
The Impact Of Gruesome Photographs On Mock Jurors' Emotional Responses And Decision Making In A Civil Case

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THE IMPACT OF GRUESOME PHOTOGRAPHS ON MOCK JURORS' EMOTIONAL RESPONSES AND DECISION MAKING IN A CIVIL CASE

*Jessica M. Salerno and Hannah J. Phalen**

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Jurors are often exposed to gruesome images of plaintiff injuries in civil cases. We conducted a mock jury experiment to investigate whether viewing a gruesome image of a plaintiff's injury would rouse disgust, which in turn might motivate a biased assessment of other evidence to

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support choosing a liable verdict. Mock jurors read about a plaintiff who lost his leg in a car accident and was suing the manufacturer of the guardrail that severed his leg. They were randomly assigned to read verbal descriptions of the injury, or to read the description and see a gruesome image of the severed leg. Mock jurors who saw the gruesome image (versus those who merely read about it) reported feeling more disgust, which in turn led them to (a) agree more with other plaintiff evidence that was unrelated to the injury, and (b) agree less with other defense evidence that was unrelated to the injury. This biased assessment of other evidence, ultimately was related to a greater likelihood of choosing a liable verdict. The gruesome image did not affect damage awards. This suggests a potentially prejudicial effect of viewing gruesome images: they might rouse disgust and motivation to skew jurors' assessment of other evidence in the case to see someone held accountable for the injury.

INTRODUCTION

Despite the conventional story that law is reason free from passion, the courtroom is often a very emotional place. Judges and juries are not only confronted with emotional appeals from attorneys, victims, and witnesses, but they are also exposed to evidence that is likely to arouse intense emotional reactions—including anger, sadness, fear, sympathy, and disgust. The persuasive power of visual images is often harnessed by attorneys to connect with jurors' emotions. Accidents and assaults are now increasingly captured on video—from surveillance cameras to cell phones—leading to more emotional experiences for jurors and the need for judges to re-evaluate the admissibility of this kind of evidence.¹ In the past decade, the use of visual evidence and arguments during legal proceedings has advanced, but empirical research on the effect that these important tools have on jurors' decision-making has just begun.² In fact, very little of the already small literature focuses on civil cases. Attorneys are increasingly building narratives through visual evidence that is likely to heighten jurors' negative emotions. These forms of evidence offer probative value, but the accompanying emotional reactions might also pose a threat of unfair prejudice.

1. John Schwartz & Katie Zezima, *With Video Everywhere, Stark Evidence is on Trial*, N.Y. TIMES, Dec 8, 2010, <https://www.nytimes.com/2010/12/09/us/09jury.html>.

2. See Richard Sherwin, Neal Feigenson & Christina Spiesel, *What is Visual Knowledge, and What is it Good for? Potential Ethnographic Lessons from the Field of Legal Practice*, 20 VISUAL ANTHROPOLOGY 143 (2007).

The Federal Rules of Evidence dictate that judges can exclude evidence if its probative value is substantially outweighed by a danger of unfair prejudice, which—according to the advisory notes to this rule—is “an undue tendency to suggest a decision on an improper basis, commonly, though not necessarily, an emotional one.”³ Judges are, therefore, forced to play armchair psychologists. They are left to their assumptions about whether (and how) jurors’ emotional responses might affect their decision-making in prejudicial ways. These assumptions are largely untested, and many are contradicted by psychological science that demonstrates how emotions affect decision making.⁴ Despite the pervasiveness of emotionally disturbing evidence in court, the psychological empirical literature investigating its effects on legal judgments is relatively small—and focused almost entirely on criminal cases.

In this Article, we review psychological theory and experiments that investigate the impact of emotionally evocative evidence on mock jurors’ decision making in criminal and civil cases. We also present an experiment designed to investigate how mock jurors’ emotional responses to emotionally evocative evidence in a civil case (i.e., a gruesome image of a plaintiff’s injury) are related to how they evaluate other evidence in the case and, in turn, their ultimate verdict and damage award decisions. In Part I, we review background on psychological theory and experiments that explain how mock jurors’ emotional responses to evidence might affect how they process evidence and reach decisions in general. Part I also discusses all previous experiments investigating the impact of gruesome images on mock jurors’ decision making, specifically. In Part II, we describe the methodology of our experiment. In Part III, we discuss and explain the results of our study. Finally, in Part IV, we identify important future directions for research regarding the role of emotion in civil legal decision making.

I. BACKGROUND

The judge in a case is responsible for deciding what evidence is admitted by determining whether the probative value of a piece of evidence is not outweighed by any unfair prejudice.⁵ In *Old Chief v. United States*, the Court defined unfair prejudice as “the capacity of

3. FED. R. EVID. 403, Advisory Committee Notes to the 1972 Proposed Rules.

4. Susan Bandes & Jessica M. Salerno, *Emotion, Proof and Prejudice: The Cognitive Science of Gruesome Photos and Victim Impact Statements*, 46 ARIZ. ST. L. J. 1003, 1025 (2015); Jessica M. Salerno & Bette Bottoms, *Emotional Evidence and Jurors’ Judgments: The Promise of Neuroscience for Informing Psychology and Law*, 27 BEHAV. SCI. & L. 273, 282 (2009).

5. FED. R. EVID. 403.

some concededly relevant evidence to lure the factfinder into declaring guilt on a ground different from proof specific to the offense charged.”⁶ Although there are no specific types of evidence that are categorically considered unfairly prejudicial, emotionally evocative evidence is the most common type of potentially prejudicial evidence.⁷

One type of emotionally evocative evidence that courts commonly deal with is gruesome photographs that depict bodily injuries that are graphic and likely to elicit disgust. These photographs are particularly difficult for courts to deal with because they can be highly probative; for example, informing injury severity by depicting the details of injuries for which a plaintiff is seeking damages. These photographs, when graphic and gruesome, also commonly rouse emotions in such a way that can create a risk of unfair prejudice. When courts encounter this type of evidence, they must balance the probative nature of the evidence against the risk of unfair prejudice.⁸ However, courts will typically admit photographs if they deem them relevant, even if the photographs are likely to prejudice the jury.⁹ For example, in *State v. Bocharski*, the defendant was accused of murdering his neighbor with a knife.¹⁰ At trial, the prosecutors sought to admit six photographs of the victim’s fatal injuries.¹¹ The defendant argued that the photographs were inflammatory and unduly prejudicial. The Court of Appeals concluded that the trial court did not abuse its discretion by admitting four of the photographs because these photographs were relevant to the extent of the injuries and the manner of death.¹² The court also decided that, although the other two photographs were not relevant, the error in including them was harmless because they would not have biased the jury any further than the four acceptable photographs that they had seen.¹³

Similar to criminal cases, relevant gruesome photographs are often admitted in civil cases despite the risk of prejudice. For example, in *Bucyrus-Erie Co. v. Von Haden*, the plaintiff offered photographs showing his injuries and a bloodstained construction crane that the

6. 519 U.S. 172, 180 (1997) (citing 1 J. Weinstein, M. Berger & J. McLaughlin, WEINSTEIN’S EVIDENCE ¶ 403[03] (1996)).

