Seeing Red: Disgust Reactions to Gruesome Photographs in Color (but not in Black and White) Increase Convictions
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CITATION
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Jurors are often exposed to emotionally disturbing gruesome photographs of victims of extreme violence. Judges must determine whether the informational value of these photographs outweighs their prejudicial effect on jurors and are left to their assumptions about juror psychology to do so. The current research draws upon the affect infusion model (AIM; Forgas, 1995) to investigate the affective mechanism through which gruesome photographs might operate. A mock jury experiment presented online adults (n = 193) with murder trial evidence that included verbal descriptions of the victim’s injuries and neutral photographs in all conditions. Participants were randomly assigned to view (a) only the nongruesome photographs or additional gruesome photographs of the victim in (b) color, or (c) black and white (B&W). Color gruesome (vs. nongruesome) photographs increased convictions via the disgust they elicited. Consistent with the AIM, this was especially so for mock jurors with relatively higher awareness of their bodily sensations. The effects of gruesome photographs in color on disgust and verdicts were eliminated, however, when the same photographs were presented in B&W. A second experiment (n = 354) replicated these results and also revealed that viewing color gruesome photographs significantly reduced mock jurors’ sensitivity to a manipulation of defense evidence strength—especially among jurors with relatively higher bodily awareness. Thus, gruesome photographs can increase convictions via direct and indirect affect infusion. Presenting gruesome photographs in B&W might reduce jurors’ emotional reactions while maintaining their probative information.

Keywords: jury decision making, emotion, gruesome photographs, disgust, blame

Lawyers often capitalize on the power of visual images when trying to persuade judges and jurors in court. Now that accidents and violent crimes are commonly captured on surveillance cameras and cell phones, judges and jurors are faced with a barrage of evidence and argument displayed in visual form that is often gruesome in nature. Judges can exclude relevant evidence if they believe that its potentially prejudicial effect outweighs the relevant information that it provides (i.e., its probative value). Judges are left to rely on their commonsense explanations for how emotionally disturbing images might affect jurors’ decisions, which are sometimes inconsistent with psychological research about how emotion affects decision-making processes (Bandes & Salerno, 2015). While previous experiments have demonstrated that viewing gruesome photographs increases pro-prosecution and pro-plaintiff judgments, the psychological mechanism underlying this effect is not yet clear. Critically, there is limited evidence about the emotional impact of gruesome photographs and how those emotions might influence jurors’ decision-making processes.

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The current studies draw upon the affect infusion model (AIM), which describes how negative emotion resulting from emotionally evocative information (e.g., gruesome photographs of a murder victim) can influence the way we process other information and ultimately color our judgments (e.g., verdicts) to be in line with that negative emotion (Forgas, 1995). To test this model in a jury context, two experiments assessed mock jurors’ negative emotions and verdicts in a murder case that included verbal descriptions of the victim’s injuries and neutral photographs in all conditions. Mock jurors were randomly assigned to see only these nongruesome photographs, or additional gruesome photographs of the victim in B&W or color (Studies 1 and 2). This design enabled a test of how viewing gruesome photographs might increase convictions through direct and indirect affect infusion. More specifically, it enabled a test of whether the negative emotions resulting from viewing gruesome photographs would explain increased convictions—especially among those who tend to be relatively more aware of their emotions (i.e., direct affect infusion). Further, the second study manipulates defense evidence strength to test whether gruesome photographs increase convictions by biasing jurors’ processing of other evidence to justify blaming the defendant (i.e., indirect affect infusion). That is, whether gruesome photographs make mock jurors less sensitive to strong (vs. weak) defense evidence. Application of the AIM to this context also suggests an intervention that might ameliorate affect infusion effects on verdicts: presenting the gruesome photographs in a less emotionally evocative way (i.e., in B&W). The following literature review describes the legal context surrounding gruesome photographs in court, the empirical evidence that gruesome photographs
increase convictions, and finally a description and application of the AIM to make specific predictions about how gruesome photographs increase convictions via direct and indirect affective infusion.

**Gruesome Photographs in Court**

Jurors who serve on criminal or civil trials involving an injury are likely to be confronted with potentially disturbing gruesome photographs of the victim. Although there is no official legal definition of “gruesome,” the word is a term of art often used in admissibility decisions regarding victim photographs. Gruesome has been defined as “extremely unpleasant and shocking” (Gruesome, n.d.a) and as “causing horror or disgust” (Gruesome, n.d.b). For the purpose of this article the term “gruesome photographs” refers to graphic depictions of victims’ injuries that are extremely unpleasant and shocking. This encompasses bloody crime scene photographs, autopsy photographs depicting extreme injuries that do not necessarily include blood, extreme burn scars, disfigurement, and so forth.

Although there is no published research establishing the frequency of gruesome photographs admitted into evidence in United States courts, court decisions indirectly suggest their prevalence. Judges are willing to permit gruesome photographs even when they are redundant with other evidence (Ex parte Broadnax, 2001; Ex parte Trawick, 1997) and even if they “have a tendency to inflame the minds of the jurors” (Ray v. State, 2010; State v. Morton, 2005). Some states have even established that gruesome photographs are always relevant regardless of how gruesome they are and how necessary they are to establish cause of death (State v. Morris, 2007; Taylor v. State, 2010; State v. Decker, 2009). One state Supreme Court held that the trial judge’s discretion “runs toward almost unlimited admissibility regardless of the gruesomeness, repetitiveness, and extenuation of probative value” of the photographic evidence (Randolph v. State, 2002). These decisions indirectly suggest that gruesome photographs are often admitted into court.

**Probative or Prejudicial?**

According to Rule 403 of the Federal Rules of Evidence (Committee on the Judiciary House of Representatives, 2004), judges can exclude relevant evidence if its probative value is substantially outweighed by a danger of unfair prejudice. According to the advisory notes to this rule, unfair prejudice is “an undue tendency to suggest a decision on an improper basis, commonly, though not necessarily an emotional one.” Thus, the crucial question for the judge is not whether gruesome photographs affect verdicts, but how and why. This is a very difficult task. First, the judge must attempt to quantify the probative information that jurors would learn from the gruesome photographs, while taking into account whether that information can be established by other verbal testimony, such as testimony from a coroner. Next, the judge must assess the potentially prejudicial impact of the photographs; for example, the judge must decide whether the gruesome photographs might produce negative emotions in the jurors that could bias their legal decision-making process. Finally, the judge must somehow weigh the two against each other. Judges might rely on incorrect assumptions about how emotion affects decision making to do so. For example, some judges’ admissibility decisions and instructions reveal that they assume jurors can divorce emotion from their judgments and control its impact, which is inconsistent with psychological research (for more details, see Bandes & Salerno, 2015). Thus, it is important to determine the degree to which gruesome photographs increase convictions via affective routes to help judges weigh their relative probative vs. prejudicial impact on jurors.

