University of Nevada, Reno

**Persuasion Factors that Influence the Effectiveness of Cross-Examination of a Forensic Expert**

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by

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Abstract

False and misleading forensic testimony is a large contributor to wrongful convictions. Many forensic science disciplines are subjective and have concerning error rates, and forensic experts often testify with unfounded certainty regarding their analyses. These issues, coupled with jurors’ misbeliefs about forensic science, result in criminal convictions despite weak evidence against a defendant. A possible safeguard against false and misleading forensic testimony is cross-examination of a forensic expert. Some cross-examination research suggests that particular types of questioning of an expert witness effectively reduce jurors’ perceptions of the expert’s credibility. Research has identified factors that influence the persuasiveness of expert witnesses. Specifically, Martire and colleagues (2020) created an Expert Persuasion Expectancy Framework that includes eight factors that influence expert persuasiveness. Two of these factors, field and trustworthiness, serve as cues that affect the credibility of the message source (i.e., expert witness). Two other factors, foundation and consistency, serve as message credibility cues (i.e., testimony content). Because source credibility and message credibility are factors that affect persuasion, manipulating these four factors in an expert witness should influence the perceived credibility of the expert and the perceived credibility of the expert’s message—and ultimately affect the persuasiveness of the expert testimony. The current study tested whether highlighting four of Martire’s factors (i.e., consistency, field, foundation, and trustworthiness) in a cross-examination of a forensic expert effectively reduces the persuasiveness of the expert. The current study also tested individual differences (i.e., Need for Cognition, legal authoritarianism, attitudes toward the legal system, attitudes toward forensic science, and legal fiction consumption) as potential
moderators of the framework. A total of 563 mock jurors read a trial summary that included a crime description of an aggravated robbery in which the perpetrator left fingerprints at the crime scene, a direct examination of the prosecution’s fingerprint analyst who testified that the latent prints match the defendant’s, and one version of a cross-examination of the fingerprint expert by the defense attorney. For the cross-examination, participants read a transcript in which the defense attorney questioned the forensic expert on his testimony. Sixteen different versions of the cross-examination manipulated the expert’s consistency, field, foundation, and/or trustworthiness. The cross-examination for each condition contained the presence (i.e., manipulation) or absence (i.e., control) of questions that reduced the consistency, field, foundation, and trustworthiness of the expert. After the cross-examination, participants indicated how guilty they believed the defendant was, completed source and message credibility scales, and completed individual difference measures. Results indicated that perceptions of the forensic expert’s field, trustworthiness, consistency, and foundation positively predicted message credibility and field, trustworthiness, and foundation positively predicted expert credibility. Expert and message credibility also predicted guilt ratings. Further, some of these relationships were moderated by attitudes toward forensic science and authoritarianism. Although other individual differences such as Need for Cognition and legal system attitudes did not moderate any of the above relationships, these individual differences did directly affect guilt ratings. These findings have several implications for the legal system. Defense attorneys can use the study’s findings to construct effective cross-examinations of forensic experts. Findings also indicate which individual differences should be considered during jury selection due to their influence on the
processing of trial information and evidence. The study’s findings also synthesize the credibility and persuasion literature.

*Keywords*: Expert testimony, Cross-examination, Expert persuasion, Forensic expert, Expert credibility, Legal attitudes, Jury decision making, Wrongful convictions, Source credibility
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Chapter 1: Introduction

On February 7th, 2020, the Chief Judge of the Superior Court for the Waycross Judicial Circuit in Georgia reversed Sheila Denton’s 2006 murder conviction. Denton was primarily convicted on the testimony of a forensic dentist who stated that bite marks left on the victim were Denton’s. The dentist testified that he “held these opinions to a reasonable scientific certainty” (Innocence Staff, 2020). Bite mark analysis is one of the pattern matching forensic sciences that has a concerningly high error rate and has little to no scientific support (Saks et al., 2016). The Chief Judge who reversed Denton’s conviction wrote that, “the bite mark evidence used at trial is now known to be unsupported by science” and that “bite mark evidence will seldom, if ever, be probative of one having inflicted a particular bite mark, nor shall it likely be of any aid to a jury in reaching a decision. The future of admissibility of such evidence is dubious at best” (Innocence Staff, 2020). Further, in the motion filed for a new trial, Denton’s legal team presented affidavits from five forensic dentists that concluded that the injuries presented in the original trial were not even bite marks.

In the United States, false or misleading forensic science has contributed to 45% of wrongful convictions that have been proven through DNA evidence and has contributed to 24% of wrongful convictions overall (i.e., including both DNA and non-DNA exonerations; The National Registry of Exonerations, 2020). Despite documented subjectivity in forensic science (National Research Council, 2009), expert witnesses (i.e., a witness qualified as an expert by knowledge, skill, experience, training, or education; Federal Rules of Evidence Rule 702) often testify with misleading certainty regarding their analyses. This is especially problematic because jurors often have misbeliefs about
forensic science (i.e., beliefs about error rates), which lead to convictions despite weak evidence (Garrett & Neufeld, 2009; MacCoun, 2015). One way to reduce these misbeliefs is to highlight the weaknesses in forensic expert testimony. This should help jurors make better-informed, and therefore more appropriate, verdicts.

In general, the credibility of a source (e.g., expert witness) is influenced by the source’s expertise and trustworthiness. These two factors are specific characteristics of the message source (i.e., referred to as “source cues”) and can influence the persuasiveness of a message. Other factors, such as characteristics of the message (e.g., quality of the argument) can influence the persuasiveness of a message. In regard to expert witnesses specifically, research has identified factors (e.g., expert experience) that specifically affect the persuasiveness of expert testimony (e.g., Martire et al., 2020) and suggests that highlighting these factors in court might be an effective method of increasing juror skepticism of forensic testimony (e.g., Lieberman et al., 2008). In their Expert Persuasion Expectancy Framework, Martire and colleagues (2020) outline eight factors that influence the persuasiveness of expert testimony. Some evidence suggests that, when forensic evidence serves as the main evidence against a defendant, jurors’ perception of the credibility of the forensic expert predicts verdict preferences (Thompson & Scurich, 2019). Thus, reducing the credibility of a forensic expert and their testimony might also reduce guilty verdicts.

Drawing on the source credibility and persuasion literature, the first purpose of this study was to examine whether highlighting weaknesses in four of these Expert Persuasion Expectancy Framework factors (i.e., field, foundation, consistency, and trustworthiness) via cross-examination effectively reduces the expert and message
credibility and therefore reduces the persuasiveness of the testimony (i.e., in the form of verdict preference).

In addition, research shows that both juror individual differences (e.g., Need for Cognition) and particular expert factors relate to juror decision making. However, researchers have neglected to study the interaction between juror individual differences and such factors on expert persuasion (i.e., juror decision making). The second purpose of the study was to examine individual differences as potential moderators of the effect of expert factors on persuasion.

The findings of this study have implications for the legal system by testing whether defense attorneys should use particular lines of questioning to effectively cross-examine and reduce the credibility of a forensic expert and their testimony. Because the defense often faces obstacles to other methods of reducing the effects of misleading forensic testimony (e.g., hiring an opposing expert; Garrett & Neufeld, 2009) a cross-examination would be a more practical method. Findings also contribute to the legal psychology literature on how individual differences relate to the persuasiveness of expert testimony. This information is potentially useful for lawyers during jury selection.

Chapter 2 provides an overview of expert witnesses (e.g., their role in the courtroom) and presents the issues regarding the subjectivity and reliability of forensic evidence. It also discusses how forensic testimony can often be false or misleading and how this can contribute to wrongful convictions. Chapter 3 discusses relevant research on the factors that affect the persuasiveness of expert testimony and presents the Expert Persuasion Expectancy Framework (Martire et al., 2020) that the proposed study further tests. In addition, chapter 3 discusses evidence regarding the effectiveness of cross-
examination. Chapter 4 discusses source credibility theory which states that the credibility of the source of a message is generally dependent on the source’s expertise and trustworthiness. The chapter then discusses factors that influence the credibility of the message and how source and message credibility pertain to expert witnesses specifically. Chapter 5 discusses six individual differences that might affect the perceived persuasiveness of forensic expert testimony. These individual differences include legal authoritarianism, Need for Cognition, attitudes toward the legal system, attitudes toward forensic science, and frequency of legal fiction (e.g., CSI) consumption.

Chapter 6 provides an overview of the study, including hypotheses. Chapter 7 describes the pilot study that tested the effectiveness of the study’s manipulations. Chapter 8 presents the study’s methodology, including all study materials. Chapter 9 discusses the results, including data cleaning and tests for all hypotheses. Chapter 10 discusses the theoretical and practical implications for the findings, study limitations, and suggestions for future research. Lastly, Chapter 11 concludes the dissertation with key findings and implications.
Chapter 2: Issue Background

The purpose of this chapter is to provide a background on the issues regarding forensic science testimony. The chapter provides an overview of expert witnesses including different types of experts and their role in the courtroom. The chapter then discusses forensic experts specifically and the issues regarding forensic sciences including subjectivity, misleading and inaccurate testimony, and wrongful convictions.

Expert Witnesses

An expert witness is a witness qualified as an expert by knowledge, skill, experience, training, or education (Federal Rules of Evidence Rule 702). Expert witnesses are commonly used in trials to present evidence or explain complex or technical evidence that is beyond the knowledge of the average juror (Bornstein, 2004). An expert testifies to present evidence for and strengthen the case for the side (i.e., prosecution/plaintiff or defense/defendant) from which they are called to testify. When an expert witness is called to testify, they are guided by the attorney’s questioning (referred to as direct examination) in order to present evidence to the jury. After the direct examination, the opposing party is permitted to question (referred to as cross-examination) and critique the expert’s testimony.

Typical experts include psychological experts (e.g., mental health professionals), medical experts (e.g., doctors), forensic experts (e.g., fingerprint examiner), and engineering experts (e.g., can testify to the safe design of products; Bornstein, 2004). Experts can generally serve one of two roles. Either they can present case-specific evidence (i.e., “specific” expert; e.g., forensics) or they can educate jurors about particular research (i.e., “general” expert; e.g., eyewitness testimony; Bornstein, 2004).
General experts, who testify to educate the jury, discuss relevant research but cannot apply such research directly to the case in which they are testifying. Aside from these general guidelines, courts do not regulate the content of expert testimony and experts are given a wide latitude (Garrett & Neufeld, 2009). Courts do not evaluate the conclusions experts reach or examine whether inferences are supported by the evidence (Garrett & Neufeld, 2009). Often when the admissibility of evidence is challenged, judges impose modest restrictions on the testimony (e.g., restricting the language or the strength of conclusions) rather than rule it inadmissible (Mnookin, 2018).