7. FED. R. EVID. 403, Advisory Committee Notes to the 1972 Proposed Rules.

8. *Old Chief*, 519 U.S. at 173.

9. *State v. Mohr*, 106 Ariz. 402, 403 (1970).

10. 200 Ariz. 50 (2001).

11. *Id.* at 55.

12. *Id.* at 56–57. *See also* *State v. Morris*, 245 La. 175 (1963) (where the trial court correctly admitted two black-and-white photographs but erred in admitting fifteen color photographs because the other photographs were irrelevant except to inflame the jury).

13. *Bocharski*, 200 Ariz. at 58.

plaintiff argued contributed to his injuries.¹⁴ The defendant argued that the probative information about the state of the equipment could have been demonstrated with a photograph that did not contain the plaintiff's blood on the crane.¹⁵ The Supreme Court of Alabama held that the photographs were properly admitted because they were relevant to the issue of damages.¹⁶ Similarly, in *Robinson v. F.W. Woolworth & Co.*, the Court of Appeals of Louisiana held that the trial court properly admitted photographs of the plaintiff's burns because the photographs corroborated testimony about the severity of the injury.¹⁷ Given that one can typically make a case for gruesome photographs of a plaintiff's injury providing probative information, it becomes very important to determine the degree to which the negative emotions elicited by these photographs, such as anger and disgust, can prejudice the jury to more effectively weigh against the photographs' probative value.

Law journal articles that discuss gruesome photographs typically focus on their impact and treatment in criminal cases. Very few articles discuss the impact of gruesome photographs in civil cases—and those that do tend to focus on cases involving a death¹⁸ and explicitly note the need for more research on the impact of gruesome photographs in civil cases.¹⁹ Yet, psychological science can provide insight into how negative emotions can affect decision-making processes in potentially prejudicial ways that might apply to seeing gruesome photographs in criminal and civil trials.

A. *Psychological Science: The Impact of Negative Emotion on Decision-Making Processes*

Arousing negative emotions in jurors is not just an unfortunate, but harmless byproduct of presenting evidence of plaintiff's injuries. Experiencing intense negative emotion can bias how people process information and make decisions. Gruesome photographic evidence of a plaintiff's injury is particularly likely to rouse anger (which people

14. 416 So. 2d 699 (Ala. 1982).

15. *Id.* at 701.

16. *Id.*

17. 420 So. 2d 737, 741 (La. Ct. App. 1982).

18. See, e.g., Amy S. Thomas, *Utah Rule of Evidence 403 and Gruesome Photographs: Is A Picture Worth Anything in Utah?*, UTAH L. REV. 1131, 1149 (1996) (examining the effect of Utah's admissibility rule on prosecutors' trial practice); Monica K. Miller et al., *How Emotion Affects the Trial Process*, 92 JUDICATURE 56, 57 (2008) (discussing research on gruesome evidence in criminal trials).

19. John Rafael Perez, *Managing Fear-Based Derogation in Murder Trials*, 43 J. LEGIS. 1, 18 (2016).

tend to feel when they see an act of harm against someone that they perceive to be intentional) and disgust (which people tend to feel when they see a violation of a body).²⁰ Psychological experiments have demonstrated that feeling anger and disgust can create a need to blame and punish someone to right the scales of justice for the harm that they have witnessed²¹—the *combination* of anger and disgust is particularly powerful.²² Social psychological research has demonstrated several ways that this emotion-based need to blame and punish can then motivate and bias people to process other information in a way that justifies blaming and punishing someone.²³ Feeling angry (even when the anger is completely unrelated to the decision being made) biases people to judge the same act as more intentional relative to other people judging the same act, but who were not made to feel angry beforehand.²⁴ Feeling anger and disgust is also associated with feeling more certain in one's own opinion than when feeling neutral, which in turn can de-motivate people to process relevant information deeply.²⁵ This decreased motivation to process information deeply can make people more reliant on heuristics (or cognitive “shortcuts”) and stereotypes in their decision making.²⁶ Further, several social psychological theories describe how rousing negative emotions might not decrease processing of all evidence equally, but instead might lead to a biased or “directed” processing of other information that is in line with their emotion-based need to blame and punish. More specifically, activating negative emotions can instigate biased information processing, such that people feeling negative emotion might selectively encode, retrieve, and interpret subsequent evidence in ways that are

20. See Pascale S. Russell & Roger Giner-Sorolla, *Bodily Moral Disgust: What it is, How it is Different from Anger, and Why it is an Unreasoned Emotion*, 139 PSYCHOL. BULL. 328 (2013).

21. Hanah Chapman & Adam Anderson, *Things Rank and Gross in Nature: A Review and Synthesis of Moral Disgust*, 139 PSYCHOL. BULL. 300, 317 (2013); e.g., Dacher Keltner, Phoebe C. Ellsworth & Kari Edwards, *Beyond Simple Pessimism: Effects of Sadness and Anger on Social Perception*, 64 J. PERSONALITY & SOC. PSYCHOL. 740, 743 (1993); Catherine Molho, Joshua M. Tybur, Ezgi Güler, Daniel Balliet & Wilhelm Hofmann, *Disgust and Anger Relate to Different Aggressive Responses to Moral Violations*, 28 PSYCHOL. SCI. 609, 617 (2017).

22. See Jessica M. Salerno & Liana C. Peter-Hagene, *The Interactive Effect of Anger and Disgust on Moral Outrage and Judgments*, 24 PSYCHOL. SCI. 2069 (2013).

23. *Id.*

24. See Karl Ask & Afroditi Pina, *On Being Angry and Punitive: How Anger Alters Perception of Criminal Intent*, 2 SOC. PSYCHOL. & PERSONALITY SCI. 494 (2011).

25. Craig A. Smith & Phoebe C. Ellsworth, *Patterns of Cognitive Appraisal in Emotion*, 48 J. PERSONALITY & SOC. PSYCHOL. 813, 833 (1985); Larissa Z. Tiedens & Susan Linton, *Judgment Under Emotional Certainty and Uncertainty: The Effects of Specific Emotions on Information Processing*, 81 J. PERSONALITY & SOC. PSYCHOL. 973, 974 (2001).