**The Experimental Effect of Gruesome Photographs on Legal Judgments**

Despite the pervasiveness of gruesome images in court and the importance of judges understanding their psychological impact on jurors’ judgments, the relevant psychological literature is relatively small. In eight of the nine published studies about the topic, gruesome photographs increased pro-prosecution or pro-plaintiff judgments. More specifically, mock jurors presented with gruesome photographs (relative to nongruesome photograph controls) are significantly more likely to (a) render guilty verdicts in criminal trials (Bright & Goodman-Delahunty, 2006; Douglas, Lyon, & Ogloff, 1997; Edwards & Mottarella, 2014; Matsu & Itoh, 2016), (b) find defendants liable in civil trials (Bright & Goodman-Delahunty, 2011), (c) deliver more severe sentences (Finkelstein & Bastounis, 2010), and (d) award more damages (Oliver & Griffitt, 1976; Whalen & Blanchard, 1982), while holding all other evidence constant.

There are some qualifications, however, to this relatively consistent pattern of results. Bright and Goodman-Delahunty (2006) found that gruesome photographs increased convictions relative to no photographs—but nongruesome photographs of the crime scene had the same effect. Although Oliver and Griffitt (1976) found that gruesome photographs increased damage awards, they did not affect verdicts. Finally, a study investigating the potential moderating effect of jury instructions found that gruesome photographs did not affect verdicts (Cush & Goodman-Delahunty, 2006). These exceptions to the gruesome photograph effect might be due to unmeasured moderators, such as mock jurors’ level of legal knowledge (Finkelstein & Bastounis, 2010).

**B&W versus color photographs.** Presenting gruesome photographs in a less vivid way might reduce jurors’ potentially prejudicial emotional responses, such as presenting the photographs in B&W rather than in color—as long the color does not represent probative information relevant to a given case. Only two previous studies investigated this question and produced contradictory findings. In a criminal case, color gruesome photographs made mock jurors more likely to vote guilty than mock jurors who saw nongruesome photographs—but this was also the case when they saw B&W gruesome (vs. nongruesome) photographs (Douglas et al., 1997). That is, presenting the gruesome photographs in B&W did not temper their effect. Another study involving a civil case, however, suggests that presenting gruesome photographs in B&W can reduce their effect. B&W (vs. color) versions reduced punitiveness—but the effect depended on the severity of the victim’s injury and the defendant’s level of blameworthiness (Whalen & Blanchard, 1982). The authors “tentatively” argue that the effect of B&W versus color gruesome photographs is due to differences in emotional arousal, but acknowledge that drawing
The role of emotion in the effect of gruesome photographs on legal judgments. Gruesome photographs might make jurors more conviction prone because they increase negative emotions that create a desire to blame and punish someone. That is, there might be an indirect effect of viewing gruesome photographs on legal judgments through jurors’ negative emotions. Some experiments have demonstrated that gruesome photographs increase various negative emotions (Bright & Goodman-Delahunty, 2006; Cush & Goodman-Delahunty, 2006; Douglas et al., 1997; Edwards & Mottarella, 2014) while others have demonstrated null effects on negative emotions (Bright & Goodman-Delahunty, 2011; Edwards & Mottarella, 2014).

To the degree that gruesome photographs do increase negative emotions, they are likely to influence legal judgments because emotions have a moderately sized effect on legal blame judgments (for description of a meta-analysis in preparation, see Feigenson, 2016).

Given that some definitions of gruesome are based on the potential to cause revulsion and disgust, disgust is a prime candidate for a potential mediator of the gruesome photograph effect on verdicts. Gruesome photographs might also operate through other emotions, such as anger, which is known to commonly co-occur with disgust (Marzillier & Davey, 2004). Only one study has directly tested whether negative emotions mediate the effect of gruesome photographs on verdicts. Bright and Goodman-Delahunty (2006) assessed negative emotions before and after a trial stimulus. Viewing gruesome (vs. neutral or no photographs) significantly increased disgust change scores, but not anger change scores. As a result, they tested disgust change scores as a mediator. They also found that viewing gruesome (vs. no) photographs significantly increased mock jurors’ absolute level of anger toward the defendant after the trial (they did not test whether gruesome photographs increased absolute levels of disgust). As a result, they also tested whether mock jurors’ posttrial absolute level of anger was a mediator. Participants’ absolute level of anger explained the effect of gruesome photographs on verdicts, but their disgust change scores did not.

Another study highlighted the importance of anger and disgust in verdict decisions (Salerno & Peter-Hagene, 2013). Mock jurors’ anger increased their moral outrage toward a murder defendant and, in turn, confidence in a guilty verdict—but only if they were also experiencing at least moderate disgust. When disgust was low, anger did not predict verdict confidence. In fact, disgust was a more consistent predictor of confidence in a guilty verdict through moral outrage. More specifically, this indirect effect was significant at all levels of anger—even among mock jurors experiencing no anger. Because these studies have established the importance of disgust and anger in verdict judgments, the present experiments focused on these two emotions as potential mediators of the gruesome photograph effect.

Theoretical Foundation: AIM

The AIM (Forgas, 1995) describes how affective responses to gruesome photographs might influence verdicts above and beyond the photographs’ inherent probative value. Forgas (1995) defines “affect infusion” as the process through which the negative affect inherent in emotionally evocative information becomes integrated into judgment processes, thereby coloring the ultimate judgment. If applied to the jury context, for example, it would describe the process through which the negative emotion that is roused by seeing gruesome photographs of a murder victim is integrated into jurors’ decision-making processes, thereby influencing the jurors’ ultimate verdict. Jury scholars have theorized about how such affect-infusion processes might play out in jury decision making (e.g., Feigenson & Park, 2006; Salerno & Bottoms, 2009), but few empirical tests of this theory in the jury context exist. Forgas (1995) identifies four different types of judgmental strategies, two of which are potentially relevant to how jurors make verdict decisions: heuristic processing and substantive processing. Forgas cites evidence that heuristic and substantive processes are not mutually exclusive, but likely work in concert. Both judgment processes are “high infusion” types of judgments, meaning that the affect elicited by viewing the emotionally evocative evidence is likely to produce judgments that are congruent with that negative affect (e.g., negative emotion increasing convictions). Affect-congruent judgments are likely to occur in both types of processing, but through different pathways: direct and indirect, which are described next.

Heuristic information processing: Direct affect infusion. One way that affect can be directly infused into judgments is through reliance on an “affect-as-information” heuristic, which can result in people mistaking or “misattributing” their feelings due to one source as a reaction to the target (Forgas, 1995; e.g., Schwarz & Clore, 1983, 1988). When making a judgment, people often ask themselves, “How do I feel about it?” and use that affect as relevant information, rather than going through the effort of generating a judgment from the evidence and features of the target (Schwarz, 1990, p. 529). As a result, their absolute level of emotion at the time of the judgment is taken as an indicator of how they feel about the target—even if the emotion is coming from an unrelated source. For example, when jurors are deciding on a verdict, they might mistake the negative emotions that they are experiencing as a result of seeing gruesome photographs of a murder victim for how they feel about the defendant’s guilt—regardless of the actual strength of evidence against the defendant. This affect-as-information process occurs in two stages: people need to identify their affective reaction and then to judge whether it is relevant to their judgment (Albarracin & Kumkale, 2003). As a result, negative affect is unlikely to influence subsequent judgments when people fail to identify that they are experiencing affect in the first place (Albarracin & Kumkale, 2003). This suggests that people’s awareness of their own affect should moderate the effect of the gruesome photographs on verdict judgments: Those who are more likely to be aware of experiencing negative emotion are more likely to infuse it into their verdict judgments. To test this theory, I assessed mock jurors’ bodily awareness as a potential moderator of the gruesome photograph effect.