Although experts are more frequently used in civil cases (Ivković & Hans, 2003), for the relevance of the proposed dissertation, the discussion below will focus on experts in criminal trials. Because the defense often lacks the financial means to hire their own experts, the prosecution tends to present more experts than the defense, especially in regard to forensic experts (Garrett & Neufeld, 2009). The prosecution often has unlimited resources regarding analyzing forensic evidence and presenting forensic experts in court. Because the defense rarely has financial means to hire their own forensic experts, much of the forensic evidence presented in court is in favor of the prosecution (Garett & Neufeld, 2009).

Before expert evidence/testimony is admitted into court, the judge is responsible for determining whether it meets the current standards for admission. Before 1993, the *Frye* standard required evidence to be generally accepted in the relevant scientific community (*Frye v. United States*, 1923). This less stringent standard (compared to the current *Daubert v. Merrill Dow*, standard) allowed admission of much of the scientific evidence presented in court today. Although some states continue to use the *Frye*
standard, in 1993, the Supreme Court *Daubert* decision changed the interpretation of the Federal Rules of Evidence (Christensen et al., 2014). Under the *Daubert* standard, the following must be considered when evaluating admissibility: (i) whether the theory or technique in question can be (and has been) scientifically tested; (ii) whether it has been subjected to peer review and publication; (iii) its known or potential error rate; (iv) the existence and maintenance of standards controlling its operation; and (v) whether it has attracted widespread acceptance within a relevant scientific community (*Daubert v Merrell Dow Pharmaceuticals Inc.*). These criteria emphasize the need for reliable and valid testimony. The Supreme Court decision also assigned judges the role of “gatekeeper” in that they are responsible for vetting the reliability and validity of expert testimony before admitting it as evidence. The *Daubert* standard is now the law in federal courts and 39 state courts (Bell et al., 2018).

Experts can aid a jury’s understanding of complex evidence or testimony. However, some ethical issues arise regarding the use of experts in court. At the root of these ethical issues is the fact that expert testimony is powerful—yet there is little to no oversight of experts (Garrett & Neufeld, 2009). The first issue is that expert testimony tends to have a strong influence on jurors, and this influence is independent of the evidence’s reliability (Garrett & Neufeld, 2009). The Supreme Court has even cautioned that “Expert evidence can be both powerful and quite misleading…” (*United States v. Frazier*, 2004). Jurors tend to place special trust in scientific evidence and give it more weight and credit than it might deserve (Garrett & Neufeld, 2009; MacCoun, 2015). This would not be problematic if experts only presented evidence that was valid and reliable, but this is not the case, as discussed below. This strong influence of expert testimony on
jurors is one-sided and disadvantages the defense in criminal trials. Unlike the defense, the prosecution possesses more resources that allow for the use of several experts, and the court often denies the defense funding (Garrett & Neufeld, 2009). The defense, then, cannot hire its own experts to counter or expose errors in the prosecution’s expert testimony. In one study, of the 137 wrongful convictions examined, only 19 exonerees retained experts (Garrett & Neufeld, 2009). Thus, there is little buffer against the sometimes invalid forensic expert testimony provided by the prosecution.

**Forensic Science Experts**

When physical evidence (e.g., hair) is found at a crime scene, crime scene investigators collect the evidence and send it to a forensics lab for analysis by forensic examiners. Many forensic analyses are referred to as “pattern matching” forensic sciences because they involve comparing physical evidence left at the crime scene (e.g., a latent fingerprint) to evidence taken from a known source (e.g., a fingerprint from a suspect; National Research Council, 2009). Pattern matching forensic experts examine the two pieces of evidence and determine whether the two are similar enough that the suspect cannot be excluded as a possible source of the crime scene evidence (National Research Council, 2009). These types of pattern matching forensic sciences can include but are not limited to fingerprint comparison, hair and fiber comparison, odontology (i.e., bite mark comparison), tool mark and shoe print comparison, and ballistics. Unlike some forensics, such as toxicological analysis and DNA analysis that are rooted in science, many of the pattern matching forensics were developed in law enforcement environments (Bell et al., 2018). This lack of scientific roots has led to several issues regarding the use of pattern matching forensics.
Issues in Forensic Science

Even though forensic evidence can be quite helpful in determining a suspect’s involvement with a crime, forensics, such as pattern matching forensics, lack established validity and is riddled with concerning error rates. In 2009, the National Research Council published an extensive report concluding that, “with the exception of nuclear DNA analysis… no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source” (National Research Council, 2009, p.7). Before the National Research Council’s groundbreaking 2009 report, there was very little research into forensic science and its error rates (Ulery et al., 2011). This report resulted in a push for the scientific review of forensic disciplines that found high error rates in forensic sciences including forensic hair and bite mark comparison (Saks et al., 2016). Other forensic sciences, such as fingerprint comparison, have shown smaller error rates (Ulery et al., 2011). These error rates appear to be present in pattern matching forensics due to the subjectivity, bias, and a lack of objective standards in the disciplines. Subjectivity is not the only issue in forensic science- sometimes forensic testimony is inaccurate or misleading and these issues contribute to wrongful convictions.

Subjectivity in Forensic Science

Many of the pattern matching forensic disciplines require judgement and interpretation in analysis, and the forensic sciences that have the highest error rates are also the most subjective disciplines. For example, a study conducted on bite mark analysis, arguably the most invalid forensic discipline still admitted in court, found that experts could not agree about whether marks left on skin were even bite marks at all.
(Saks et al., 2016). Similarly, there was much disagreement regarding whether the “bite marks” in Sheila Denton’s case (described in chapter 1) were even human bite marks (Innocence Staff, 2020). During forensic analyses, experts must make judgements regarding whether the evidence found at the crime science is similar enough to a forensic sample from a suspect to conclude that the suspect cannot be eliminated as a possible contributor to the evidence. These judgements can vary amongst experts, even when experts attempt to make the same comparison. One fingerprint examiner even stated that “determining a match requires a certain leap of faith through which the expert becomes subjectively certain” (Stoney, 1991). The same issue can be found in hair comparison. Because the microscopic comparison of hair is subjective, equally qualified experts can have different opinions regarding whether a particular individual is the source of the hair (National Research Council, 1992).

One of the reasons there is so much subjectivity in forensic science is because there are no national or widely accepted standards for forensic science reports or testimony (Garrett & Neufeld, 2009). Many of the pattern matching forensic disciplines lack formal standards regarding what constitutes a “match” (National Research Council, 2009). For example, in bite mark comparison, there are no formal guidelines regarding a required number of point comparisons or how similar the teeth model must be from the bite mark in order to declare a “match” (Saks et al., 2016). This can create great variability in subjective judgement amongst experts.

The subjectivity and lack of objective standards in forensic science lends itself to interpretation by individual forensic examiners (Risinger et al., 2002). This allows for contextual bias to influence analyses. Bias can influence forensic examiner decision
making in different ways. First, there is an inherent conflict of interest because many laboratories are associated with law enforcement (Bell et al., 2018). This might result in forensic examiners feeling as if they are part of the law enforcement “team” (Mnookin, 2018) and unintentionally trying to help law enforcement’s case. Second, this association also allows for forensic examiners to be exposed to task-irrelevant information. Task-irrelevant information is information that might be related to the case but is not directly relevant or necessary for forensic analysis (e.g., knowing whether the suspect has a previous criminal record; Edmond et al., 2015). Task-irrelevant information can be biasing because it can contribute to an examiner’s belief about the suspect’s guilt and influence the examiner’s interpretation of whether the crime scene evidence matches the suspect. Studies have shown that task-irrelevant information can influence forensic examiners’ interpretation of their analysis (Edmond et al., 2015).

**Inaccurate and Misleading Testimony**

Despite the documented issues with many of the pattern matching forensic sciences, inaccurate and misleading forensic testimony continues to be admitted into court. Even though courts have moved toward a stricter standard for scientific testimony, the *Daubert* standard does not appear to be effective in removing questionable science from evidence (Lieberman et al., 2008). Judges rarely rule evidence as inadmissible under the *Daubert* and *Frye* standards (Thompson & Scurich, 2019). Specifically, courts continue to admit forensic evidence, such as bite mark analysis, that has high or unknown error rates (Lieberman et al., 2008; Saks et al., 2016). Further, even courts that use the *Daubert* standard do not usually examine whether the conclusions experts reach are supported by the evidence (Cole, 2007).
Judges likely continue to allow the admittance questionable science because they struggle to evaluate scientific methodology (Kovera & McAuliff, 2000) and struggle to understand the Daubert criteria (Gatowski et al., 2001). This is problematic because jurors assume that evidence is already screened by the court (Schweitzer & Saks, 2009). For example, compared to participants who evaluated evidence outside of a trial context, participants who evaluated evidence within a trial context rated the evidence as higher quality and more persuasive (Schweitzer & Saks, 2009). In fact, one of the reasons the stricter Daubert standard was adopted was because jurors might be persuaded by experts who testify using faulty science (Ivković & Hans, 2003). Because jurors can be persuaded by unreliable evidence that does not meet the Frye or Daubert standards (DeWitt et al., 1997), it is judges’ responsibility to evaluate all scientific testimony before it is presented to jurors. When neither the judge nor jurors effectively evaluate scientific testimony, unreliable “scientific” evidence is admitted, used in court, and often given a lot of weight. The use of expert testimony is paradoxical in that experts are used to testify about evidence that is beyond the layperson’s understanding, yet judges and jurors are asked to evaluate their testimony to determine its quality (Gross, 1991).

It is also possible that judges continue to admit questionable science due to the precedence of that evidence being admitted (Slobogin, 2003). When the admissibility of evidence is challenged, prosecutors argue that the evidence has a long history of precedent, and this often results in admittance. Even when the defense challenges the admissibility of such evidence, often courts simply require modest changes to the words used by the expert (Mnookin, 2018).

When forensic evidence is admitted, it is not uncommon for forensic expert
testimony to be false or misleading. In one study of the trials of wrongful convictions, 60 percent of forensic experts called by the prosecution provided invalid testimony at trial (Garrett & Neufeld, 2009). Concerningly, the invalid forensic testimony came from forensic experts employed across 25 states (Garrett & Neufeld, 2009). Forensic experts give false testimony when they make claims that are inaccurate, such as claiming error rates of zero (Garrett & Neufeld, 2009; Kadane, & Koehler, 2018; Mnookin, 2018).

During their testimony, experts also give false conclusions that are unfounded in their field. For example, bite mark experts often testify that every person’s dentition is unique, equating dentition to fingerprints, even though this assumption has never been tested (National Research Council, 2009). Another example of false testimony occurs when experts present inaccurate population statistics that inflate the probability that the defendant was the source of the evidence. For example, in one wrongful conviction case, the semen left in a sexual assault case was left from a Type O secretor. Type O secretors comprise 35% of the population (Garrett & Neufeld, 2009). The forensic serologist in the case divided the frequency (i.e., 35%) in half, reasoning that 17.5% of men could have contributed to the semen. However, the population statistics for blood groups are identical for both men and women. Thus, dividing the frequency in half was inaccurate and misled the jury to believe that population of people that could be the source of the semen was much smaller than the actual population (Garrett & Neufeld, 2009). Further, some pattern matching disciplines are not based on an established statistical foundation and therefore many of these disciplines are not even founded in true base rates (Mnookin, 2018).