26. See Galen V. Bodenhausen, *Emotions, Arousal, and Stereotypic Judgments: A Heuristic Model of Affect and Stereotyping*, in AFFECT, COGNITION & STEREOTYPING 13 (1993).

consistent with that negative emotion and the resulting need to blame someone.²⁷

This research suggests that if jurors are made to feel angry and disgusted, it might motivate them to seek out information that justifies blaming and punishing a defendant and ignore other information that contradicts that motivation. In fact, social psychologists have described this phenomenon as anger turning “‘intuitive scientists’ . . . into ‘intuitive prosecutors’”²⁸ This social psychological research has implications, specifically, for the potentially prejudicial impact of presenting gruesome photographs. These theories and experiments would support the prediction that the anger and disgust jurors might feel after seeing graphic photographs of a plaintiff’s injury might create a need to blame and punish, which could make them engage in a prejudicial processing of other evidence to support ruling against the defendant. More specifically, viewing the photographs might make the jurors more disgusted and angry, which in turn might make them unconsciously more likely to process or to rely on plaintiff evidence and less likely to process or to rely on defense evidence, which in turn would justify choosing a verdict for the plaintiff.

B. *The Impact of Gruesome Photographs on Mock Juror Decision Making*

A growing number of mock jury experiments have demonstrated that gruesome images can make mock jurors more conviction prone and punitive in the criminal system.²⁹ These experiments presented a

27. See Joseph P. Forgas, *Mood and Judgment: The Affect Infusion Model (AIM)*, 117 PSYCHOL. BULL. 39 (1995); Mark D. Alicke, *Culpable Control And The Psychology Of Blame*, 126 PSYCHOL. BULL. 556, 558 (2000); Dan Simon, Douglas M. Stenstrom & Stephen J. Read, *The Coherence Effect: Blending Cold And Hot Cognitions*, 109 J. PERSONALITY & SOC. PSYCHOL. 369, 379 (2015); for application of these theories to juror decision making specifically, see Bandes & Salerno, *supra* note 4, at 1026; Neal Feigenson & Jaihyun Park, *Emotions and Attributions of Legal Responsibility and Blame: A Research Review*, 30 L. & HUM. BEHAV. 143, 147–48 (2006); Salerno & Bottoms, *supra* note 4, at 287.

28. Julie H. Goldberg, Jennifer S. Lerner & Philip E. Tetlock, *Rage and Reason: The Psychology of the Intuitive Prosecutor*, 29 EUR. J. SOC. PSYCHOL. 781, 782 (1999).

29. David A. Bright & Jane Goodman-Delahunty, *Gruesome Evidence and Emotion: Anger, Blame, and Jury Decision-Making*, 30 L. & HUM. BEHAV. 183, 196 (2006); Kevin Douglas, David Lyon & James R. Ogloff, *The Impact of Graphic Photographic Evidence on Mock Jurors’ Decisions in a Murder Trial: Probative or Prejudicial?*, 21 L. & HUM. BEHAV. 485, 492 (1997); Emily R. Edwards & Karen E. Mottarella, *Preserving the Right to a Fair Trial: An Examination of Prejudicial Value of Visual and Auditory Evidence*, 16 N. AM. J. PSYCHOL. 397, 397–414 (2014); Remi Finkelstein & Marina Bastounis, *The Effect of the Deliberation Process and Jurors’ Prior Legal Knowledge on the Sentence: The Role of Psychological Expertise and Crime Scene Photo*, 28 BEHAV. SCI. & L. 426, 436 (2010); Kayo Matsuo & Yuji Itoh, *Effects of Emotional Testimony and Gruesome Photographs on Mock Jurors’ Decisions and Negative Emotions*, 23 PSYCHIATRY, PSYCHOL. & L. 85, 91 (2016); Jessica M. Salerno, *Seeing Red: Disgust Reactions to Gruesome*

sample of mock jurors with the same case that includes information regarding the victim's injuries verbally (e.g., in a coroner or expert's testimony). The mock jurors were randomly assigned to either learn of the injury via testimony only (i.e., the control condition) or to see images of the victim's injuries in addition to the verbal description. A meta-analysis of these studies demonstrated that mock jurors who see the photographs are significantly more likely to deliver more pro-prosecution/plaintiff judgments than those who get the information only verbally.³⁰

Only three of these experiments, however, have tested this question in the context of a civil case. One experiment found that viewing photographs of a girl who had been hit by a car and suffered a bleeding head wound significantly increased liable verdicts relative to those who learned the details about the injury but did not see the photographs.³¹ Another experiment found that viewing photographs of a child who had fallen and had a contorted leg injury and was bleeding profusely significantly increased the amount of damages awarded relative to those who learned the details about the injury but did not see the photographs.³² The third study found that viewing graphic photographs of a plaintiff's hand injury did not affect ratings of the defendant's negligence, although the photographs did increase the percentage of jurors who were willing to award damages relative to jurors who learned the details about the injury verbally, but did not see the photographs.³³ In addition to the scarcity of studies in the civil realm, further experiments are needed: Two of these three studies were conducted decades ago before the field was as cognizant of, and had the resources to address, the unreliable nature of small sample sizes and all three were conducted with undergraduate samples who are less representative of actual jury pools.

Photographs in Color (But Not in Black and White) Increase Convictions, 23 *PSYCHOL., PUB. POL'Y, & L.* 336 (2017) [hereinafter Salerno 2017].

30. Rebecca H. Grady, Lauren Reiser, Robert J. Garcia, Christian Koeu & Nicholas Scurich, *Impact of Gruesome Photographic Evidence on Legal Decisions: A Meta-Analysis*, 25 *PSYCHIATRY, PSYCHOL. & L.* 503, 505-07 (2018).

31. David A. Bright & Jane Goodman-Delahunty, *Mock Juror Decision Making in a Civil Negligence Trial: The Impact of Gruesome Evidence, Injury Severity, and Information Processing Route*, 18 *PSYCHIATRY, PSYCHOL. & L.* 439, 451 (2011).

32. David H. Whalen & Fletcher A. Blanchard, *Effects of Photographic Evidence on Mock Juror Judgement*, 12 *J. OF APPLIED SOC. PSYCHOL.* 30, 30 (1982).

33. Edward Oliver & William Griffitt, *Emotional Arousal and 'Objective' Judgment*, 8 *BULL. PSYCHONOMIC SOC'Y.* 399, 400 (1976).