Bodily awareness is defined as a trait-level individual difference variable that captures the extent to which an individual is chronically aware of the sensations in their body (e.g., palms sweating, increased heart rate, quickening of breath, muscle tension; Porges, 1993). Previous research has utilized this measure to assess participants’ subjective perception of their own internal states as it relates to experiencing emotion (e.g., Critchley, Wiens, Rotshstein, Öhman, & Dolan, 2004; Terasawa, Shibata, Moriguchi, & Umeda, 2013; Wiebking et al., 2011). People who are relatively higher in bodily awareness should be more aware of the physiological symptoms of their affective reactions to the gruesome photographs. As a result, they might be more likely to sense the negative emotional response to the gruesome photographs into their verdict judgments and vote guilty as a result.
Although no one has tested this theory directly in legal settings, similar findings have been demonstrated in moral psychology. For example, when participants are experimentally induced to feel disgust (vs. no emotion or sadness), they judge moral transgressions more harshly—but only among participants who are relatively more sensitive to their own physical sensations (Schnall, Haidt, Clore, & Jordan, 2008).

**Substantive information processing: Indirect affect infusion.**

When jurors use a substantive judgment strategy affect-infusion processes are indirect. Substantive processing is a high-effort processing strategy that includes generating and constructing a judgment from the evidence presented (Forgas, 1995). When people are provided with a large amount of information on which to base their judgment (as jurors always are), negative affect can prime them to selectively pay attention to, retrieve from memory, and interpret the information to be consistent with their negative affect. The culpable control model of blame (CCM, Alicke, 2000) makes similar predictions specific to blame judgments. Alicke argues that feeling negative emotion initiates a biased information search and skewed interpretation of evidence to be consistent with blaming a target. In this context, jurors’ intense negative emotion resulting from gruesome photographs might create a need to blame the defendant, which would motivate jurors to pay less attention to evidence that is inconsistent with blaming the defendant (i.e., defense evidence).

These theories would suggest that the presentation of gruesome photographs in court might present a particular problem for the defense. If jurors are selectively ignoring or discounting defense evidence because it is incongruent with their negative emotional response to seeing gruesome photographs and resulting need to blame someone, even a strong defense case might not reduce their confidence in a guilty verdict. That is, negative emotion and the resulting need to blame a defendant might make jurors pay less attention to defense evidence, choose to discount it, or both. This phenomenon would mean that jurors’ judgments would not be sensitive to a manipulation of defense evidence strength. Specifically, gruesome photographs might make jurors less sensitive to strong (vs. weak) defense evidence compared with jurors who do not have negative emotion roused by gruesome photographs, which, in turn, could result in more convictions.

**Research Overview and Hypotheses**

Two mock jury experiments tested whether color gruesome photographs can make mock jurors more conviction prone via affect infusion. Mock jurors read evidence from a murder trial that included verbal descriptions of the alleged victim’s injuries and emotionally neutral photographs and completed measures of negative emotions, verdicts, and bodily awareness. They were randomly assigned to view the trial with either only the nongruesome photographs, or the addition of gruesome photographs in B&W or color (Studies 1 and 2). Study 2 also included a manipulation of defense evidence strength to begin to investigate whether gruesome photographs might make jurors less sensitive to defense evidence strength. These studies will determine whether all previous gruesome photograph studies, which have relied exclusively on student samples (cf., a sample of Sydney school teachers, Cush and Goodman-Delahunty, 2006), generalize to more diverse samples of adults from across the United States. To test the affective mechanisms underlying the gruesome photographs effect, I hypothesized the following indirect and conditional indirect effects of gruesome photographs on verdicts.

**Hypothesis 1:** Gruesome photographs in color (but not in B&W) increase convictions through increased negative emotion.

I predicted an indirect effect of color gruesome (vs. nongruesome) photographs on verdicts through mock jurors’ anger and/or disgust, such that viewing color gruesome photographs would increase anger and disgust, which, in turn, would increase guilty verdicts. I predicted that this indirect effect would not generalize to B&W gruesome (vs. nongruesome) photographs because they are less vivid and therefore would not produce as much negative emotion to then be infused into verdicts. Further, I predicted that color gruesome photographs would increase guilty verdicts via anger and/or disgust, relative to B&W versions of the same gruesome photographs.

**Hypothesis 2:** Color gruesome photographs will have a stronger effect as mock jurors’ bodily awareness increases.

The affect-as-information process is more likely to occur when people are aware of their affect so that it can then be infused into their judgments (Albarracin & Kumkale, 2003). Thus, I predicted that the likelihood that jurors’ emotional responses to color gruesome photograph would be infused into their verdicts would increase along with their awareness of their bodily sensations. That is, I predicted that the indirect effect of color gruesome photographs on guilty verdicts through increased anger and disgust would be stronger as mock jurors’ awareness of their bodily sensations increased.

**Hypothesis 3:** Gruesome photographs in color will reduce jurors’ sensitivity to strong defense evidence.

The AIM (Forgas, 1995) and CCM (Alicke, 2000) suggest that if jurors’ negative emotions are aroused by gruesome photographs, they will be less likely to process, retrieve, and apply evidence that is incongruent with their negative emotion and resulting need to blame someone for the transgression (i.e., defense evidence). Thus, I predicted that jurors who see strong (vs. weak) defense evidence will rate that evidence as stronger and, in turn, vote guilty less—but that the strength of this indirect effect would be significantly reduced when jurors see gruesome photographs in color relative to seeing only nongruesome photographs. Because this effect is thought to be instigated by jurors’ negative emotion responses, I predicted that this desensitizing effect of gruesome photograph would (a) be eliminated when the gruesome photographs were presented in a less emotionally arousing B&W version, and (b) be stronger among those with relatively higher bodily awareness.

**Study 1**

Study 1 tested the effect of viewing gruesome photographs of an alleged murder victim in color or B&W on mock jurors’ self-reported emotions and verdicts relative to nongruesome photographs.
Participants

Mock jurors were jury-eligible online panel members (i.e., United States citizens who were at least 18 years of age) from Amazon’s Mechanical Turk (Paolacci, Chandler, & Ipeirotis, 2010). Participants were excluded for not being United States citizens (n = 2) and/or failing manipulation checks about which photographs they saw (n = 9.4%). The remaining 193 participants were 60% men and 77% White, 9% Asian, 8% African American, and 6% Hispanic.