In addition to being erroneous, forensic expert testimony can be misleading in
several ways. First, experts often testify with a level of certainty that is not warranted by their analyses. For example, there is a history of experts testifying that they hold a “reasonable degree of scientific certainty” regarding their opinion. However, this phrase ultimately is meaningless and misleading (Mnookin, 2018). In the past, experts have even claimed that they were 100 percent certain that the evidence came from the defendant (Mnookin, 2018), even though the forensic disciplines do not support this. Second, experts make conclusions that are also not warranted by their analyses, such as individualization (i.e., that an individual person is the source of a piece of forensic evidence). No pattern matching forensic discipline (i.e., not even DNA analysis) can render conclusions that the crime science evidence definitively matches a suspect (Mnookin, 2018; National Research Council, 2009). The only conclusions that can be made are whether the suspect can or cannot be excluded from the population of people who might be the source of the evidence (Mnookin, 2018). However, it is not uncommon for forensic experts to testify that they are certain that evidence matches the defendant (Garrett & Neufeld, 2009; Mnookin, 2018).

Wrongful Convictions

Ultimately, the admittance of misleading and inaccurate forensic testimony contributes to wrongful convictions. The discovery of DNA analysis has allowed for not only reliable exoneration evidence, it has allowed for the review of cases in which exonerees were convicted based on false forensics (Innocence Project, 2020). Amongst DNA based exonerations, faulty forensic science was present in about half of those cases (The National Registry for Exonerations, 2020). The forensic disciplines with the highest error rates and subjectivity tend to serve as the biggest contributors to wrongful
convictions. For example, in an examination of cases that cited forensic science as a primary cause of false conviction, the most common methods used were serology, hair examinations, and bite marks (Bell et al., 2018). Even though DNA testing is now available for certain types of cases (e.g., sexual assault), DNA is only used in a small minority of criminal investigations (Garrett & Neufeld, 2009). Many crimes, such as drive-by shootings and robberies do not allow for DNA testing. In fact, just two percent of law enforcement’s requests to crime labs are DNA analysis requests (Durose et al., 2008). Thus, pattern matching forensic disciplines will likely continue to contribute to wrongful convictions unless methods are developed to either reduce the error rate of these disciplines or reduce their strong influence in the courtroom. One promising method is reducing the credibility of forensic expert testimony. This possibility is discussed further in chapter 3.
Chapter 3: Persuasiveness of Expert Testimony

The current chapter reviews the relevant literature on factors that affect the persuasiveness of expert testimony. The chapter then discusses the Expert Persuasion Expectancy Framework (Martire et al., 2020) that serves as the foundation for the proposed study. Subsequently, the chapter discusses the effectiveness of cross-examination in highlighting these persuasion factors to reduce the credibility of an expert witness. The chapter closes with an explanation of the persuasion factors’ involvement in the current study.

Expert Persuasion Factors

Research has examined the factors that make expert testimony credible and persuasive, including the expert’s experience and expertise (Schweitzer, 2016), trustworthiness (Walton & Zhang, 2016), likeability (Cramer et al., 2009), and presentation style (Brodsky et al., 2010). Although researchers agree that both expertise and trustworthiness affect expert persuasion, models vary on whether they include (Cramer et al., 2009) or exclude likeability (Walton & Zhang, 2016), and vary on whether they include (Brodsky et al., 2010) or exclude (Walton & Zhang, 2016) presentation style.

Cramer and colleagues (2009) found evidence of a four-factor model of characteristics that affect expert witness credibility: likeability, believability, trustworthiness, and intelligence. Although the authors found that likeability was the most significant factor, other studies suggest that expert experience tends to be the strongest factor to influence juror’s perceptions of expert credibility (Blackwell & Seymour, 2015; Schutz, 1997; Schweitzer, 2016; Sundby, 1997). Furthering Cramer and colleague’s (2009) findings, Brodsky and colleagues (2010) created a four-factor (i.e., knowledge, likeability, trustworthiness, and confidence) Witness Credibility Scale as a measurement
of expert witness credibility.

Walton and Zhang (2016) identified six factors that influence the persuasiveness of expert testimony. These factors included 1) whether the person is an expert in a relevant field (i.e., field), 2) whether the person is unbiased and honest in their practice (i.e., trustworthiness), 3) whether the person’s opinion is clear and includes relevant caveats (i.e., opinion), 4) the person’s assertions are based on evidence (i.e., backed up), 5) whether the person’s assertions are consistent with other experts’ assertions (i.e., consistency), and 6) the depth of knowledge and experience the person has as an expert (i.e., expertise).

Drawing on this research, Martire and colleagues (2020) developed an Expert Persuasion Expectancy Framework (ExPEx). The ExPEx aims to comprehensively include all factors that affect expert persuasion identified in previous research (e.g., Edmond et al., 2016; Walton & Zhang, 2016) and that pertain to expert opinion evidence in legal settings. The framework includes eight factors: 1) foundation (i.e., whether training, study, or experience in the expert’s field supports their assertions), 2) field (i.e., whether the person has training, study, or experience in a relevant field), 3) specialty (i.e., whether the expert has training, study, or experience specific to their particular assertions), 4) ability (i.e., whether the expert provides accurate and reliable assertions), 5) opinion (i.e., whether the expert conveys testimony clearly with necessary qualifications), 6) support (i.e., whether the expert’s assertions rely on evidence), 7) consistency (i.e., whether the expert’s assertions are consistent with other experts’ assertions), and 8) trustworthiness (i.e., whether the expert is personally fair, impartial, and objective as a source).
To examine the effect of these factors on the persuasiveness of an expert witness, Martire and colleagues (2020) manipulated the strength of each factor in an “Expert Report”. The authors found that manipulations of ability, consistency, and trustworthiness in an expert report significantly affected expert persuasion (the other five factors did not significantly predict persuasion). Although this is a good first step in examining the influence of the eight factors on expert persuasion, jurors tend to hear expert witness information via a direct and cross-examination, not an expert report. One of the purposes of the current study is to examine the influence of four of the eight factors (i.e., consistency, foundation, field, and trustworthiness) in a more ecologically valid jury decision making context.

**Effectiveness of Cross-Examination**

Cross-examination of a forensic expert has been studied as a potential way of reducing the effect of inaccurate or misleading forensic testimony on jurors.\(^1\) The evidence for the effectiveness of a cross-examination of expert witnesses is mixed. These mixed findings are likely due to the variability in (1) the type of expert witness, (2) the type of cross-examination, and (3) the operationalization of “effectiveness.” For example, some studies have investigated the cross-examination of general witnesses such as an eyewitness expert (e.g., Austin & Kovera, 2015), whereas other studies have investigated forensic experts such as an odontologist (e.g., Thompson & Scurich, 2019). The weaknesses that were highlighted via cross-examination have also varied (e.g., the use of task-irrelevant information, whether the expert was paid to testify). Lastly, whereas some

\(^1\) The majority of cross-examination studies use a cross-examination of a prosecution expert witness so an “effective” cross-examination in regard to verdict should reduce guilty verdicts or guilt ratings.
researchers have measured the “effectiveness” of the cross-examination as the influence on verdict (e.g., Thompson & Scurich, 2019), others have focused on more subtle effects such as changes of perceived strength of evidence (Koehler et al., 2016).

Often researchers test the effectiveness of a “scientifically informed” cross-examination against a control condition or a “scientifically naïve” cross-examination (e.g., Lieberman et al., 2008). A scientifically informed cross-examination highlights the weaknesses in the expert’s research, testing, or field whereas a scientifically naïve cross-examination tends to focus on characteristics of the expert (e.g., whether the expert was paid to testify). The findings regarding the effectiveness of a scientifically informed cross-examination seem promising. A cross-examination that questioned whether an eyewitness expert’s research had necessary elements of an experiment (i.e., control group, random assignment) decreased both participants’ ratings of the scientific validity of the expert’s testimony and ratings of the expert’s credibility compared to a scientifically naïve cross-examination that questioned whether the expert was paid to testify (Austin & Kovera, 2015). Although neither type of cross-examination influenced verdicts (Austin & Kovera, 2015), Thompson and Scurich (2019) found that a cross-examination of a prosecution’s odontologist highlighting the subjectivity and lack of standards in forensic odontology effectively reduced both ratings of expert credibility and guilty verdicts.

In contrast to those studies that did find that cross-examination affects perceptions of experts and sometimes verdicts (Austin & Kovera, 2015; Lieberman et al., 2008; Thompson & Scurich, 2019), there are cross-examination studies that have not found such effects. A scientifically informed cross-examination that questioned a general expert on the general acceptance, ecological validity, and construct validity of her study did not
influence participants’ beliefs about the validity of the expert evidence or verdicts (Kovera et al., 1999). Studying a cross-examination of a forensic expert specifically, Koehler et al. (2016) found that, whereas cross-examining a forensic expert on his background experience was effective in reducing the perceived strength of the forensic evidence, cross-examining the expert on whether the forensic science has been scientifically tested was less effective. Similarly, addressing the limitations of hair examination by questioning the expert’s degree of certainty, lack of scientific testing, and subjectivity in his judgement via cross-examination had no effect on participants’ belief that the hair evidence belonged to the defendant (McQuiston-Surrett & Saks, 2009).

Some cross-examination studies demonstrate that forensic experts who follow preferred protocol and guidelines not only buffer themselves from the effects of cross-examination but can also increase perceptions of the credibility of their testimony. For example, Thompson and Scurich (2019) found that odontologists who testify that they were blind to task-irrelevant information were actually perceived as more credible than experts who did not testify regarding the use of task irrelevant information. Similarly, Lieberman et al. (2008) manipulated the reliability of a DNA expert’s lab and whether the cross-examination was evidence or expert focused. The reliable lab was not affiliated with the police department, conducted regular proficiency testing, and was accredited whereas the unreliable lab was directly affiliated with the police department and the expert had previously been a police officer, the lab was not accredited, and there was no mention of proficiency testing. The evidence focused cross-examination mentioned the possibility of cross contamination of evidence, prior wrongful convictions using DNA evidence, and the possibility of subjectivity in expert judgments; the expert focused
cross-examination questioned the expert’s experience, college record, and payment for testifying. When the lab was unreliable, participants who received an evidence focused cross-examination were less confident in the defendant’s guilt than participants who read an expert focused cross-examination. However, when the lab was reliable participants who read an evidence-focused cross-examination were actually more confident in the defendant’s guilt than participants who read an expert focused cross-examination (Lieberman et al., 2008). These findings suggest that scientifically informed cross-examinations can actually benefit experts who adopt objective practices.