C. *The Effect of Gruesome Photographs on Verdicts:
Probative or Prejudicial?*

In addition to addressing potential methodological limitations of the previous three experiments, further research is needed to begin to understand *how* and *why* these photographs are making people more likely to render pro-prosecution/plaintiff verdicts. Very few studies that investigate emotionally disturbing evidence—in both the criminal and civil realms—have addressed the specific question that lawyers, judges, and the legal system face: To what degree are jurors' emotional reactions to case evidence having a *prejudicial* impact on decisions? It is not problematic if jurors are influenced by these photographs through probative channels. Judges are not asked to judge *whether* a photograph will influence jurors' judgments—surely, they assume they might if they are admitting them into court. They need to determine *how* and *why* photographs influence jurors' judgments to judge whether the prejudicial effect of a particular photograph outweighs its probative value.³⁴

As noted in our review of basic social psychological theory and experiments, one potentially prejudicial effect of viewing gruesome photographs is that they might bias jurors' processing of other case evidence in a way that supports their motivation to blame and punish someone for the plaintiff's injury.³⁵ A few mock jury studies have provided evidence suggestive of emotionally evocative evidence having, specifically, prejudicial effects on jurors' decision-making processes. One study found that exposure to a visual depiction of a crime scene roused mock jurors' emotions, which led them to set lower standards of proof than those who did not see the visual depiction.³⁶ As reviewed, mock jurors who are feeling angry (even when the anger is completely unrelated to the case) are biased to judge the same action as more intentional³⁷ and more likely to rely on racial stereotypes when choosing a verdict, relative to mock jurors who are not feeling angry.³⁸ Three experiments have demonstrated that viewing gruesome photographs increase mock jurors' anger or disgust, or both, and that

34. FED. R. EVID. 403.

35. See discussion *supra* Part I.A.

36. See generally Saul M. Kassir & David A. Garfield, *Blood and Guts: General and Trial-Specific Effects of Videotaped Crime Scenes on Mock Jurors*, 21 J. APPLIED SOC. PSYCHOL. 1459 (1991).

37. See Ask & Pina, *supra* note 24.

38. See Galen V. Bodenhausen, Lori A. Sheppard & Geoffrey P. Kramer, *Negative Affect and Social Judgment: The Differential Impact of Anger and Sadness*, 24 EUR. J. OF SOC. PSYCHOL. 45–62 (1994).

the degree to which they felt anger or disgust directly predicted a greater likelihood of voting guilty in a case.³⁹

Viewing gruesome photographs of a murder victim can bias how mock jurors perceive other evidence in the case. Mock jurors who were randomly assigned to view gruesome photographs of a murder victim were less open to a strong (versus weak) defense case, relative to those who heard about the victim's injuries in verbal testimony alone.⁴⁰ More specifically, among mock jurors who only heard about the victim's injuries during testimony, those who heard a strong defense case were significantly more likely to rate the defense's evidence as stronger and, in turn, were significantly less likely to vote guilty relative to those who heard a weak defense case (as we would hope jurors would do). In contrast, when mock jurors also saw gruesome photographs of the murder victim, the impact of hearing a strong (versus weak) defense case on their perceptions of defense case strength and verdicts was drastically reduced. That is, jurors became either less attentive to or less willing to rely on a strong defense when their emotions are roused by seeing gruesome photographs.

In even more recent ongoing work, we have found that viewing gruesome photographs of a murder victim (versus hearing about the details only verbally during testimony) motivates mock jurors to agree more with prosecution arguments—even when we ask about evidence and arguments that are completely unrelated to the photographs and the victim's injuries. Even more concerning, viewing the prosecution's gruesome photographs (versus not viewing them) made mock jurors also agree *less* with defense testimony unrelated to the photographs, which, in turn, made them more conviction prone.⁴¹ These studies have demonstrated that presenting mock jurors with gruesome photographs of a victim's injuries not only rouses jurors' negative emotions, but can prejudice them against a defendant by instigating a motivated processing of the evidence that puts more weight on prosecution evidence and less weight on defense evidence. Although this preliminary work in the criminal realm suggests a psychological process that might be at play in civil cases, no studies to our knowledge have attempted to identify these potentially *prejudicial* effects of viewing emotionally disturbing evidence in civil cases.

39. Bright & Goodman-Delahunty, *supra* note 31, at 454; Salerno 2017, *supra* note 29.

40. Salerno 2017, *supra* note 29, at 339.

41. Jessica M. Salerno, Hannah J. Phalen, Janice Nadler, Nicholas J. Schweitzer & Susan Bandes, *The impact of gruesome photographs and judicial instructions on jury decision making* (research in progress) (on file with author).

II. EXPERIMENTAL METHODOLOGY

We designed a mock jury experiment to address this gap by testing whether viewing a graphic photograph of a plaintiff's injuries would affect mock jurors' emotions, opinions about other unrelated case evidence, and ultimately their liability verdicts and damage awards in a civil case. We recruited 223 online participants from Amazon's Mechanical Turk to participate, who read a summary of evidence from a real civil case.⁴² We excluded 12 (5.4%) of participants for failing manipulation checks assessing whether they paid enough attention to correctly report that they had seen either no photograph of the victim's leg, a photograph of the victim's leg in black and white or in color. The remaining 211 participants were 47% women; 81% White, 6.6% African American, 6.2% Other, 5% Asian, and 1% American Indian or Alaska Native; and had an age range of 19 to 72 years old ($M_{age} = 38$, $SD = 11.5$).

We presented all mock jurors with the same case evidence in which the plaintiff's vehicle veered off of the highway and struck a guardrail end treatment designed and manufactured by Springhill Industries, Inc. (the defendant). After the initial impact, the guardrail broke away from the end treatment and penetrated the front driver side headlight and speared the plaintiff's foot, which resulted in severing the plaintiff's leg. The plaintiff was trapped until emergency responders cut through the roof of his vehicle, freed him, and transported him to the closest hospital. Now, the plaintiff reports suffering both real and phantom pain and is no longer able to live on his own.

All parties stipulated that a piece of the guardrail severed the plaintiff's leg. The plaintiff sued Springhill Industries, Inc. (we changed the name of the actual company in the case), arguing that they designed a faulty end treatment that caused his injury. Springhill Industries argued that the end treatment was not faulty and that the plaintiff is fully at fault. The participants read summaries of the opening and closing statements, and testimony from plaintiff witnesses (i.e., the plaintiff, a Springhill employee, an accident reconstruction expert, a medical expert, and an economics expert who suggested damages) and

42. *Mechanical-Turk* samples have been found to be more demographically diverse than more traditional samples (e.g., college students or online community member samples), and are considered to be a legitimate source of quality data. See generally Michael Buhrmester, Tracy Kwang & Samuel D. Gosling, *Amazon's Mechanical Turk: A New Source of Inexpensive, Yet High-Quality, Data?*, 6 PERSPECTIVES PSYCHOL. SCI. 3 (2011); Gabriele Paolacci, Jesse Chandler & Panagiotis G. Ipeirotis, *Running Experiments on Amazon Mechanical Turk*, 5 JUDGMENT & DECISION MAKING 411 (2010) (including for psychology and law studies, specifically Krin Irvine, David Hoffman, & Tess Wilkinson-Ryan, *Law and Psychology Grows Up, Goes Online, and Replicates*, 15 J. OF EMPIRICAL LEGAL STUD. 320, 331 (2018)).

defense witnesses (i.e., the CEO of Springhill Industries, a medical expert, and a reconstruction expert). The issue that the mock jurors' liability verdicts should have hinged on was whether the plaintiff's injury was caused by the company knowingly deciding to cut corners and save money by decreasing the size of the guardrail component, which the plaintiff claims they knew had deleterious safety implications. Given that both sides stipulated that the plaintiff lost his leg and that the accident was the cause of the severed leg, a photograph of the leg should not have had non-redundant probative value regarding the issue at hand (i.e., whether the company knowingly decided to cut corners by decreasing the size of the guardrail despite the safety implications).