Procedure

Panelists were invited to participate in a study entitled “Juror Judgments Research” by “answering a 30-minute survey about your legal opinions regarding a legal case.” The consent form told participants that they were going to see one of several cases, some of which include potentially disturbing photographs of murder victims and might show blood. The instructions reminded them of this to make sure they were aware and required participants to type the exact phrase “I am aware” before advancing to the study. Participants viewed the trial stimulus, read jury instructions, completed measures, and were compensated $2.00. Procedures in both experiments were approved by the University’s Institutional Review Board. Participants took 21.27 minutes to complete the study on average.

Materials

Trial stimulus. Participants viewed a presentation of evidence based on an actual case of a man accused of murdering his wife (R v. Valevski, 2000) utilized in previous research (Salerno & Peter-Hagene, 2013). The gruesome photographs were utilized by previous researchers (Bright & Goodman-Delahunty, 2006), but were presented within a different trial stimulus. The trial evidence was presented via 18 PowerPoint slides that presented the information in a visually appealing manner to facilitate understanding for online panelists (e.g., bullet point summaries of testimony, informational tables clarifying timelines, photographs). In all conditions, the presentation included (in the following order) summaries of opening statements, a coroner’s report that described the victim’s injuries in detail (i.e., the probative information conveyed in the gruesome photographs), testimony from prosecution witnesses, testimony from defense witnesses, and summaries of closing statements. The slides in all conditions included neutral photographs throughout (e.g., photographs of the house where the crime occurred that did not include blood) to ensure that our comparison isolated the effect of gruesome photographs by comparing gruesome + neutral photographs to only the neutral photographs.

The evidence described that the defendant and his wife had an intense argument, after which the victim threatened to leave the defendant with their children and locked herself in a bedroom. The police found the victim still locked in the room the next morning with her throat slit. The prosecution argued that the defendant murdered his wife. In support, a locksmith expert testified that the defendant could have maneuvered the lock from the outside to make it appear locked from the inside. A pathologist expert testified that the crime scene and bodily evidence were consistent with a murder and not with a suicide. The defense claimed that the victim killed herself. In support, the defendant’s neighbor testified that the victim had admitted to experiencing depression. A forensic scientist expert testified that the lack of blood on the defendant, in the house, or in the drainage system was inconsistent with a murder. A pathologist described aspects of the crime scene and victim that supported a suicide explanation (i.e., the position of the knife under her body, bloodstain patterns, lack of defense injuries, nature of the cuts) and refuted the prosecution expert’s arguments directly. This stimulus produced a 62% conviction rate in a previous study. The jury instructions (see Appendix A) were modified from actual Illinois pattern jury instructions for first-degree murder.

Gruesome photograph manipulation. Immediately after the opening statements, participants in all conditions viewed four slides describing the coroner’s report, which provided detailed verbal descriptions of the victim’s injuries (e.g., shape, size, and nature of the victim’s wounds on her throat). Thus, the probative information in the gruesome photographs was described verbally in the coroner’s report to hold the probative information as constant as possible across photograph conditions. Participants were randomly assigned to the non-gruesome photograph control condition (i.e., only verbal descriptions of the victim’s injuries and neutral photographs), or to additionally view four gruesome photographs in B&W or color. In the two gruesome photograph conditions, each of the four coroner’s report slides included a different gruesome photograph of the victim from the actual case evidence presented alongside the verbal descriptions. One photograph depicted the victim’s face and upper body covered in blood. Three others were autopsy photographs of the victim’s cleaned face and upper body and close-up shots of the gaping throat wounds. Although three of the gruesome photographs did not include large amounts of blood, a pilot study ensured that participants found them gruesome (see Bright & Goodman-Delahunty, 2006 for details). Participants were not able to revisit the photographs once they had advanced past them.

The current studies purposefully utilized a case in which the color itself was not relevant to the legal issues that the jurors needed to consider. The trial stimulus presents gruesome photographs of a victim’s throat to help jurors determine whether the injuries were more likely to have been inflicted by someone else or if it was possible that the victim could have made them herself. Thus, in this case, the color and the amount of blood were not relevant to the likelihood that the defendant committed the murder. Although the B&W and color versions of the photographs would both fit the definition of gruesome, including a B&W condition enabled me to assess the impact of the photographs when presented in a relatively less vivid manner while holding the probative information constant.

Measures. Participants first completed the dichotomous verdict measure (guilty vs. not guilty). Next, the anger and disgust measures required participants to simultaneously choose their level of disgust (M = 3.37, SD = 1.33) and anger (M = 2.42, SD = 1.34) on 5-point scales ranging from Not at all to Extremely on a grid designed to discourage people from using the word “disgust” to label their anger (Salerno & Peter-Hagene, 2013; Appendix B) given that people sometimes use the words anger and disgust interchangeably (Nabi, 2002; Olatunji et al., 2012). The anger and disgust measures were predictably correlated, but not redundant, r = .48, p < .001. Finally, the Bodily Awareness Scale assessed
however, the indirect effect of color gruesome (vs. nongruesome) photographs on verdicts through anger was not significant, $ab_1 = .03, 95\% CI [−.10, .21]$, because the color gruesome photographs did not increase anger ($a_1$). As hypothesized, the gruesome photograph effect was eliminated when they were presented in B&W. B&W gruesome (vs. nongruesome) photographs did not increase convictions through disgust, $ab_2 = .04, 95\% CI [−.47, .53]$, or anger, $ab_3 = .15, 95\% CI [−.12, .53]$, as shown in Figure 2. In other words, the disgust reaction to color gruesome photographs that was infused into verdict decisions was eliminated when the gruesome photographs were presented in B&W because they no longer increased disgust ($a_2$) or anger ($a_3$).

Of note, when color and B&W versions of the same photographs were compared directly, the indirect effect on guilty verdicts was significant through disgust, $ab_1 = .32, 95\% CI [.02, .78]$, but not through anger, $ab_1 = .05, 95\% CI [−.40, .50]$; Figure 3. Despite presenting the same probative information, the more vivid gruesome photographs in color increased disgust ($a_2$), which increased convictions ($b_2$) relative to seeing the same photographs in less vivid B&W.

$H_2$: Color gruesome photographs will have a stronger effect as mock jurors’ bodily awareness increases. All conditional indirect effects are reported in Table 2. As predicted, the indirect effect of color gruesome (vs. nongruesome) photographs through disgust was moderated by the continuous bodily awareness measure. The effect was significant when participants had mean levels of bodily awareness, $ab = .17, 95\% CI [.04, .43]$, and relatively higher levels of bodily awareness ($+1 SD, ab = .20, 95\% CI [.02, .63]$). The effect was not significant, however, when participants had relatively lower bodily awareness ($−1 SD, ab = .14, 95\% CI [−.02, .51]$). None of the indirect effects involving anger were significant at any level of bodily awareness. As expected, these indirect effects were eliminated when participants saw B&W gruesome (vs. nongruesome) photographs at all levels of bodily awareness.