Overall, although there are mixed findings regarding the effectiveness of cross-examination of an expert witness on expert persuasion, cross-examination appears to be promising in influencing juror perceptions of experts, expert testimony, and verdicts. The current study aims to synthesize some of the past variability in previous cross-examination types (e.g., scientifically informed versus scientifically naïve) and measures of effectiveness (e.g., perceptions of experts, verdicts).

**Persuasion Factors and the Current Study**

Although not explicitly labeled as the factor names that Martire and colleagues (2020) use, previous research has examined consistency, foundation, field, and trust-worthiness in the context of cross-examinations. Past studies examined the foundation factor (i.e., whether training, study, or experience in the expert’s field supports their assertions) by manipulating the reliability of the discipline or the quality of the research that supported the expert’s opinion (e.g., Koehler et al., 2016; Lieberman et al., 2008; McAuliff & Kovera, 2008; Thompson & Scurich, 2019). For example, Thompson and Scurich (2019) manipulated the foundation factor by including a cross-examination that
questioned the expert about the subjectivity in bite mark analysis and the field’s lack of objective standards. Martire and colleagues (2020) manipulated foundation by stating in an expert report whether the expert’s field does or does not allow for comparison.

Studies that examined the field factor (i.e., whether the person has training, study, or experience in a relevant field) focused on training, study, experience, or credentials of the expert (e.g., Cooper et al., 1996; Koehler et al., 2016; Parrott et al., 2015; Salerno et al., 2017). For example, Koehler and colleagues (2016) manipulated the expert’s experience in a cross-examination by varying whether the expert had extensive experience or little experience. Martire and colleagues (2020) manipulated field by stating in an expert report whether the expert had formal training in a relevant versus irrelevant field.

Studies that examined the trustworthiness factor (i.e., whether the expert is personally fair, impartial, and objective as a source) focused on characteristics of the expert that suggest that their testimony might be biased. These studies have manipulated expert compensation and the frequency of which the expert testifies (Brekke et al., 1991; Cooper & Neuhaus, 2000). For example, Cooper and Neuhaus (2000) varied whether an expert witness was paid a large or small amount for testifying (i.e., the “hired gun” effect) and how often the expert testifies. Martire and colleagues (2020) manipulated trustworthiness by stating in an expert report that the expert has been described as a “hired gun” and only testifies for the prosecution.

Lastly, past studies have manipulated the consistency factor (i.e., whether the expert’s assertions are consistent with other experts) by presenting opposing expert testimony (Devenport & Cutler, 2004; Levett & Kovera, 2009). Martire and colleagues (2020) manipulated consistency by stating in an expert report that the expert’s opinion
was the same as or different from the opinions of two other experts.

The current study manipulated the four factors via cross-examination, utilizing similar manipulations to the ones discussed above. Specifically, foundation was manipulated through questioning the expert about the subjectivity of the forensic science, the lack of objective standards in the field, and the forensic discipline’s role in wrongful convictions. This is similar to the way in which Lieberman and colleagues (2008) and Thompson and Scurich (2019) manipulated foundation. Field was manipulated through questioning the forensic expert about his lack of experience in the field. This is similar to the way in which Cooper and colleagues (1996) and Koehler and colleagues (2016) manipulated field. Trustworthiness was manipulated by questioning the expert on whether he was compensated for his testimony and whether he has only testified for the prosecution. This is similar to how Brekke and colleagues (1991), Cooper and Neuhaus (2000), and Martire and colleagues (2020) manipulated trustworthiness. Lastly, consistency was manipulated by questioning an expert on the inconsistencies between his opinion and the opinion of similar experts. This is similar to the way Martire and colleagues (2020) manipulated consistency and similar to presenting an opposing expert (Devenport & Cutler, 2004; Levett & Kovera, 2009).

The current study tested four of the eight factors in the ExPEx framework for design feasibility.\(^2\) Trustworthiness and field were chosen because they can be conceptualized as source credibility cues (discussed in the next chapter) and have been manipulated in previous cross-examination studies (e.g., Cooper et al., 1996; Cooper &

\(^2\)Testing all 8 factors with current design would require an excessively large number of conditions (i.e., 256).
Also, Martire and colleagues (2020) found that manipulating trustworthiness affected the persuasiveness of the expert but field did not. It was important to choose factors that were not effective in Martire et al., (2020) because the current study might show that some of the factors that were not effective (i.e., field and foundation) are actually effective in a different context (i.e., cross-examination). The current study tested whether the effect of trustworthiness replicates with a cross-examination and whether field affects persuasion when manipulated via cross-examination.

Consistency and foundation were chosen because they can be conceptualized as message credibility cues (discussed in the next chapter) and have been manipulated in either previous cross-examination studies (e.g., Thompson & Scurich, 2019) or studies that examined the perception of expert testimony (Devenport & Cutler, 2004; Levett & Kovera, 2009). Also, Martire and colleagues (2020) found that manipulating consistency affected the persuasiveness of the expert but foundation did not. The current study tested whether the effect of consistency replicates with a cross-examination and whether foundation affects persuasion when manipulated via cross-examination.

Lastly, the four factors were chosen because of their practicality for a cross-examination in a criminal trial; all four factors represent information that might be disclosed during a cross-examination.

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3 It should be noted that although the foundation manipulation did not predict persuasiveness, subjective ratings of expert foundation predicted persuasiveness.
Chapter 4: Source and Message Credibility

Martire and colleague’s (2020) expert persuasion factors can be housed in the broader persuasion literature on source credibility and message credibility. This chapter begins with a definition and history of source credibility. It then discusses message credibility and the interaction between message credibility and source credibility on persuasion. The chapter elaborates on source and message credibility in the context of expert witnesses and concludes with a discussion of how source credibility pertains to the current study.

Source Credibility

Source credibility is the attitude that a message recipient has toward a message source (e.g., person delivering the message). The factors of source credibility have commonly been identified as expertise and trustworthiness; with expertise referring to the degree to which a source is capable of portraying valid information and trustworthiness referring to the degree to which the message recipients view the information provided by the source to be information that the source believes is valid (Hovland & Weiss, 1951; Pornpitakpan, 2004). It should be noted that trustworthiness as it pertains to source credibility strictly refers to the source’s intent to provide fair and unbiased information. Some scholars who study trust view expertise as an element of trust because it is difficult to rely on a source that is inaccurate (e.g., Mayer et al., 1995; Pytlikzillig et al., 2016). However, the source credibility literature (e.g., Hovland et al., 1953) distinguishes trustworthiness and expertise as independent concepts. Trustworthiness, in terms of source credibility, does not refer to the validity of the source’s information – it refers to the source’s impartial intentions. The definition of trustworthiness for the current study
will align with the source credibility literature and refer to the source’s unbiased intent to provide accurate information.

Even so, there is not agreement that expertise and trustworthiness are the only factors that affect source credibility. For the past several decades, scholars have debated the underlying factors that determine whether a source is credible. For example, Whitehead (1968) argued that there are four factors that contribute to source credibility: competence, trustworthiness, dynamism, and objectivity; whereas Giffin (1967) argued that source credibility is composed of expertness, reliability, intention, activeness, and attractiveness. Berlo and colleagues (1969) found evidence for qualification, safety, and dynamism as underlying source credibility factors. However, some of these studies were criticized for generalizing particular credibility factors beyond the scope of the study (Cronkhite & Liska, 1976). These studies were also later criticized because the scales that represented source credibility factors and the number of significant factors changed over time (Applbaum & Anatol, 1973).

Despite minor distinctions, generally these source credibility factors are quite similar. Overall, source credibility appears to comprise of expertise, trustworthiness, and likeability (e.g., McCroskey & Teven, 1999; McCroskey & Young, 1981). Competence, expertness, and qualification all tend to refer to the source’s expertise and competence and influence overall credibility (Swenson et al., 1984; Wechsler et al., 2015). Trustworthiness, reliability, intention, and safety all refer to a perception that the source is honest and intending to portray unbiased information (Hovland & Weiss, 1951). Lastly, dynamism, activeness, attractiveness, positivity, and extroversion all refer to a source’s presentation and likeability (Miller & Burgoon, 1982). No matter how source
factors are differentiated and structured, research shows evidence of their influence on source credibility.

Credibility of a source is not a dichotomous trait, but a continuous variable (Brodsky et al., 2010). Thus, source credibility cues can independently affect a message recipient’s level of perceived source credibility. The literature also suggests that source factors might hold varying weights on overall source credibility and overall persuasion. Several findings show that trustworthiness might actually play a bigger role in source credibility compared to expertise/competence (e.g., Hovland et al., 1953). For example, one study found that a trustworthy source is more persuasive than an untrustworthy source, independent of the source’s expertise (McGinnies & Ward, 1980). Further, Yoon and colleagues (1998) found that trustworthiness influenced beliefs about a particular advertisement, but expertise and attractiveness did not.

The current study examined two source credibility factors: trustworthiness and expertise and test their influence on perceived source credibility. This examination also tested whether expertise or trustworthiness is stronger in their effect on perceptions of source credibility. Although characteristics of the message source influences persuasion, the same is also true for characteristics of the message.

Message Credibility

Similar to source credibility, message credibility can influence the persuasiveness of an argument (Metzger et al., 2003; Slater & Rouner, 1996). Message credibility refers to the actual message, not to the source of the message. There tends to be a lack of cohesion in the credibility literature regarding definitions of source and message credibility (Appelman & Sundar, 2016). For the purposes of this study, message
credibility adopts Appelman and Sundar’s (2016) definition, “...an individual’s judgement of the veracity of the content of communication” (Appelman & Sundar, 2016, p. 63). Although source and message credibility are related (Metzger et al., 2003), message credibility can be considered without thinking about the source, and vice versa (Lang, 2000). Sometimes message recipients do not know the original source of the information. Characteristics of the message itself can influence credibility perceptions. For example, manipulating word choice or framing of a message can affect perceptions of credibility (Borah, 2013; Cole & Greer, 2013).

Although the literature possesses only a few message credibility scales, the scales that do exist are comprised of the adjectives that contribute to message credibility (e.g., accuracy; Appelman & Sundar, 2016; Flanagin & Metzger, 2003; Meyer, 1988). Participants rate a message’s content on the scale’s adjectives. The composite score indicates the participant’s perception of the overall credibility of the message. Like source credibility, scholars have identified factors that make up message credibility. These factors include message structure (i.e., the organization of the message), message content (i.e., information quality and message discrepancy), and message delivery or persuasion style (i.e., the way in which a message is presented; Metzger et al., 2003).