The mock jurors were randomly assigned to read the case evidence summaries and view neutral photographs of the car and guardrail before the accident along with either (a) no photographs of the victim's injury (i.e., the control condition), (b) the addition of a photograph of medical professionals working on the plaintiff's severed leg on a table in color, or (c) the addition of the same photograph of the plaintiff's severed leg in black and white. We included a black-and-white condition because previous research regarding a criminal trial demonstrated that presenting gruesome photographs in black and white eliminated the effect that the same photographs in color had on verdicts.⁴³ The photograph of the plaintiff's leg was presented once in the context of the plaintiff's testimony, once in the context of the medical professional's testimony, and once during the plaintiff's closing statement. This case and photograph was from a real case that was chosen, in part, because the severity and cause of the plaintiff's injury was clear without seeing a photograph, in that both sides stipulated that the leg had been severed and that it was a result of the guardrail end treatment. Thus, the photographs had limited probative value for liability judgments beyond other redundant evidence. Further, we held the probative information as constant as possible by including the details of the plaintiff's injuries in all versions of the medical expert's testimony for all participants—even those who were in the control condition with no photographs of the leg.

After viewing the trial evidence, mock jurors read pattern civil jury instructions. Next, they completed several measures, described below. We focused primarily on liability judgments because the photograph of the plaintiff's leg arguably should not have had a probative impact on liability judgments given that both sides stipulated to details about

43. Salerno 2017, *supra* note 29, at 336.

the plaintiff's injury (i.e., losing his leg). The measures the mock jurors completed were as follows:

- (a) *Liability Verdict*: Participants chose whether they found in favor of the plaintiff or the defendant.
- (b) *Damage awards*: Participants indicated the amount of full damages that they would award to the plaintiff in dollars. We did not specify what type of damages or different categories of damages. They were then asked whether they believed that amount to be "Basically nothing," "Low," "Medium," or "High." They were then asked to indicate the amount of punitive damages that they would award to the plaintiff in dollars, and were again asked whether they believed that amount to be Basically nothing, Low, Medium, or High.
- (c) *Assessment of unrelated evidence*: Participants indicated the extent to which they agreed with a set of five inferences drawn from plaintiff evidence and then a set of five inferences drawn from the defendant's evidence on a 7-point scale ranging from *Strongly Disagree* to *Strongly Agree*. Care was taken to ensure that none of the arguments were relevant to the photographs of the plaintiff's severed leg (e.g., *The defendant knew the 4-inch SET-7—a component of the guardrail—was unsafe*), such that viewing the photographs should have had no probative effect on the extent to which they agreed with any of these unrelated case facts.⁴⁴ We created two scales. One assessing agreement with unrelated plaintiff evidence ($\alpha = .82$) and the other assessing agreement with unrelated defendant's evidence ($\alpha = .68$).
- (d) *Emotional reactions to the plaintiff's injury*: Participants indicated the extent to which they felt the following emotions while reviewing evidence about the plaintiff's injuries:
 - (1) disgust (4-item scale, $\alpha = .88$), (2) anger (3-item scale, $\alpha = .93$), (3) fear (single item), (4) sympathy toward the victim (3-item scale, $\alpha = .87$), and (5) sadness (3-item scale, $\alpha = .76$). The ratings were completed on 5-point scales ranging from *Not at all* to *Very much*.

A. Hypotheses

First, we hypothesized that viewing a gruesome photograph of a plaintiff's injury would rouse negative emotions, which, in turn, would increase the likelihood that mock jurors would choose a liable verdict.

44. See app.

Although we measured all negative emotions that could feasibly be roused by viewing the photograph of the plaintiff's injury (i.e., anger, disgust, sadness, fear, and sympathy), our previous research⁴⁵ led us to predict that seeing the graphic photograph of a severed leg would be particularly likely to increase mock jurors' level of disgust and, in turn, liability verdicts.

Second, we hypothesized a psychological explanation for *why* or *how* the increased disgust (and any other negative emotions) elicited by viewing the photograph might be associated with increased liability verdicts. We predicted that the disgust resulting from viewing the gruesome photograph of the plaintiff's injury might be associated with biased or selective reliance on other evidence to support a liable verdict—even arguments in the case that are entirely unrelated to the plaintiff's injury depicted in the photograph. More specifically, this increase in disgust, in turn, would (a) increase agreement with plaintiff's evidence that is unrelated to the injury depicted in the photo and (b) decrease agreement with defendant's evidence that is unrelated to the injury, which would both ultimately result in a greater likelihood of a liable verdict.

We had hypothesized that presenting the gruesome photograph in black and white might eliminate these effects but found no statistically significant differences between mock jurors who saw black and white photographs and color photographs in terms of their emotional reactions or verdicts. Thus, we combined participants from these two conditions into one group and now present results from mock jurors who saw the gruesome leg photograph in black and white or color compared to mock jurors who saw no gruesome leg photograph.

Third, we tested whether the gruesome photograph of the leg affected mock jurors' damage awards. We tested whether viewing the gruesome photograph of the leg increased damage awards relative to reading about details of the injury verbally.