### Discussion

Study 1 demonstrated support for the hypotheses. First, viewing color gruesome photographs of a murder victim made mock jurors more conviction prone because they increased disgust; but this
The indirect effect did not generalize to less vivid B&W versions of the same photographs ($H_1$). Consistent with the AIM, even though the color and B&W gruesome photographs contained the same information relevant to the verdict decision, only seeing the relatively more vivid, color photographs produced enough disgust to be infused into verdicts and increase convictions. Second, this effect was stronger among mock jurors who tend to be relatively more aware of their bodily sensations ($H_2$). Feeling disgust in reaction to gruesome photographs is an example of a bodily sensation that people might be relatively more or less aware of, which is the first step necessary for affect to be infused into judgments (Albarracin & Kumkale, 2003). These results suggest that the effect of the gruesome photographs was operating through affective channels: If the effect was driven by the gruesome photographs providing probative information, mock jurors’ level of bodily awareness and the lack of color in the photographs should not have moderated the results. Of note, anger was not a mediator at any level of bodily awareness because—even though both anger and disgust increased convictions—the gruesome photographs increased only disgust. This is particularly noteworthy, given that the same gruesome photographs were used in a previous study that demonstrated anger explained the effect of the gruesome photographs, but disgust did not (Bright & Goodman-Delahunty, 2006)—a point addressed in detail in the General Discussion section.

**Study 2**

Given that the results in Study 1 contradicted the only previous test of mediation, the first goal of Study 2 was to replicate the Study 1 results. The second goal was to extend the investigation by testing whether viewing color gruesome photographs would make participants more conviction prone indirectly because they bias jurors’ attention and evaluation of defense evidence. The AIM describes how negative affect can prime and influence which pieces of evidence people selectively pay attention to, retrieve from memory, and how they interpret the information. The CCM makes similar predictions specific to blame judgments. Feeling negative emotion will initiate a biased information search and skewed interpretation of evidence to be consistent with blaming a target. Thus, I tested whether color gruesome photographs would reduce jurors’ sensitivity to strong (vs. weak) defense evidence by adding a manipulation of defense evidence strength and measures of jurors’ perceptions of defense evidence strength. Study 2 comprised a 3 (gruesome photograph condition: nongruesome, B&W, color) $\times$ 2 (defense evidence strength: weak, strong) between-subjects design.

**Hypotheses**

Consistent with Study 1, I again predicted that (a) viewing the color gruesome photographs would make participants more disgusted and, in turn, more likely to convict, which would not generalize to B&W gruesome photographs ($H_1$), and that (b) this indirect effect would be stronger as participants’ awareness of their bodily sensations increased ($H_2$).

In addition to replicating these findings, Study 2 also included an additional hypothesis that viewing color gruesome photographs would increase convictions indirectly by making jurors less sensitive to strong defense evidence ($H_3$). More specifically, that mock jurors’ who read about a strong (vs. weak) defense case would perceive the defense evidence as stronger and, in turn, be less likely to vote guilty—but that the strength of this indirect effect would be significantly reduced if the mock jurors viewed color gruesome photographs. I again predicted that this pattern would be more likely to manifest among those who are relatively higher in bodily awareness.

Finally, consistent with the findings in Study 1, I predicted that the effects of color gruesome photographs would be eliminated when the gruesome photographs were presented in B&W because they would not arouse the level of negative emotion necessary to instigate the biased processing of evidence (Alicke, 2000; Forgas, 1995).

**Participants and Procedure**

Mock jurors were 381 online panel members from Amazon’s Mechanical Turk. Participants were excluded for not being United States citizens ($n = 2$) or for failing manipulation checks about which photographs they saw ($n = 25, 6.6\%$). The remaining 354 participants were 49\% men and were 78\% White, 7\% Asian, 6\% African American, and 6\% Hispanic (age range = 18–71, $M_{age} =$...
Table 2  
Conditional Indirect Effects (ab) of the Photograph Manipulation on Verdicts as a Function of Bodily Awareness (Study 1)

<table>
<thead>
<tr>
<th>Conditional indirect effect</th>
<th>BA value</th>
<th>Anger as mediator</th>
<th>Disgust as mediator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color (vs. non-) gruesome photographs</td>
<td></td>
<td>Indirect effect (ab)</td>
<td>95% CI</td>
</tr>
<tr>
<td>Low bodily awareness</td>
<td>1.50</td>
<td>.05</td>
<td>−.03, .33</td>
</tr>
<tr>
<td>Moderate bodily awareness</td>
<td>2.29</td>
<td>.05</td>
<td>−.13, .27</td>
</tr>
<tr>
<td>High bodily awareness</td>
<td>3.09</td>
<td>−.11</td>
<td>−.64, .32</td>
</tr>
<tr>
<td>B&amp;W (vs. non-) gruesome photographs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low bodily awareness</td>
<td>1.53</td>
<td>.16</td>
<td>−.23, .76</td>
</tr>
<tr>
<td>Moderate bodily awareness</td>
<td>2.31</td>
<td>.05</td>
<td>−.37, .53</td>
</tr>
<tr>
<td>High bodily awareness</td>
<td>3.08</td>
<td>−.18</td>
<td>−.10, .59</td>
</tr>
</tbody>
</table>

Note. Significant effects are indicated by bolded font and an asterisk. BA = bodily awareness; CI = confidence interval; B&W = black and white.

34, SDage = 11.32). The procedure and compensation were identical to Study 1.

Materials

Trial stimulus. The trial stimulus was identical to Study 1 with the exception that the strength of the defense’s evidence was manipulated. Participants were randomly assigned to (a) the strong defense evidence condition (i.e., the Study 1 trial evidence presentation), or (b) the weak defense evidence condition, which omitted the two defense experts (i.e., the forensic scientist and pathologist described in Study 1). The weak version included only the defendant’s account of the timeline and testimony that his wife had threatened suicide, and the neighbor’s testimony about the victim’s admission that she was depressed. Thus, this manipulation represented a very stark difference in defense evidence strength that should have a large effect on jurors’ judgments. The prosecution evidence was held constant across all conditions.

Measures. The measures were identical to Study 1 with one addition: participants’ perception of the defense case strength was assessed on a 6-point scale with verbal labels (Extremely Weak, Weak, Slightly Weak, Slightly Strong, Strong, Extremely Strong) coded as 1 through 6 for analyses. The Bodily Awareness Scale (α = .98, M interitem correlation = .60, M = 2.32, SD = .96) again did not differ as a function of the experimental manipulation. Fs ≤ 1.52, ps ≥ .22. Anger and disgust were again correlated but not redundant, r = .55, p < .001. Participants completed measures in the following order: verdict, evidence strength, emotions, and bodily awareness. Mock jurors also reported their level of sadness, fear, unhappiness, contempt, empathy, sympathy, and pity, which were not affected by the gruesome photographs manipulation and therefore are not mentioned further. Participants took 21.58 minutes to complete the study on average.

Results

First, the Study 1 analyses were repeated to test whether the support for H1 and H2 replicated. Second, additional moderated mediation analyses tested whether viewing color gruesome photographs made jurors less sensitive to strong defense evidence (H3). See Table 1 for descriptive statistics of all measures.