**Effects of Source and Message Credibility on Persuasion**

Source and message credibility are overlapping concepts (Cronkhite & Liska, 1976; Slater & Rouner, 1996; Smith, 1978; Stamm & Dube, 1994) and can also influence each other (e.g., McCroskey, 1969). For example, the use of evidence in a message (i.e., message content) increased people’s perceptions of the speaker’s credibility when the speaker’s credibility was low to moderate (Hamilton, 1998; McCroskey, 1969). However,
it should be noted that, although the two are overlapping constructs, source and message credibility scales tend to discriminate the two from each other (e.g., Roberts, 2010).

Generally, more credible sources are more persuasive than less credible sources (Braunsberger, 1996; Hovland & Weiss, 1951; Pornpitakpan, 2004). However, the persuasiveness of a message might be influenced more by message content than by source credibility (Austin & Dong, 1994; Mondak, 1990; Slater & Rouner, 1996). Source credibility and message credibility can interact to affect persuasion. Two message cues that interact with source credibility to affect persuasiveness are message quality and message complexity.

**Message Quality**

The quality of the arguments presented by a source can influence the relationship between source credibility and persuasion. Message quality is reflected in the accuracy, comprehensiveness, currency, reliability, and validity (Rieh & Belkin, 1998). In some cases, the presence of evidence can override any source credibility effects (McCroskey, 1969, 1970), as supporting arguments influence persuasion independently of source credibility factors (Maddux & Rogers, 1980). The quality of the source’s arguments influences persuasion, but only when the credibility of the source is high (Moore et al., 1986). Consistently, some research suggests a “violated expectancies” effect in that, when participants were provided with a weak message, participants were significantly less persuaded when the source was highly credible than when the source had low credibility (Bohner et al., 2002; Tormala et al., 2006). This might occur because, when a credible source provides weak arguments, people assume that strong arguments do not exist, otherwise the credible expert would have used them (Grice, 1975).
**Message Complexity**

Another relevant message credibility cue that influences the relationship between source credibility and persuasion is the complexity or ambiguity of the message. Research consistently demonstrates that source credibility influences persuasion when a message is complex (Bohner et al., 2002; Ratneshwar & Chaiken, 1991). For example, compared to participants who received a simple message, participants who received a complex or ambiguous message were more likely to rely on the expertise of the source (Bohner et al., 2002; Ratneshwar & Chaiken, 1991).

A consistent finding is that source credibility has a greater effect on people who have low involvement with a message than people who have high involvement (Heesacker et al., 1983; McGarry & Hendrick, 1974; Petty & Cacioppo, 1979; Stoltenberg & Davis, 1988, see Chebat et al., 1990 for an exception). Specifically, people who are highly involved with an issue are less affected by source cues (e.g., expert credentials) and their persuasion is dependent on the quality of the source’s argument (Chaiken & Maheswaran, 1994). On the other hand, people who are less involved with an issue tend to consider source cues.

The effects of participant involvement and message complexity on the use of source credibility cues is often explained through dual process frameworks. Researchers argue that systematic processing reduces the effects of source credibility cues (e.g., Ratneshwar & Chaiken, 1991). If source credibility cues are truly heuristic or peripheral cues, the previously mentioned findings support this notion. The dual processing literature shows that people who are highly involved with an issue should process a message systematically whereas people who are less involved might process the same
message heuristically (Petty & Cacioppo, 1979). Referred to as the “cue-loss” hypothesis, peripheral cues (e.g., credibility cues) influence attitudes initially, but this influence is reduced or drowned out by issue-relevant arguments (Petty & Cacioppo, 1979). This can explain why people who are highly involved with an issue rely less on source cues—they are more likely to focus on and scrutinize the message credibility.

There is also evidence for an additivity hypothesis (i.e., heuristic processing can directly affect judgements independent of systematic processing; Chaiken & Maheswaran, 1994; Maheswaran et al., 1992; Maheswaran & Chaiken, 1991). For example, systematic processing mediated the effect of incongruent cue -- message combinations (e.g., positive cue consensus- negative message content) on attitudes, but both systematic and heuristic processing affected attitudes when participants were provided congruent message combinations (e.g., positive cue consensus- positive message content). Relatedly, when a message is complex or ambiguous, people might not possess the motivation or ability (i.e., two conditions necessary for systematic processing) to think deeply about the message (Cacioppo & Petty, 1982; Petty et al., 1983). This should result in heuristic processing; and the findings that, when a message is complex, people are more influenced by source cues (Ratneshwar & Chaiken, 1991) supports this.

However, it should be noted that dual processing models such as the Elaboration Likelihood Model emphasize that the two types of processing can co-occur (Mackie, 1987). The models posit that a peripheral cue can be influential in both high and low elaboration conditions in that source credibility can serve as a cue when elaboration is low and as an issue argument when elaboration is high (Kruglanski & Thompson, 1999). A peripheral cue, such as a source cue, can also help a person decide the degree to which
they will process the message content (Mackie, 1987). The bias hypothesis suggests an interdependence between systematic and heuristic processing in that heuristic cues can indirectly influence attitudes by influencing a person’s expectations regarding the validity of a message (Chaiken & Maheswaran, 1994). Thus, source credibility cues might influence perceptions of message credibility.

**Expert Witnesses Credibility**

The credibility literature helps explain the persuasiveness of expert testimony, as source credibility cues and message credibility affect the credibility and persuasiveness of an expert witness’s testimony (e.g., Cooper et al., 1996; Cooper & Neuhaus, 2000; Koehler et al., 2016). For example, experts who are perceived as more credible tend to be more persuasive to a jury (Thompson & Scurich, 2019). Similar to the credibility literature that shows that source cues and message credibility cues interact to influence persuasion, expert credibility cues and testimony credibility cues interact to persuade jurors.

Juror decision making is often influenced by expert credibility cues. People rely on an expert’s background and experience when assigning value to the expert’s testimony (Hans & Saks, 2018). A proxy that is often used to measure “experience” in expert testimony is the expert’s credentials (e.g. Bank & Poythress, 1982; Cooper et al., 1996). An expert that is perceived to have more experience or credentials is perceived to be more credible and persuasive than an expert with less experience or fewer credentials (Swenson et al., 1984). Although jurors tend to weigh the credentials of one expert against the credentials of another expert (i.e., especially when the experts give opposing testimony; Ivković & Hans, 2003), it should be noted, though, that in real cases, lawyers tend to hire experts with similar credentials (Hans & Saks, 2018). When this occurs,
expert credentials will likely be irrelevant in predicting which expert is considered more credible. However, in some instances, experience regarding an expert’s frequency of testifying can actually decrease an expert’s credibility because experts who testify more frequently are sometimes viewed as less trustworthy. Experts who testify frequently are viewed as less credible than an expert who has less experience testifying. Ivković and Hans (2003) found that novice experts were trusted more than experts who testified frequently because jurors are sometimes suspicious of an expert’s motives. Experts who receive high pay for testifying or appear in several similar cases with the same attorney are sometimes perceived as “hired guns” and are less trusted (Ivković & Hans, 2003). Thus, although experts who testify frequently might be considered experienced, they might not be perceived as trustworthy.

Similar to message credibility, the majority of source credibility scales comprise of bipolar source credibility related adjectives (e.g., honest/dishonest, unintelligent/intelligent) that participants rate in reference to the source of a message (e.g., Eisend, 2006; Powell & Wanzenried, 1995). Most appropriate for the proposed study’s context, Brodsky and colleagues (2010) developed an expert witness specific source credibility scale (i.e., Witness Credibility Scale). This scale measures four factors of expert credibility: trustworthiness, knowledge, likeability, and confidence.

Cues regarding the credibility of the testimony (i.e., message credibility) also influence the persuasiveness of expert testimony. As previously stated, many of the effects of the influence of source cues on perception of expert and testimony credibility tend to occur when the testimony is complex (a message credibility cue; Cooper et al., 1996). For example, although mock jurors based their judgements on an expert’s
credentials when scientific testimony was complex (i.e., linguistically), this effect disappeared when the testimony was more comprehensible (Cooper et al., 1996). Similar effects were found with trustworthiness. When testimony was simple, the expert’s pay did not affect perceptions of the expert’s trustworthiness, but it did when the testimony was complex (Cooper & Neuhaus, 2000). The authors suggest that one possibility is that, once mock jurors hear that the expert has impressive credentials, they engage in peripheral route processing.

These findings are quite relevant for the proposed dissertation because forensic expert testimony is inherently complex. Even though jurors (and even mock jurors) are typically involved in their decision making and are focused on the content of expert testimony (Diamond & Rose, 2005; Diamond & Vidmar, 2001), many lay jurors are unfamiliar with the analyses that forensic experts present in court. Therefore, even though jurors might satisfy one of the conditions of systematic processing (i.e., motivation), if testimony is complex, source credibility cues should influence testimony credibility.

**Source and Message Credibility in the Current Study**

One of the purposes of the current study was to examine whether manipulating the credibility of an expert witness (i.e., source) and the credibility of the expert’s testimony (i.e., message) will affect the persuasiveness of the expert. Two of the four ExPEx factors examined in the current study can be characterized as source credibility cues. Specifically, the field factor refers to the expert’s experience and the trustworthiness factor refers to the fairness and impartiality of the expert. Thus, the source credibility literature suggests that, in general, these two source cues will influence perceptions of forensic expert credibility because forensic expert testimony is usually complex.
The other two of the four ExPEx factors (i.e., consistency and foundation) examined in the current study can be characterized as message credibility cues. The consistency factor refers to the consistency of an expert’s assertions (i.e., message) with other experts’ opinions, and the foundation factor refers to the validity of the message’s underlying assertions. Both of these factors are characteristics of the quality of the expert’s message. As previously discussed, when an expert is seemingly credible but presents weak arguments, message recipients might be less persuaded than had the expert been less credible (Bohner et al., 2002; Tormala et al., 2006). Therefore, it is necessary to test both source and message separately to test for this violated expectancy effect. Specifically, when the field and trustworthiness of an expert are strong, but the expert’s consistency and foundation are weak, jurors should be less persuaded by the testimony compared to when the expert is weak on all four factors.

Overall, Martire et al.’s (2020) persuasion factors field and trustworthiness align with the expertise and trustworthiness source credibility factors, and foundation and consistency influence message credibility. The current study examined the effects of the four persuasion factors on source and message credibility as well as overall persuasion. Further, the study tested whether juror individual differences influence these effects.
Chapter 5: Individual Differences

It is important to consider individual differences that might influence the effects of both cross-examination and persuasion factors on jurors’ perceptions of expert credibility, message credibility, and verdicts. Research shows that juror individual differences (e.g., legal authoritarianism) influence juror decision making and that particular expert (e.g., field) and testimony factors (e.g., foundation) influence an expert’s persuasiveness. However, research has neglected to study the interaction between juror individual differences and testimony factors on expert persuasion. An interactionist model posits that both the situation (e.g., evidence) and the individual juror (e.g., attitudes) influence juror behavior (Roberts & Zuckerman, 2004). Thus, the current study will examine individual differences as potential moderators of the effects of expert factors on persuasion.