III. EMPIRICAL STUDY RESULTS

A. Hypothesis 1

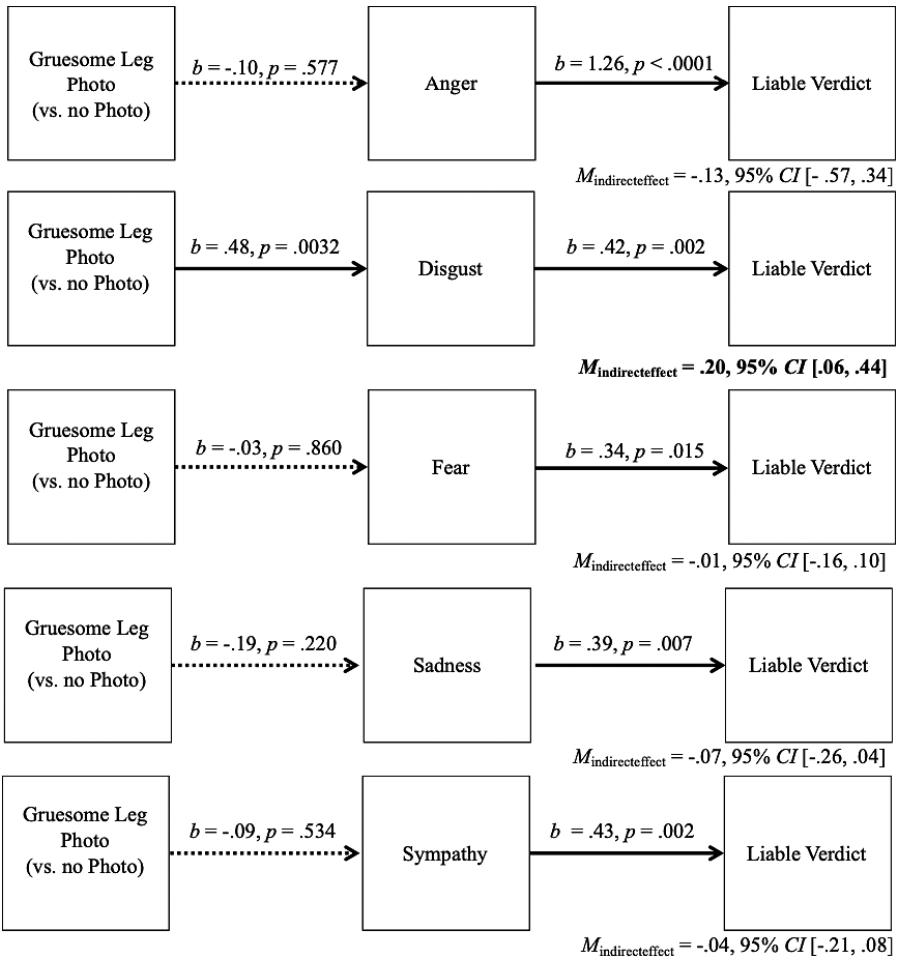
First, we tested whether seeing the gruesome leg photograph would increase negative emotions, which, in turn, would result in a greater likelihood of a liable verdict.⁴⁶ We conducted a series of mediation analyses to test whether viewing the gruesome leg photograph (versus not viewing the photograph) had a significant indirect effect on liable

45. See Salerno 2017, *supra* note 29.

46. See *infra* fig.1.

verdicts through anger, disgust, fear, sadness, or sympathy. We report all indirect effects, which are considered to be statistically significant if their associated confidence intervals do not include zero. We also report the direction and significance of each path in the model in Figure 1.

FIGURE 1. Indirect Effects of a Gruesome Photograph on Verdicts Through Emotional Reaction⁴⁷



47. Indirect effects of viewing a gruesome photograph of the plaintiff’s leg on the likelihood of choosing a liable verdict through mock jurors’ emotional reactions to the evidence, relative to not viewing the gruesome photograph. Significant indirect effects are indicated by confidence intervals (CI) that do not include zero and are denoted in bold. Significant paths are indicated by p-values less than .05 and denoted by solid lines; non-significant paths are denoted by dotted lines.

The only significant indirect effect of viewing the gruesome photograph of the plaintiff's leg on the likelihood of choosing a liable verdict operated through disgust. More specifically, viewing the gruesome leg photograph significantly increased the level of disgust the mock jurors reported, and the increased disgust was significantly associated with an increased likelihood of finding the defendant liable for the injury. Despite the fact that the nature and severity of the plaintiff's injury was not in dispute, and given that both sides stipulated that the leg had been severed as a result of the car accident, the disgust that the mock jurors felt about actually seeing the severed leg (relative to only reading about the details in the medical examiner's testimony) predicted an increased likelihood finding the defendant to be liable.

It is important to note that although none of the other negative emotions explained the effect of the gruesome photograph on liable verdicts, it is not the case that mock jurors' other emotions were unrelated to their verdicts. The significant and positive pathways between all negative emotions and liable verdicts⁴⁸ show that all negative emotions were positively related to the increased likelihood of a liable verdict. In other words, although the gruesome photograph did not significantly increase the other negative emotions, to the degree that the mock jurors did feel anger, sadness, fear, and sympathy about the plaintiff's injuries they were also more likely to choose a liable verdict.

B. Hypothesis 2

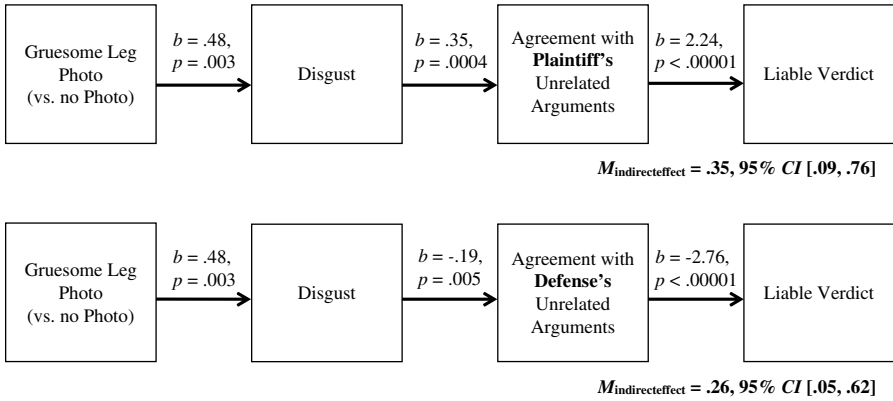
Our second hypothesis predicted that the negative emotional reaction to the gruesome leg photograph would increase liability verdicts, in part, due to biased and selective reliance on other evidence unrelated to the plaintiff's injury to justify a liable verdict. Given that disgust was the only negative emotion that significantly increased as a result of seeing the gruesome photograph of the plaintiff's leg, we focused only on disgust.⁴⁹ We conducted a serial mediation model that tested whether seeing a gruesome photograph (versus not seeing the gruesome photograph) of the plaintiff's leg would increase disgust, which, in turn, would significantly (a) increase agreement with plaintiff's arguments that were unrelated to the victim's injury, and (b) decrease agreement with defendant's arguments unrelated to the

48. See *supra* fig.1.

49. We did, however, run additional models similar to Figure 2 that substituted each of the other negative emotions for disgust and found that all models were not significant. See *infra* fig.2.

plaintiff’s injury, both of which would ultimately be associated with an increased likelihood of choosing a liable verdict.⁵⁰

FIGURE 2. The Indirect Effects of the Gruesome Photograph on Verdicts Through Disgust and Assessment of Unrelated Arguments⁵¹



We found that the indirect effects of the gruesome photograph on liable verdicts through disgust and both agreement with unrelated plaintiff’s and defendant’s arguments were significant. The first significant indirect effect revealed that viewing a gruesome leg photograph significantly increased disgust, which, in turn, predicted agreeing more with plaintiff’s arguments that were unrelated to the plaintiff’s injury. This, in turn, was associated with a greater likelihood of finding for the plaintiff. The second indirect effect revealed that viewing a gruesome leg photograph significantly increased disgust, which, in turn, predicted agreeing *less* with defendant’s arguments that were unrelated to the plaintiff’s injury. This, in turn, was also associated with greater likelihood of finding for the plaintiff. In summary, the disgust resulting from seeing a gruesome image of a plaintiff’s severed leg was associated with a prejudicial pattern of assessing other evidence—even evidence that was completely unrelated to the plaintiff’s injury that was depicted in the photograph—in a direction consistent with

50. See *infra* fig.2.

51. Indirect effects of viewing a gruesome photograph of the plaintiff’s leg on the likelihood of choosing a liable verdict through mock jurors’ disgust and agreement with unrelated plaintiff and defense arguments, relative to not viewing the gruesome photograph of the plaintiff’s leg. Significant indirect effects are indicated by confidence intervals (CI) that do not include zero and are denoted in bold. Significant paths are indicated by p -values less than .05 and denoted by solid lines; non-significant paths are denoted by dotted lines.

supporting a liable verdict. That is, the gruesome photograph made people disgusted, which was related to a biased assessment of both plaintiff's and defendant's evidence in a direction supportive of a liable verdict.