H2: Color gruesome photographs will have a stronger effect as mock jurors’ bodily awareness increases. All conditional indirect effects are reported in Table 3. Consistent with Study 1, the indirect effect of color gruesome (vs. nongruesome) photographs was moderated by the continuous bodily awareness mea-
sure. The indirect effect of color gruesome photographs on verdicts through disgust was again significant when participants had mean levels of bodily awareness, $ab = .08$, 95% CI [.02, .20] and relatively higher bodily awareness (+1 SD), $ab = .19$, 95% CI [.04, .45]. This effect was not significant, however, when they had relatively lower bodily awareness (−1 SD), $ab = .02$, 95% CI [−.02, .14]. As hypothesized, and consistent with Study 1, none of the indirect effects (a) through anger were significant at any level of bodily awareness, and (b) of seeing B&W gruesome (vs. non-gruesome) photographs were significant at any level of bodily awareness (see Table 3).

**$H_3$: Gruesome photographs in color (but not B&W) will reduce jurors' sensitivity to strong defense evidence.** I conducted a moderated mediation analysis to test the hypothesis that mock jurors would perceive strong (vs. weak) defense evidence as stronger, which, in turn, would decrease convictions—but that this sensitivity effect would be significantly reduced when they viewed gruesome photographs in color. Because I expected this effect to be stronger for jurors with relatively higher bodily awareness, I ran this model first with mock jurors who scored above the mean and again with mock jurors who scored below the mean. For mock jurors with relatively higher bodily awareness, the hypothesis was confirmed. Hearing strong (vs. weak) defense evidence made mock jurors perceive the defense evidence as stronger, which decreased convictions in all conditions—but the indirect effect was very strong when they saw nongruesome photographs, $ab = -19.04$, 95% CI [−29.56, −10.51] and much smaller when they saw color gruesome photographs, $ab = -0.94$, 95% CI [−2.70, −1.15]. This reduction was statistically significant, moderated mediation index = 18.10, $SE = 4.97$, 95% CI [9.55, 29.08].

As would be predicted by the AIM, this pattern was not evident for mock jurors who were relatively less likely to be aware of their emotional responses. The indirect effect of the defense evidence strength (i.e., the sensitivity effect) on convictions through assessments of defense evidence was significant in both conditions (nongruesome: $ab = -1.17$, 95% CI [−2.86, −.32]; Color gruesome: $ab = -2.11$, 95% CI [−4.86, −6.01]), and was not significantly reduced by seeing the color gruesome photographs, moderated mediation index = −.94, $SE = 2.32$, 95% CI [−4.40, 1.53]. In other words, when they saw the more vivid gruesome photographs in color they became less sensitive to defense evidence strength compared with when they did not have their emotions roused by color gruesome photographs.

This effect on mock jurors with relatively higher bodily awareness was, unfortunately, not diminished when the gruesome photographs were presented in B&W. Hearing strong (vs. weak) defense evidence made them perceive the defense evidence as stronger, which decreased convictions in all conditions, but the indirect effect was again very strong when they saw nongruesome photographs, $ab = -19.10$, 95% CI [−29.41, −10.81] and much smaller when they saw B&W gruesome photographs, $ab = -1.19$, 95% CI [−3.07, −.31]. This reduction was again statistically significant, moderated mediation index = 17.91, $SE = 4.89$, 95% CI [9.71, 28.93]. As would be predicted by the AIM, this was not the case for mock jurors with relatively lower bodily awareness. The indirect effect of the defense evidence strength on convictions through assessments of defense evidence (i.e., the sensitivity effect) was significant in both conditions (nongruesome: $ab = -1.25$, 95% CI [−2.81, −.42]; B&W gruesome: $ab = -1.66$, 95% CI [−4.21, −.20]), and was not significantly reduced by seeing the B&W gruesome photographs, moderated mediation index = −.41, $SE = 1.80$, 95% CI [−3.43, 1.80].

**Discussion**

Support for the three hypotheses designed to test the theory that viewing gruesome photographs in color will increase convictions through affective disgust-based channels were largely replicated. First, viewing the more vivid color gruesome photographs of a murder victim again made mock jurors more conviction prone because they increased disgust, relative to when they only read verbal descriptions of the injuries and saw neutral photographs. Second, this effect did not generalize to less vivid B&W versions of the same photographs. The one exception to the replication pattern, however, was that the direct comparison of color to B&W gruesome photographs dropped from significant in Study 1 to marginal in Study 2. Third, mock jurors’ disgust reactions to the color gruesome photographs increased convictions among those who tend to be relatively more aware of the sensations in their body. Consistent with Study 1, anger did not explain any effects of color gruesome photographs on verdicts.

![Diagram](image1)

**Figure 5.** The indirect effect of B&W gruesome (versus nongruesome) photographs on verdicts through anger and disgust in Study 2. $^* p < .05$. $^{**} p < .01$. $^{***} p < .001$.

![Diagram](image2)

**Figure 6.** The indirect effect of color (versus B&W) gruesome photographs on verdicts through anger and disgust in Study 2. $^{*} p < .05$. $^{**} p < .01$. $^{***} p < .001$. 

603.0x801.0
Color (vs. non-) gruesome photographs consistently made jurors feel more disgusted than if they only read detailed verbal descriptions. Despite the color and B&W gruesome photographs conveying the same probative information (excepting the color, which was not relevant in this case), they only increased some photographs was being infused into verdicts when jurors were relatively likely to be aware of the physiological disgust response. This suggests that the color gruesome photograph effect was operating through an affective channel because if the gruesome photographs were increasing convictions because jurors got probative information from them, jurors’ level of bodily awareness and the color would have been irrelevant.

The current study joins eight of the nine previous gruesome photograph experiments demonstrating that viewing gruesome photographs can increase pro-prosecution/plaintiff judgments (Bright & Goodman-Delahunty, 2006, 2011; Douglas et al., 1997; Edwards & Mottarella, 2014; Finkelstein & Bastounis, 2010; Matsuo & Itoh, 2016; Oliver & Griffith, 1976; Whalen & Blanchard, 1982). The mediation results are consistent with the only other mediation test (Bright & Goodman-Delahunty, 2006) in that both demonstrated that gruesome photographs increase guilty verdicts by increasing negative emotion.