Juror individual differences tend to have a larger influence on juror behavior when situational cues are unclear (e.g., weak or ambiguous evidence; Kassin & Wrightsman, 1983). Because the current study utilized ambiguous forensic evidence (i.e., weak credibility of the evidence), considering juror individual differences provided a more accurate understanding of the proposed effects. For example, a cross-examination that highlights the foundation factor might only be influential in a subset of the jury (e.g., jurors high in Need for Cognition). Because one of the aims of this research was to maximize implications and utility of the study’s findings in the courtroom, examining the populations in which the proposed effects occur is particularly helpful for attorneys and jury consultants. This chapter discusses how a host of individual differences (i.e., Need for Cognition, attitudes toward the legal system, attitudes toward forensic science, legal
fiction consumption, and legal authoritarianism) relate to the persuasiveness of forensic expert testimony.

**Need for Cognition**

Need for Cognition (NFC) refers to a person’s general processing style and their preference for thinking carefully about persuasive messages (Petty & Cacioppo, 1986). People high in NFC tend to be motivated to process messages systematically, whereas people low in NFC tend to process information more heuristically (Cacioppo & Petty, 1982). People high in NFC are often influenced by the strength and quality of a message, whereas people low in NFC are often influenced by heuristic cues such as the number of arguments a speaker makes (Chaiken, 1987).

Need for Cognition is arguably one of the most studied individual differences in jury-decision making (e.g., Cooper et al., 1996; Cooper & Neuhaus, 2000). NFC can predict some juror decision making behavior. For example, NFC relates to juror verdict preferences. People high in NFC tend to give less punitive verdicts than people low in NFC (Miller, Wood, et al., 2014; Sargent, 2004). NFC can also affect how jurors process trial information. People high in NFC are more likely to think critically about evidence and more accurately evaluate the validity of scientific studies (i.e., message credibility) than people low in NFC (Devine, 2012). Further, jurors high in NFC can analyze evidence more thoroughly and can better detect logical flaws (DeWitt et al., 1997; Graziano et al., 1990; Kassin et al., 1990).

Importantly, NFC can affect the ways that jurors are influenced by experts in court because expert testimony can often be complex (Bornstein, 2004; McAuliff & Kovera, 2008; Leippe et al., 2004). People high in NFC are more critical of expert
testimony and are better able to appreciate variation in the quality of scientific research (Devine, 2012). For example, NFC was negatively related with an expert’s perceived credibility when the expert presented scientifically flawed evidence (McAuliff & Kovera, 2008).

Because people high in NFC tend to be more likely to engage in systematic processing and people low in NFC tend to be more likely to engage in heuristic processing (Chaiken, 1987), jurors high in NFC tend to be less affected by heuristic cues (e.g., source credibility cues). Low NFC participants perceived an expert as more credible when he presented anecdotal evidence than when he presented experimental evidence (i.e., a sign of heuristic processing), whereas people high in NFC were unaffected by evidence type (Bornstein, 2004). However, the relationship between NFC and juror level of processing seems to be a bit more complex. Mock jurors who were high in NFC were influenced by the source credibility cues of an expert (Wood et al., 2019). This suggests that expert credibility cues might be processed rationally as a piece of evidence rather than a heuristic cue (Wood et al., 2019). People who are motivated to think about an issue are sometimes more likely to consider source credibility (Kruglanski & Thompson, 1999). Thus, people high in NFC might focus on both source credibility and message credibility (Tormala et al., 2006). This explanation is also consistent with argument that dual processing routes can co-occur and heuristic cues can sometimes serve as issue arguments (Kruglanski & Thompson, 1999).

The current study aimed to test the following hypotheses. First, because jurors high in NFC are more likely to scrutinize expert testimony (i.e., message) and appreciate flaws in scientific evidence (i.e., message credibility), compared to those low in NFC,
jurers high in NFC will be more affected by the message credibility cues, (foundation and consistency), in their perceptions of message credibility and expert persuasiveness. Because of the mixed findings on the possible influence of NFC on jurors’ perceptions of experts (i.e., source), the study will test the following two competing hypotheses: 1) because people high in NFC might be less likely to use heuristic cues like source cues in their perceptions of persuasiveness, NFC might weaken the relationship between source credibility and persuasion; 2) however, because some findings indicate that people high in NFC sometimes use source cues as evidence (Kruglanski, 1989; Kruglanski & Thompson, 1999), NFC might not moderate the relationship between source credibility and persuasion. In addition, because people high in NFC might process both source and message credibility cues whereas people low in NFC might only rely on source credibility cues, NFC might weaken the relationship between source credibility and message credibility.

**Attitudes Toward the Legal System**

Attitudes toward the legal system predict juror verdict decisions (Kassin & Wrightsman, 1983). For example, positive attitudes toward the police (Hepburn & Albonetti, 1980) and the jury system (Sealy, 1981) are associated with a greater likelihood of rendering guilty verdicts. The most well-known measure of pretrial attitudes, the Juror Bias Scale (JBS; Kassin & Wrightsman, 1983) is comprised of items that reflect two constructs, probability of commission (PC; i.e., the subjective likelihood, based on one’s a priori beliefs and the evidence, that the defendant actually committed the crime) and reasonable doubt (RD; a threshold of certainty that must be exceeded in order to convict). If the probability that the defendant committed the crime exceeds a juror’s
threshold of reasonable doubt, then the juror votes guilty. Addressing some of the limitations of this scale, Lecci and Myers (2008) created a more comprehensive pretrial attitudes assessment, the Pretrial Juror Attitude Questionnaire (PJAQ), that includes a wide range of attitudes toward the legal system and generally measures conviction proneness. Specifically, their scale includes attitudes regarding conviction proneness, system confidence, cynicism toward the defense, racial bias, social justice (i.e., belief that individuals do not receive equal protection under the law), and innate criminality. These attitudes are reliable predictors of verdict preference (Lecci & Myers, 2008).

Although research shows that pretrial attitudes influence juror verdicts, Lecci and Myers (2008) note that they only examined direct effects. The authors point out that, “…indirect effects, particularly as mediated by the evaluation of evidence, would carry the greatest influence of pretrial biases” (Lecci & Myers, 2008, p. 2029). Therefore, in addition to a direct effect on verdict preferences, pretrial attitudes toward the legal system might moderate the effect of expert persuasion factor manipulations on perceptions of expert credibility and message credibility. Specifically, cross-examinations that use the four persuasion factors might have a weaker effect on jurors’ perceptions of expert credibility and message credibility when jurors hold more favorable attitudes toward the legal system than when jurors hold less positive attitudes. The current study also examined whether favorable attitudes toward the legal system weaken the effect of certain expert persuasion factors and not others, and whether these attitudes uniformly weaken the effect of all expert persuasion factors on expert credibility and message credibility.

**Attitudes Toward Forensic Science**

Jurors’ attitudes toward forensic science might also influence the persuasiveness
of expert testimony. There is mixed evidence regarding the effect of general scientific attitudes on perceptions of experts and verdicts. In one study, participants who held more positive scientific attitudes rated the defendant’s expert as more credible (Bornstein, 2004). However, scientific attitudes were not related to perceptions of the plaintiff’s expert or verdict (Bornstein, 2004).

Consistent with the literature on specific attitudes as stronger predictors of behavior compared to more general attitudes (Fazio & Zanna, 1978), attitudes toward forensic science specifically might better predict juror decision making. The literature provides limited evidence of this; evidence specific and case specific attitudes do influence juror verdicts (Moran et al., 1994). For example, Lieberman et al. (2008) found that jurors with greater trust in DNA evidence were more likely to convict a defendant when DNA evidence was presented. Similarly, Smith and Bull (2012) found that jurors’ ratings of the strength of DNA evidence was the only piece of evidence that predicted final probability of guilt. This effect was partially mediated by pro-prosecution beliefs about forensic evidence (i.e., beliefs about the infallibility and conclusiveness of forensic science). Taken together, these findings suggest that jurors who hold more pro-prosecution beliefs about forensic evidence perceive weak DNA evidence to have higher probative value than jurors with less pro-prosecution beliefs (Smith & Bull, 2012).

Based on the above research, in addition to a direct effect on verdicts, jurors’ pro-prosecution beliefs about forensic science should moderate the effect of expert persuasion factor manipulations on perceptions of expert credibility and message credibility. Specifically, cross-examinations that use the four persuasion factors might have a weaker effect on jurors’ perceptions of expert credibility and message credibility when jurors
hold more pro-prosecution beliefs about forensic science than when jurors hold less pro-
prosecution beliefs. The current study also examined whether pro-prosecution beliefs
about forensic science weaken the effect of certain expert persuasion factors and not
others, or whether these beliefs uniformly weaken the effect of all expert persuasion
factors on expert credibility and message credibility.

**Legal Fiction Consumption**

Jurors’ legal fiction consumption might also influence the effects of cross-
examination on verdicts. Referred to as the “CSI Effect”, prosecutors have argued that,
due to an increase in legal fiction consumption (e.g., shows like CSI), jurors are acquit-
ting defendants due to a lack of physical evidence actually presented at trial. Because
crime shows present an abundance of physical evidence that connects the crime to a
suspect, prosecutors have argued that jurors who watched these shows have an expect-
ation that real crimes and trials include a similar amount of physical evidence. Thus,
when limited evidence is presented in court, jurors are underwhelmed and acquit the
defendant (Podlas, 2006). Further, some jurors believe that if forensic evidence is not
presented, the state has not met its burden of proof (Giannelli, 1991).

Another phenomenon referred to as the CSI Effect involves the crime scene
investigation TV show, CSI, portraying forensic science as infallible and thus increasing
trust in forensic science (Podlas, 2006). For example, one of CSI’s mantras is that people
can lie but the evidence cannot. Viewers often believe that the legal fiction that they
consume is an accurate portrayal of the criminal justice system (Mann, 2005). Some
people even perceive such legal shows as a “lesson in law” (Shrum, 1998). For example,
the process of DNA testing takes weeks to complete, but the process is portrayed as only
taking minutes to complete in TV shows. Thus, during the Scott Peterson case, the public could not understand why it would take weeks to months to analyze DNA evidence (Mann, 2005). The exaggerated portrayal of forensic evidence also leaves viewers with the belief that scientific evidence is irrefutable (Mann, 2005). For example, crime shows often portray fingerprint analyses as a computer generated “perfect match” and fail to discuss the likelihood of error. Therefore, according to the CSI Effect, exacerbated trust in forensic science should result in more convictions when forensic evidence is presented.