It should be noted, however, that although we found robust evidence for this biased psychological process, the overall effect of this specific gruesome photograph on liability verdicts in this study was not large. As reported, we did find evidence that the gruesome photograph significantly increased mock jurors' disgust, and that disgust level was associated with a biased assessment of evidence unrelated to the photograph that can result in biased verdicts. However, when we do not take disgust and assessment of unrelated evidence into account in the analysis, we do not find that viewing the gruesome photograph of the leg, relative to not seeing the photograph, had an overall significant effect on liability verdicts, $\chi^2(1, N = 211) = .11, p = .430$. This pattern of results suggests that to the degree that gruesome photographs elicit disgust, they can instigate a prejudicial assessment of plaintiff's and defendant's evidence to support a liable verdict for the plaintiff—but this one particular photograph did not have a large impact on verdicts in this case.

C. *Damage Awards*

We also tested whether the gruesome photograph of the leg might have had a probative effect on damage awards—that is, it might have conveyed information about how severe the injury was more impactfully than just a verbal description. This might have made mock jurors who chose a liable verdict award higher damages than those who did not see the photograph. We found, however, that viewing the gruesome photograph of the plaintiff's severed leg did not have a statistically significant effect on mock jurors' suggested overall damage awards, $F(1, 151) = 3.01, p = .085$, or punitive damages, $F(1, 127) = .50, p = .480$. Viewing the gruesome photograph of the plaintiff's severed leg also did not have a significant impact on their perceived level (i.e., basically nothing, low, medium, high) of overall damage awards, $F(1, 151) = .01, p = .907$, or punitive damages, $F(1, 127) = .53, p = .468$. See tbl.1 for descriptive statistics.⁵²

52. We identified one statistical outlier among (a) overall awards (\$5,000,000,000), which we recoded to be the same as the next highest overall award (\$20,000,000), and (b) punitive awards (\$3,000,000,000), which we recoded to be the same as the next highest punitive award (\$50,000,000). These two awards were suggested by the same participant. Analyzing the data without recoding this outlier (i.e., the original awards) did not change the results.

TABLE 1. Mean (SD) Award Amounts as a Function of Whether Participants Saw a Gruesome Photo of the Plaintiff’s Severed Leg

	Dollar Awards		General Levels of Awards	
	No Gruesome Photo	Gruesome Photo	No Gruesome Photo	Gruesome Photo
Overall Awards	\$7,122,305 (\$3,836,375) n = 52	\$5,994,721 (\$3,792,553) n = 101	3.13 (.74) n = 52	3.15 (.57) n = 101
Punitive Damages	\$5,176,000 (\$10,292,078) n = 45	\$4,040,803 (\$7,671,401) n = 84	2.98 (.66) n = 45	2.88 (.75) n = .84

Note. Only participants who chose a liable verdict were asked the damage award measures. General level of awards were assessed on a 4-point scale (1 = Basically nothing, 2 = Low, 3 = Medium, 4 = High).

IV. DISCUSSION AND FUTURE DIRECTIONS

Although this study cannot speak to the probative value of any given photograph in any given case, it calls into question the assumption that viewing gruesome photographs is harmless. Instead, the results identify a potentially prejudicial effect of viewing gruesome photographs of plaintiffs’ injuries: the disgust that results from viewing these photographs can turn jurors from “‘intuitive scientists’ . . . into ‘intuitive prosecutors’”⁵³ More specifically, their disgust reaction to the gruesome photographs can (potentially unconsciously) motivate them to put more weight on plaintiff’s evidence and less weight on defendant’s evidence—even when that evidence that is entirely unrelated and irrelevant to the photograph—which then justifies them choosing a verdict for the plaintiff. This indirect effect of gruesome photographs on verdicts emerged despite the fact that all mock jurors saw the same evidence (excepting the gruesome photograph), that all jurors learned the details of the injury in testimony even when they did not see the photograph, and that both sides stipulated that the leg was severed. Thus, this effect is likely due to the negative emotional reaction to seeing the photograph, rather than merely learning more information about the injury.

Further, seeing the gruesome photograph of the leg did not appear to hold probative value about the severity of the injury given that seeing the photograph did not affect mock jurors’ damage awards. Al-

53. Goldberg, *supra* note 28, at 782.

though mock jurors assigned similar damage awards whether or not they saw the photograph, the gruesome photograph *was* related to a biased assessment of the evidence in support of a plaintiff verdict. Therefore, judges might want to think about whether the information depicted in gruesome photographs can be presented to jurors in a less prejudicial format, such as through verbal testimony from witnesses.

It should be noted, however, that although the gruesome photograph elicited disgust and instigated biased assessment of the other evidence that affected liability verdicts, its impact on verdicts in this case was not large. It is difficult to draw conclusions from one study about why that is the case. Of note, among the four extant experiments regarding the impact of gruesome photographs on civil judgments (including this one), the two experiments that showed young people's injuries that included their entire body in the photograph demonstrated a statistically significant effect of the gruesome photograph on liability verdicts or damages.⁵⁴ In contrast, the two experiments that showed a hand or leg injury without the victim's full body (and did not involve children) showed more mixed results (i.e., the photographs affecting some judgments, but not others).⁵⁵ This suggests the possibility that gruesome photographs depicting the victim's entire body, head, or face might have a bigger impact than photographs that do not. It is also possible that gruesome photographs depicting children are more impactful than photographs that do not. It is possible that seeing only one photograph, as the participants in this study saw, is less impactful than seeing several photographs. More broadly, it suggests that more research must be done to determine when gruesome photographs have potential to affect legal judgments in civil cases in prejudicial ways. Next, we describe several fruitful avenues for future research on this issue.