The current findings contradicted Bright and Goodman-Delahunty’s (2006), however, in that disgust (rather than anger) explained the effect of gruesome photographs. This discrepancy might be due to the difference in how disgust was operationalized. The previous study tested mock jurors’ absolute level of posttrial anger and a disgust change score as mediators, whereas I tested absolute levels of disgust and anger. This difference is theoretically important because testing affect infusion theory relies on the idea that jurors will consult their level of emotion as relevant information while making the guilt judgment (i.e., the affect-as-information heuristic). This would require knowing their absolute level of each emotion—a disgust change score in the previous study would not provide this pertinent information. For example, in the previous study, if Juror A reported high disgust at the beginning of the trial (e.g., 4) and experienced a modest increase (5) at the end of the study, s/he would have a low disgust change score (1)—even though s/he was experiencing high disgust while making their verdict judgment. In contrast, if Juror B reports very low disgust at the beginning (1), and experienced a larger increase (3), s/he would have a higher disgust change score (2) than Juror A—even though s/he would be experiencing less disgust than Juror A while making their judgment. Affect infusion theory would predict that Juror A would be more likely to vote guilty than Juror B because Juror A was experiencing more disgust—yet, disgust change scores would obscure this effect because it operationalizes Juror A as having a higher level of disgust than Juror B without regard to their emotional response at any moment.
lower score than Juror B. The previous study might have demonstrated anger as a mediator because it was measured as an absolute level of negative emotion, while disgust was not a significant mediator because it was measured as a change score. Conversely, utilizing an absolute measure of disgust in the current study might have revealed the effect of disgust that was not evident in the previous study. There are other methodological differences that might contribute to the discrepancy. The previous study utilized undergraduates, who are less representative of a jury venire compared with the current studies’ nonstudent sample (Buhrmester, Kwang, & Gosling, 2011; Paolacci et al., 2010). The previous study assessed emotions before the trial stimulus for a baseline measure, which raises the possibility of priming effects on the processing of the trial stimulus information.

Contradictory findings can raise concerns about the reliability of the findings. Yet, the role of disgust was replicated across two studies and is consistent with previous work demonstrating that disgust is a more consistent predictor of confidence in a guilty verdict than is anger (Salerno & Peter-Hagene, 2013). This suggests the current results are not spurious. Taken together, the literature suggests that both anger and disgust can explain the effect of gruesome photographs. Perhaps the specifics of a given case might determine the relative strength of the role of disgust versus anger. Hopefully the current findings will inspire future research investigating the circumstances under which anger versus disgust are more influential.

Gruesome Photographs in Color (but not B&W) Significantly Reduced Sensitivity to Strong Defense Evidence

Prosecutors argue for the admission of gruesome photographs of victims’ injuries because they provide probative information to strengthen the prosecution’s case. I identified a different potentially prejudicial effect of viewing the prosecution’s gruesome photographs of the victim: it reduced mock jurors’ sensitivity to strong defense evidence. Mock jurors who were relatively more likely to be aware of their emotional response thought that the strong defense evidence was indeed stronger than the weak evidence, which in turn, decreased convictions. This sensitivity was significantly reduced, however, when they saw color gruesome photographs. Those who were most likely to be aware of their disgust were motivated to diminish the strength of the strong defense evidence that this group was otherwise sensitive to and incorporated into their verdicts in the nongruesome conditions. This is particularly noteworthy, given that the difference between the strong and weak defense cases was relatively extreme and produced a very large effect on verdicts in the nongruesome photograph condition. Unfortunately, presenting the gruesome photographs in B&W instead of color did not eliminate this desensitization effect: the reduction in sensitivity to strong defense evidence was also significant when they saw the gruesome photographs in B&W.

Theoretical Contributions

The current results make theoretical contributions by furthering our understanding of how and why gruesome photographs affect blame judgments. The current results provide support for the AIM’s (Forgas, 1995) direct affect infusion: mock jurors might consult their negative emotions heuristically while making a verdict judgment and, as a result, misattribute their negative emotion due to seeing a victim of a horrific crime to how they feel about the defendant’s guilt. The results also support the indirect route to affect infusion described by the AIM model and the CCM (Alicke, 2000): Negative emotions resulting from color gruesome photographs might motivate jurors to discount strong defense evidence. Mock jurors who were relatively higher in bodily awareness were highly sensitive to the strong manipulation of defense evidence strength in the nongruesome control condition, but this sensitivity was significantly reduced when the jurors saw gruesome photographs in color or B&W. The findings are also theoretically consistent with moral psychology studies demonstrating that disgust (but not other negative emotions like sadness) is infused into moral judgments of transgressions among those who are relatively more sensitive to their bodily sensations (Schnall et al., 2008). Finally, the finding that disgust, but not anger, increased convictions contributes to the growing theoretical discussion of differences between the effect of anger and disgust on moral judgments (Russell & Giner-Sorolla, 2013).

Legal Implications

Judges are gatekeepers who decide whether emotionally disturbing evidence should be allowed in court. The Federal Rules of Evidence (Rule 403) state that judges can exclude such evidence if its prejudicial impact outweighs its probative value, but provide little guidance about how to judge such an issue. Thus, judges—as well as prosecutors and defense attorneys making admissibility arguments—are in need of psychological research that demonstrates the extent to which gruesome photographs can affect verdicts through probative and/or affective channels. Judges should be aware that color gruesome photographs can make jurors more conviction prone because they induce disgust—even when the photographs add little to no probative information beyond other evidence. Further, judges and attorneys should be aware that viewing gruesome photographs in color or B&W can prejudice jurors against strong defense evidence, rendering them less sensitive to its strength and more motivated to discount it (Study 2).

The current results are not meant to argue that emotional responses to gruesome photographs are necessarily legally prejudicial in every case. Whether an emotional response to evidence provides legally relevant information and of itself is a legal question, rather than an empirical psychological question. Emotional reactions might have probative value in some cases (for further discussion, see Bandes & Salerno, 2015). For example, one could argue that mock jurors’ emotional reactions to gruesomeness or harm should legally inform punishment (as opposed to guilt) decisions. The goal of the current studies is not to argue that the emotional response to gruesome photographs should always be considered prejudicial, but instead to demonstrate that they can affect verdicts via emotion directly and indirectly through biasing their processing of defense evidence—even when they do not provide additional probative information. It is up to judges making admissibility decisions to determine whether these emotion-driven effects are legally prejudicial and to weigh them against the photographs’ potential probative value.
In cases where the color/quantity of blood is irrelevant to the legal issues being considered to judge guilt, presenting the gruesome photographs in a less prejudicial way (i.e., in a less vivid B&W version) can prevent jurors’ disgust response to color gruesome photographs from coloring their judgments. The current studies provide preliminary support for the promise of reducing the emotional impact of gruesome photographs by presenting them in B&W, while maintaining the probative information. It is important to note, however, the color of the blood was not centrally relevant to the question of the defendant’s guilt in the current studies. In cases where it is important to see the amount or color of the blood, seeing color (vs. B&W) versions of the gruesome photographs might provide probative information. It is also important to note that this B&W intervention did not prevent gruesome photographs from making jurors less sensitive to strong defense evidence. Finally, attorneys might want to consider assessing jurors’ likelihood of being relatively more or less aware of their emotional reactions in these types of cases during jury selection (e.g., using the scale in *voir dire*, identifying jurors with prior trauma who might be hypersensitive to their emotional reactions to depictions of violence).

**Strengths, Limitations, and Future Directions**

Although mock jury studies will never be completely representative of the real jury deliberation process (e.g., Diamond, 1997; Salerno & Diamond, 2010), the current study was designed to make generalizations to the legal arena possible. The ecological validity of the current studies was enhanced by a trial stimulus, gruesome photographs, and jury instructions taken from real trials. These were the first studies to test the impact of gruesome photographs among nonstudent American samples, which is important because student and nonstudent samples are sometimes differentially affected by focal variables in legal settings (Wiener, Krauss, & Lieberman, 2011).