Like other individual differences, findings regarding the presence and absence of the CSI Effect are mixed. Limited evidence supports a possible existence of the Effect, however, much of it is anecdotal. Maricopa County Attorney’s Office found support for the CSI Effect in that prosecutors reported that jurors expected forensic evidence and were acquitting defendants when the evidence was not provided (Thomas, 2005). Of the numerous studies actually conducted on the CSI Effect, only a few show empirical support for it. Harvey and Derksen (2009) found that people who watch crime shows are generally predisposed to accepting scientific explanations. This is, in part, because people incorporate legal fiction as factual into their worldview. Further, consistent with the CSI Effect phenomenon in which legal fiction increases trust in forensic science, Baskin and Sommers (2010) found that more time spent watching crime TV resulted in greater perceptions of reliability of forensic evidence compared to other types of testimony. Consistent with the CSI Effect phenomenon in which legal fiction consumption increases expectations about forensic evidence, the authors also found that crime show viewing was negatively related to the willingness to convict a defendant without scientific evidence. Specifically, participants who watched three or more hours of crime shows per
week were less likely to convict without the presence of scientific evidence (Baskin & Sommers, 2010). Similarly, Klentz and colleagues (2020) found that, compared to lower levels of crime drama viewing, higher levels of crime drama viewing was associated with lower guilt ratings when no forensic evidence was presented and when DNA evidence supported the defendant’s innocence. Other research has found that heavy forensic science TV viewers were more dissatisfied with pro-prosecution scientific evidence and required a higher percentage of certainty to find the defendant guilty (Mancini, 2011).

Much of the empirical research on the CSI Effect finds no evidence of its existence (e.g., Podlas, 2006). People’s perceptions about DNA’s accuracy and persuasiveness did not differ between people who were exposed to legal media and those who were not (Lieberman et al., 2008). Watching CSI also did not have an independent effect on jurors’ verdicts (Kim et al., 2009; Shelton et al., 2006). Podlas (2006) also found no evidence of a CSI Effect. There was no difference between crime viewers and nonviewers in how they weighed the absence of DNA or fingerprint evidence in their verdict decisions. Similarly, when incriminating DNA evidence was presented, mock jurors’ levels of crime drama viewing did not influence guilt ratings (Klentz et al., 2020). After analyzing jury deliberation discussions, Klentz and colleagues (2020) also found no evidence of a CSI effect during discussions of DNA evidence, opinions about DNA, or missing evidence.

Previous research demonstrates indirect effects of CSI viewing on verdicts via raised expectations (e.g., Kim et al., 2009). Although legal fiction consumption might not directly predict verdicts, it might influence the effectiveness of a cross-examination of a forensic expert. Jurors who consume more legal fiction might hold greater trust in forensic science. This increased trust might serve as a buffer against the effects of cross-
examination, resulting in a greater likelihood of conviction. However, the opposite effect is also a possibility. In line with prior research, jurors who consume more legal fiction might have greater expectations for forensic evidence and a cross-examination that highlights the weaknesses of forensic evidence might actually reduce satisfaction with the prosecutor’s evidence. This should then result in a lower likelihood of conviction. Thus, the study tested the following two competing hypotheses: 1) amount of legal fiction consumption will strengthen the relationship between the persuasion factor on expert credibility and message credibility; 2) amount of legal fiction consumption will weaken the relationship between the persuasion factor on expert credibility and message credibility. The current study also examined whether legal fiction consumption influences the effect of certain expert persuasion factors on expert credibility and message credibility, or whether viewing legal fiction uniformly influences the effect of all expert persuasion factors on expert credibility and message credibility.

**Authoritarianism**

Authoritarianism refers to the degree to which people value social order, traditional norms, and strong leadership and authority (Adorno et al., 1950). People high in authoritarianism hold conservative values and support any means of enforcing such values. Because they value submission to authorities, their thinking tends to be inflexible. Those high in authoritarianism also support harsh punishment for people who deviate from such societal norms and values. Legal authoritarianism, a variant of authoritarianism, refers to similarly held legal attitudes. People high in legal authoritarianism are conviction prone and are less concerned about civil liberties or protecting rights of the accused (Narby et al., 1993). Overall, in regard to legal issues, they feel that the rights of
the government outweigh the rights of individual people.

Legal authoritarianism can predict some aspects of juror behavior (Butler, 2010; De la Fuente Solana et al., 1998; Landwehr et al., 2002; Miller et al., 2014). Research has found a positive correlation between legal authoritarianism and death qualification, with jurors higher in legal authoritarianism being more willing to consider the death penalty than jurors lower in legal authoritarianism (Butler & Moran, 2007). Legal authoritarianism also predicts verdicts (Butler, 2010; Martin & Cohn, 2004; Narby et al., 1993); people high in legal authoritarianism are more likely to convict (Narby et al., 1993) and recommend a death sentence (Butler, 2010) compared to people low in legal authoritarianism. This might be because legal authoritarians are more likely to endorse aggravating factors (i.e., factors that make a death sentence more appropriate) and less likely to endorse mitigating factors (i.e., factors that make a life sentence more appropriate; Butler & Moran, 2007).

Based on the above tendencies of people high in legal authoritarianism, legal authoritarianism should predict verdict preferences and might also moderate the effect of expert persuasion factor manipulations on perceptions of expert credibility and message credibility. Specifically, because jurors high in legal authoritarianism are more conviction prone and place less emphasis on the rights of the accused (Narby et al., 1993), cross-examinations that use the four persuasion factors might have a weaker effect on jurors’ perceptions of expert credibility and message credibility when jurors hold more legal authoritarian attitudes than when jurors hold less legal authoritarian attitudes. The current study also examined whether legal authoritarian attitudes weaken the effect of certain expert persuasion factors and not others, or whether these attitudes uniformly weaken the
effect of all expert persuasion factors on expert credibility and message credibility.
Chapter 6: Study Overview

Using Martire and colleagues (2020) as a foundation, the current study tested part of the ExPEx in a more ecologically valid context. First, Martire and colleagues (2020) presented information about a forensic expert via a brief “Expert Report.” In the United States legal system, jurors do not receive such information in a report; they hear the information via a direct and cross-examination of a forensic expert. As previously discussed, mixed evidence suggests that cross-examinations of forensic experts that highlight weaknesses in the persuasion factors (e.g., the subjectivity of the forensic science; foundation) might be effective in reducing the credibility of the expert and reducing guilty verdicts (e.g., Thompson & Scurich, 2019). Thus, rather than presenting the expert information via a report, the current study presented mock jurors with the forensic expert information through a more realistic method, that is, through a direct and cross-examination.

Second, in Martire and colleagues (2020), all participants read information on all eight factors. Although the authors aimed to create a comprehensive model, in reality, often jurors will not receive information on all eight factors during trial. It is also possible that the weight jurors give to individual factors might be influenced by the presence of all factors. For example, foundation information might be given a significant amount of weight, but only when consistency information is not presented, suggesting a possible interaction effect between factors. As Mitchell and Garrett (2019) point out, “Jurors are likely to find it easy to discount general concerns about forensic evidence, including general error rate information, when confronted with an experienced expert with an impressive background…” (p. 198). Thus, jurors might give more weight to foundation
information when field information is not presented. Further, the study aimed to examine whether there might be additive effects of the factors on perceptions of credibility and guilt. For example, it is unclear whether reducing the perceptions of the expert on one factor is enough to reduce credibility and therefore reduce guilt, or if the reductions of perceptions of the expert on more than one factor is needed in order to achieve the same effect. The current study examined four of the factors, presented both individually and together.

Third, some of the factor manipulations that Martire and colleagues (2020) use are a bit vague or unrealistic for a trial context. For example, the foundation factor was manipulated by stating whether the particular forensic science does or does not allow for comparison. Although particular forensic sciences might yield poor comparisons, an expert would not be asked to testify if objectively their field could not make comparisons. The current study utilized more ecologically valid factor information such as using known error rates of the forensic discipline to manipulate the foundation factor.

Fourth, Martire and colleagues (2020) used “gait analysis” (i.e., “a practice that involves comparing persons of interest in crime-related images such as surveillance recordings with reference images of suspects; Edmond & Cunliffe, 2016, p. 219) because they “anticipated low levels of familiarity and prejudgment amongst respondents” (Martire et al., 2020, p. 5). Because people tend to believe that more commonly known forensic evidence (e.g., fingerprint, DNA) is very accurate and persuasive (Lieberman et al., 2008), the current study aimed to examine whether four of the ExPEEx persuasion factors would have similar effects on a more commonly known forensic expert (i.e., fingerprint analyst).
Fifth, synthesizing Martire et al.’s (2020) persuasion factors with the source credibility and message credibility literature, the current study tested whether field and trustworthiness serve as source credibility cues (i.e., expertise and trustworthiness) that affect the credibility of the expert and whether foundation and consistency serve as message cues (i.e., message quality -- accuracy and reliability) that affect the credibility of the expert’s message. Further, the study tested whether source credibility and message credibility mediate the relationship between the expert persuasion factors and persuasion (i.e., juror verdicts).

Lastly, this study measured a variety of individual differences not yet tested as mediators/moderators of the ExPEx framework. For example, compared to jurors who have high Need for Cognition, jurors who have low Need for Cognition might be less influenced by source factors including field and trustworthiness.

A 2 Consistency (challenge absent, challenge present) X 2 Foundation (challenge absent, challenge present) X 2 Field (challenge absent, challenge present) X 2 Trustworthiness (challenge absent, challenge present) between subjects experiment tested whether challenging a forensic expert on their field, trustworthiness, consistency, and foundation reduces jurors’ perceptions of the expert on those factors. The current study also tested whether the perceived consistency, foundation, field, and trustworthiness of a forensic expert influences the credibility the forensic expert and the credibility of their message. Further, the study tested whether expert credibility and message credibility affect persuasion in the form of jurors’ ratings of defendant guilt. The current study also examined relevant individual differences (e.g., Need for Cognition) as potential moderators. Specifically, the current study tested the following hypotheses (see Appendix
P for Hypothesis Tables):

**Persuasion Factors on Expert Credibility**

**H1:** There will be a main effect of “Field” on “Expert Credibility,” such that participants who read about a challenge to the expert’s field will rate the expert as less credible compared to participants who do not read about the challenge.

**H2:** There will be a main effect of “Trustworthiness” on “Expert Credibility,” such that participants who read about a challenge to the expert’s trustworthiness will rate the expert as less credible compared to participants who do not read about the challenge.

**Persuasion Factors on Message Credibility**

**H3:** There will be a main effect of “Consistency” on “Message Credibility,” such that participants who read about a challenge to the expert’s consistency will rate the expert’s testimony as less credible compared to participants who do not read about the challenge.

**H4:** There will be a main effect of “Foundation” on “Message Credibility,” such that participants who read about a challenge to the expert’s foundation will rate the expert’s testimony as less credible compared to participants who do not read about the challenge.