A. *Future Directions*

1. *Emotionally Evocative Evidence in Civil Cases*

In addition to the need for more studies investigating whether the effects of gruesome photographs on criminal judgments generalize to civil cases, the heavy focus on criminal cases represents a missed opportunity to gain insight into factors unique to civil cases. First, civil cases present unique types of evidence that might affect jurors emotionally, which are not a part of criminal trials. For example, attorneys often present "Day-in-the-Life" videos depicting the tragic conse-

54. See discussion *supra* Part I.B.

55. *Id.*

quences of a plaintiff's injury in their everyday life to educate the jury in civil cases. These videos have roused debate, however, about the potential prejudicial impact of these videos and the implications for admissibility.⁵⁶ These videos have the potential to elicit anger from seeing an individual suffering from intense harm, sadness from witnessing the plaintiff's profound losses, disgust from seeing graphic depictions of the plaintiff's injuries, and sympathy for the plaintiff's plight. Yet, similar to gruesome photographs, the judge is left to guess at how intense these emotional reactions might be and—even more difficult—predict the impact that those emotional reactions might have on mock jurors' decision-making processes. Perhaps the most similar form of evidence that has been investigated experimentally are victim impact statements, which are allowed in the sentencing phase of a capital murder trial (but not typically allowed in the guilt phase). Experimental studies have demonstrated that mock jurors are more likely to choose the death penalty when they hear a victim impact statement relative to those who hear the same evidence without the statement.⁵⁷ However, these studies have not tackled the degree to which the effect of this kind of evidence is operating through probative versus prejudicial channels.⁵⁸

In addition to civil cases involving unique forms of evidence, jurors in civil cases are instructed to employ a lower burden of proof, which might make the impact of their emotions on their confidence and final judgments even stronger than in criminal trials that require a much

56. See Jane A. Kalinski, *Jurors at the Movies: Day-in-the-Life Videos as Effective Evidentiary Tool or Unfairly Prejudicial Device*, 27 SUFFOLK U. L. REV. 789 (1993); Chilton D. Varner & James M. McGee, *Worth a Thousand Words: The Admissibility of Day-in-the-Life Videos*, TORT & INS. L.J. 175, 176 (1999); Douglas A. Graham & Daryl J. Lapp, *Day-in-the-Life Videos: Evolving Arguments on Their Making and Use on Trial*, 27 TORT & INS. L.J. 574 (1991); Tricia E. Habert, *Day in the Life and Surveillance Videos: Discovery of Videotaped Evidence in Personal Injury Suits*, 97 DICK. L. REV. 305 (1992).

57. Ray Paternoster & Jerome Deise, *A Heavy Thumb on the Scale: The Effect of Victim Impact Evidence on Capital Decision Making*, 49 CRIMINOLOGY 129, 150 (2011); see also Lynne Forsterlee, G. B. Fox, Robert Forsterlee & Robert Ho, *The Effects of a Victim Impact Statement and Gender on Juror Information Processing in a Criminal Trial: Does the Punishment Fit the Crime?*, 39 AUSTRALIAN PSYCHOL. 57 (2004); Mila G. McGowan & Bryan Myers, *Who is the Victim Anyway? The Effects of Bystander Victim Impact Statements on Mock Juror Sentencing Decisions*, 19 VIOLENCE & VICTIMS 357, 366 (2004); Bryan Myers & Jack Arbuthnot, *The Effects Of Victim Impact Evidence On The Verdicts And Sentencing Judgments Of Mock Jurors*, 29 J. OFFENDER REHABILITATION 95, 108 (1999); Narina Nuñez, Dori Egan-Wright, Andre Kehn & Bryan Myers, 4th International Congress of Psychology and Law, Miami, Florida: *Impact of different methods of victim impact statement delivery at capital trials: Emotionality of statements and its impact on sentencing decisions* (Mar. 2011).

58. For an exception see Paternoster & Deise, *supra* note 55. This study did find that the increase in death penalty verdicts was explained, in part, by feelings of sympathy and empathy for the victim and the victim's family.

higher burden of proof. Further, civil jurors are asked to make entirely different judgments than criminal jurors—some of which might be relevant to emotions, such as quantifying emotional pain and suffering.

2. *Interventions to Mitigate the Prejudicial Impact of Gruesome Photographs*

There might be interventions that can mitigate the prejudicial impact of emotionally disturbing evidence without having to exclude photographs that might have probative value. We have found that seeing the same gruesome photographs in black and white makes mock jurors less conviction-prone than mock jurors who see the same photographs in color, specifically because they induce less disgust.⁵⁹ We did not find in this study, however, that the black and white photographs elicited less disgust than did color photographs. This intervention should be tested further in the context of a case that has more than one gruesome photograph, as well as photographs that might be more likely to have a larger effect—such as photographs that depict the victim's entire body or depict child victims. We have also found preliminary support for the possibility that judicial instructions drawing mock jurors' awareness to the potentially biasing effect of the photographs might eliminate the impact of viewing gruesome photographs (versus only verbal descriptions) on convictions in criminal cases.⁶⁰ This needs to be tested in the realm of civil cases.

3. *Judges' Admissibility Decisions*

An important future direction would be to focus on judges, rather than jurors. There are no data, to our knowledge, on judges' admissibility decisions: Are gruesome photographs challenged often in pre-trial hearings? If so, do judges tend to err on the side of admitting them because they believe jurors can regulate their emotional responses? How often do attorneys challenge the photographs and present alternative modes of presentation (e.g., black and white photographs, diagrams, verbal testimony)? And, when defense attorneys do challenge the photographs, how often do judges rule in their favor? Further, testing interventions to help judges make admissibility decisions would be helpful.

Existing research has focused on providing judges with knowledge and insight about the potentially prejudicial effect of emotional evi-

59. Salerno 2017, *supra* note 29, at 337–38.

60. Salerno et al., *supra* note 41.

dence, which they can then weigh against the probative value they believe that piece of evidence holds. Even if judges knew exactly how much probative value and how much prejudicial impact a given piece of emotionally evocative evidence had, how do they then go about quantifying and weighing the two against each other to reach a categorical decision about whether it should be admitted or not? Now that we know more about the potentially prejudicial effects of viewing gruesome photographs, it is important to investigate how to weigh them against the photographs' probative value, as well as testing potential decision aids to help judges quantify and weigh their prejudicial effects against their probative value.

APPENDIX

FIGURE 3. Assessment of Unrelated Evidence

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The plaintiff's injuries were much worse than they would have been had there not been an end terminal. [PL]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The plaintiff would not have become addicted to painkillers if not for the accident. [PL]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The defendant knew the 4-inch SET-7 was unsafe. [PL]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The defendant's decision to change their guardrail end treatment from 5-inches to 4-inches caused the plaintiff's injury. [PL]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The defendant made cost-cutting decisions that put people at risk. [PL]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If there had not been an end terminal, the plaintiff's injury would have been even worse. [DF]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The plaintiff's visits to physicians prior to the accident suggest that his addiction to painkillers was not caused by the accident. [DF]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The plaintiff's pre-existing injury contributed to his inability to live on his own. [DF]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This particular accident was so dangerous that the plaintiff would have been seriously injured regardless of the width of the end terminal. [DF]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The plaintiff caused the accident because he fell asleep. [DF]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[PL] denotes an item included in the assessment of unrelated plaintiff evidence. [DF] denotes an item included in the assessment of unrelated defense evidence.