The current study also had limitations. Experimental studies might produce effect sizes that underestimate the strength of emotional influences on legal judgments in real cases that can be extremely traumatic for jurors (for reviews, see Feigenson, 2015; Salerno & Bottoms, 2009). Some MTurk workers participate in many studies and might be more familiar with experimental studies than student samples (Chandler, Mueller, & Paolacci, 2014). It is difficult to gauge participants’ attention and effort while completing online studies. Although manipulation checks were included, more extensive attention checks would have improved the ability to do so. This concern should be somewhat ameliorated, however, by the convergence between the results from laboratory studies with students and the current online studies with nonstudents. This is consistent with other research demonstrating convergence between student and community samples (Bornstein, 1999; Bornstein et al., 2015).

Our measures of emotion were single-item self-report measures. Although this is a common measure utilized by experimental psychologists (e.g., Gutierrez, Giner-Sorolla, & Vasiljevic, 2012; Schnall et al., 2008), utilizing more objective physiological measures would be an important next step. Verdict was measured before the other variables to maintain the ecological validity of this most important variable. Measuring emotion variables first would prime participants to explicitly consider their emotions right before their verdict when they might not have naturally done so. Given that awareness of their physiological responses was a key part of the theory being tested and that real jurors do not do this, measuring the emotion and bodily awareness variables first would be more problematic. The chosen order of measurement is, however, a limitation because it is possible participants were completing the later measures differently to be consistent with their verdict (i.e., cognitive consistency; Simon, Snow, & Read, 2004; Simon, Stenstrom, & Read, 2015). Finally, it is also important to test the effect of gruesome photographs using different cases and photographs as stimuli. Of note, however, the extant literature has demonstrated that gruesome photographs increase pro-prosecution/plaintiff judgments across myriad cases, including diverse murder cases (Bright & Goodman-Delahunty, 2006; Douglas et al., 1997; Edwards & Mottarella, 2014), civil cases about a cyclist hit by a car (Bright & Goodman-Delahunty, 2011) and a 10-year-old who fell through a decaying floor (Whalen & Blanchard, 1982), and involuntary manslaughter (Finkelstein & Bastounis, 2010).

**Conclusion**

Given recent advances in technology, it is important to provide the legal system with guidance regarding the effect that viewing gruesome photographs will have on the psychology of jurors’ decision-making processes. The current studies demonstrate that it is possible for gruesome photographs to make jurors more conviction prone through affective disgust-based channels. Mock jurors’ disgust reaction to viewing gruesome photographs in color made them more conviction prone. The current studies provide preliminary support for a relatively easy intervention of presenting gruesome photographs in B&W, which reduced their impact on jurors’ disgust and verdicts while maintaining their probative information. There was also evidence that viewing gruesome photographs (in color or B&W) can make mock jurors less sensitive to strong defense evidence, which increased convictions. Consistent with the AIM, all of these effects were stronger as mock jurors’ likelihood of being aware of their emotional reactions to the photographs increased. These effects of gruesome photographs on mock jurors’ emotions, perceptions of other defense evidence, and verdict decisions should be taken into account by judges who must weigh them against the gruesome photographs’ probative value in any given case.

**References**


Randolph v. State, 852 So.2d 547 (Miss. 2002).
State v. Morton, 701 N.W.2d 225 (Minn. 2005).


### Appendix A

**Jury Instructions**

**DIRECTIONS.** The following are the jury instructions that are used in the state of Illinois. Please read every word and pay close attention as these instructions are very complex. You should follow them when delivering your verdict. It is very important that you read through these very carefully and understand them before delivering a verdict.

**THE JUDGE’S INSTRUCTIONS TO YOU, THE JURY**

Members of the jury, the evidence and arguments in this case have been completed, and I now will instruct you as to the law. The law that applies to this case is stated in these instructions, and it is your duty to follow all of them. You must not single out certain instructions and disregard others. It is your duty to determine the facts and to determine them only from the evidence in this case. You are to apply the law to the facts and in this way decide the case. Neither sympathy nor prejudice should influence you. The evidence which you should consider consists only of the testimony of the witnesses—all of the information saw or heard in the case summary presentation. You should consider all the evidence in the light of your own observations and experience in life. By these instructions I do not mean to indicate any opinion as to the facts or as to what your verdict should be. Faithful performance by you of your duties as jurors is vital to the administration of justice.

The defendant is presumed to be innocent of the charge against him of first degree murder. This presumption remains with him throughout every stage of the trial and during your deliberations on the verdict. This presumption is not overcome unless, from all the evidence in this case, you are convinced beyond a reasonable doubt that the defendant is guilty. The State has the burden of proving that the defendant is guilty of first degree murder, and this burden remains on the State throughout the case. The defendant is not required to prove his innocence.

Only you are the judges of the believability of the witnesses and of the weight to be given to the testimony of each of them. In considering the testimony of any witness, you may take into account his or her ability to observe, age, memory, manner while testifying, any interest, bias, or prejudice he or she may have, and the reasonableness of his or her testimony considered in the light of all the evidence in the case. You should judge the testimony of the defendant in the same manner as you judge the testimony of any other witness.

**YOU HAVE TWO VERDICT OPTIONS IN THIS CASE:**

**FIND THE DEFENDANT, MICHAEL STEVENS, GUILTY OF FIRST-DEGREE MURDER.**

**FIND THE DEFENDANT, MICHAEL STEVENS, NOT GUILTY.**

To sustain the charge of first degree murder, the State (the Prosecution) must prove the following Propositions:

1. **First Proposition:** That the defendant, Michael Stevens, performed the acts which caused the death of Stacy Stevens. **AND**

2. **Second Proposition:** That when the defendant, Michael Stevens, did so

   [1] he intended to kill or do great bodily harm to Stacy Stevens

[or]

(Appendices continue)
[2] he knew that such acts would cause death to Stacy Stevens
[or]
[3] he knew that such acts created a strong probability of
death or great bodily harm to Stacy Stevens
If you find from your consideration of all the evidence that any
one of these propositions has not been proved beyond a reasonable
doubt, you should return a verdict of not guilty.
If you find from your consideration of all the evidence that each
one of these propositions has been proved beyond a reasonable
doubt, you should return a verdict of guilty.

Appendix B

Anger and Disgust Measure

GRID INSTRUCTIONS:
Please use this grid to indicate how angry and disgusted you feel right now. You can be high in both, low in both, or high in one and not the other. Along the bottom of the grid is how disgusted you feel, with low disgust on the left through high disgust on the right. Along the left side of the grid represents how angry you feel, from low anger on the bottom to high anger at the top. Please enter the number of the box that best represents how angry and disgusted you feel.
For example if you were extremely angry and not at all disgusted you would enter a 5-1.
If you were not at all angry and extremely disgusted you would enter 1-5.

Please Enter the Number of the Box That Best Matches With Your Level of Disgust and Anger SPECIFICALLY ABOUT THE VICTIM’S INJURIES