendix F: Manipulation check question

What was the outcome of the story you just read?

- AMBER Alert issued, Child found alive
- AMBER Alert issued, Child found dead
- No AMBER Alert, Child found alive
- No AMBER Alert, Child found dead
- Elderly lady broke up a shoplifting attempt.