**Persuasion Factors and Persuasion**

**H5:** There will be an additive effect of each of the four persuasion factors on “Guilt” Specifically, the condition in which all four persuasion factor challenges are present will result in the lowest “Guilt” ratings and the condition in which none of the four persuasion factor challenges are present will result in the highest “Guilt” ratings. The other conditions will fall between these extremes, with the presence of three persuasion
factor challenges resulting in lower “Guilt” ratings compared to conditions in which only one or two persuasion factor challenges are present.

Consistent with the violated expectancies effect (i.e., persuasion is reduced when the source is credible, but the message is of low quality) in the source credibility literature, the following auxiliary hypothesis will be tested:

**H5a:** Participants who do not receive a field and trustworthiness challenge but do receive a consistency and foundation challenge will result in the highest “Guilt” ratings compared to other conditions.

**Research Question 1:** Will there be interaction effects between the four persuasion factor challenges such that the effect of one factor’s challenge on “Guilt” is dependent on the challenges of other persuasion factors?

**Testing the Model**

**H6:** “Expert Credibility” (IV) will positively predict “Guilt” (DV; See Figure 1).  

**H7:** “Message Credibility” (IV) will positively predict “Guilt” (DV).  

**H8:** “Message Credibility” will positively correlate with “Expert Credibility”.
Figure 1

*Expert Persuasion Mediation Model*

Note. Persuasion factor manipulations (i.e., challenges) were coded “Absent” (0) and “Present” (1).

**Individual Differences**

In addition to testing the above hypotheses, the current study examined the following hypotheses to examine the influence of individual differences on jurors’ perceptions.

**Need for Cognition**

H9: As shown in Figure 2, “NFC” will negatively predict “Guilt” controlling for other factors.

H10: Higher “NFC” scores will moderate the relationships between: 1) “Expert Credibility” (DV) and “Guilt” (IV), 2) “Message Credibility” (IV) and “Guilt” (DV), 3) “Consistency” (IV) and “Message Credibility” (DV), and 4) “Foundation” (IV) and “Message Credibility” (DV).
Due to the mixed findings regarding Need for Cognition and the use of source cues, the following competing hypotheses (H1 and H1a) will be tested:

H1: Higher “NFC” scores will weaken (moderate) the relationship between “Expert Credibility” (IV) and “Guilt” (DV).

H1a: Higher “NFC” scores will not moderate the relationship between “Expert Credibility” (IV) and “Guilt” (DV).

Figure 2

Need for Cognition and Expert Persuasion
**Attitudes Toward the Legal System**

H12: As shown in Figure 3, “Positive attitudes toward the legal system” will positively predict “Guilt.”

H13: “Positive attitudes toward the legal system” will weaken (moderate) the relationship between: 1) both “Field” (IV) and “Trustworthiness” (IV) and “Expert Credibility” (DV), 2) both “Foundation” (IV) and “Consistency” (IV) and “Message Credibility” (DV), and 3) both “Expert Credibility” (IV) and “Message Credibility” (IV) and “Guilt” (DV).

**Figure 3**

*Attitudes Toward the Legal System and Expert Persuasion*
**Attitudes Toward Forensic Science**

H14: As shown in Figure 4, “Pro-prosecution attitudes toward forensic science” will positively predict “Guilt.”

H15: “Pro-prosecution attitudes toward forensic science” will weaken (moderate) the relationship between: 1) both “Field” (IV) and “Trustworthiness” (IV) and “Expert Credibility” (DV), 2) both “Foundation” (IV) and “Consistency” (IV) and “Message Credibility” (DV), and 3) both “Expert Credibility” (IV) and “Message Credibility” (IV) and “Guilt” (DV).

**Figure 4**

*Attitudes Toward Forensic Science and Expert Persuasion*
**Legal Fiction Consumption**

Due to the mixed findings regarding the CSI Effect and likelihood of conviction or acquittal, the following competing hypotheses (H16 and H16a) will be tested:

H16: “Legal fiction consumption” will strengthen (moderate) the relationship between each of the four persuasion factors (IV) and “Expert Credibility”/ “Message Credibility” (DV; See Figure 5).

H16a: “Legal fiction consumption” will weaken (moderate) the relationship between each of the four persuasion factors (IV) and “Expert Credibility”/ “Message Credibility” (DV).

**Figure 5**

*Legal Fiction Consumption and Expert Persuasion*
**Authoritarianism**

H17: As shown in Figure 6, higher “Authoritarianism” scores will positively predict “Guilt.”

H18: “Authoritarianism” will weaken (moderate) the relationship between: 1) both “Field” (IV) and “Trustworthiness” (IV) and “Expert Credibility” (DV), 2) both “Foundation” (IV) and “Consistency” (IV) and “Message Credibility” (DV), and 3) both “Expert Credibility” (IV) and “Message Credibility” (IV) and “Guilt” (DV).

**Figure 6**

*Authoritarianism and Expert Persuasion*
Chapter 7: Pilot Study

The first purpose of the pilot study was to ensure that the four persuasion factor manipulations (i.e., consistency, foundation, field, trustworthiness) were effective and manipulated what they intended to manipulate. Specifically, each persuasion factor manipulation should decrease participants’ perception of the respective factor including either the expert’s consistency (i.e., whether the expert’s assertions are consistent with those of other experts), foundation (i.e., whether training or experience in the expert’s field supports their assertions), field (i.e., whether the person has training or experience in a relevant field), or trustworthiness (i.e., whether the expert provides reliable and unbiased assertions). The pilot study consisted of five conditions: Consistency Present, Foundation Present, Field Present, Trustworthiness Present, and the control condition to test differences in perception between the control and present condition (i.e., for each respective factor). The second purpose of the pilot study was to make sure that the trial stimuli elicit a split verdict to prevent ceiling and floor effects.

One of the assumptions underlying the design of the present/absent manipulations is that people naturally hold favorable perceptions of expert witnesses and their testimony (Lieberman et al., 2008). It was assumed that without specific information intended to reduce perceptions of the expert’s consistency, field, foundation, and trustworthiness, people would rate the expert high (i.e., favorably) in all four factors, and this would serve as a baseline line for perceptions of a forensic expert. When presented with information intended to reduce perceptions of the expert in these four factors, it was assumed that people would rate the expert lower than the baseline.
Participants

Jury qualified participants who live in the United States were recruited via Amazon’s Mechanical Turk (M-Turk). M-Turk is an online platform in which researchers can monetarily compensate community members for participating in studies. M-Turk workers are often considered representative of the general adult population of the United States (Buhrmester et al., 2011). To get a good indicator of participants’ perceptions of expert testimony credibility, and to determine whether more information in control conditions needed to be provided, for the five conditions, 87 participants participated in the pilot study and received $2 for compensation.

Procedure

As part of the consent form (see Appendix A), participants read that they needed to complete screener questions in order to determine their eligibility for the study. After consenting to participate in the current study, participants completed screener questions that assessed whether they were juror qualified (see Appendix B). Juror qualified refers to participants who meet the general eligibility requirements of serving on a jury in most states (e.g., U.S. citizen, at least 18 years old, proficient in English). The survey then routed participants who were considered not juror qualified to a screen that explained that they were not eligible for the study, and they were thanked for their time. Participants who were juror qualified read a case summary about a crime, a direct examination of a forensic expert (see Appendix C), a cross-examination of the forensic expert (see Appendix D), closing arguments (see Appendix E), and jury instructions (see Appendix F). The above mock jury materials are based off of those used in Garrett and Mitchell (2013), Lieberman and colleagues (2008), and Thompson and Scurich (2019).
Participants then completed a verdict form (see Appendix G) and attention check items to ensure that they read the case materials. Then they rated their perceptions of the forensic expert’s consistency, foundation, field, and trustworthiness (i.e., manipulation checks; see Appendix H).

The cross-examination manipulated the expert’s consistency, foundation, field, or trustworthiness via defense attorney questioning. The cross-examination for each condition contained the presence (i.e., manipulation) or absence (i.e., control) of questions that reduce the consistency, foundation, field, or trustworthiness of the expert and were randomly assigned to participants. 4

**Data Analysis**

To test the effectiveness of the manipulations of the four persuasion factors, Type II ANOVAs were run with the five manipulation conditions as the grouping variable and perceptions of the expert as the dependent variables.

**Field.** The ANOVA that tested differences between each of the five conditions and perceptions of expert “Field” was not significant ($F(4, 82) = .85, p = .50$). Although there were no significant differences of “Field” ratings between conditions, the condition that received the field manipulation (i.e., intended to reduce “Field” ratings) had the lowest mean “Field” ratings (see Table 1).

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4 Two pilot studies were run. The manipulation checks in the first pilot showed that the manipulations were not entirely effective in manipulating perceptions of the expert. Manipulations were strengthened by making persuasion factor information more salient and explicit, and adding additional information regarding the persuasion factor. The cross-examination materials were reviewed by a supervising criminalist for a sheriff department’s forensic science division to ensure accuracy and ecological validity.
Table 1

*Average Ratings of Expert “Field” by Condition*

<table>
<thead>
<tr>
<th>Condition/Present Factor</th>
<th>Mean</th>
<th>SD</th>
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<td>Control</td>
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</tbody>
</table>

**Trust.** The ANOVA that tested differences between each of the five conditions and perceptions of expert “Trustworthiness” was not significant ($F(4, 82) = .34, p = .85$). Although there were no significant differences between groups, the condition that received the Trustworthiness manipulation had the lowest “Trustworthiness” mean, (see Table 2 for all means).

Table 2

*Average Ratings of Expert “Trustworthiness” by Condition*

<table>
<thead>
<tr>
<th>Condition/Present Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>5.67</td>
<td>1.76</td>
</tr>
<tr>
<td>Field</td>
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<td>1.67</td>
</tr>
<tr>
<td>Trust</td>
<td>5.33</td>
<td>1.59</td>
</tr>
<tr>
<td>Consistency</td>
<td>5.91</td>
<td>1.08</td>
</tr>
<tr>
<td>Foundation</td>
<td>5.72</td>
<td>1.57</td>
</tr>
</tbody>
</table>

**Consistency.** The ANOVA that tested the differences between each of the five conditions and perceptions of expert “Consistency” was not significant ($F(4, 82) = .93, p = .45$). Although there were no significant differences between groups, the condition that received the consistency manipulation had the lowest “Consistency” mean, (see Table 3 for all means).
Table 3

*Average Ratings of Expert “Consistency” by Condition*

<table>
<thead>
<tr>
<th>Condition/Present Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
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<tr>
<td>Field</td>
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<td>1.69</td>
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<tr>
<td>Trust</td>
<td>5.73</td>
<td>1.10</td>
</tr>
<tr>
<td>Consistency</td>
<td>5.17</td>
<td>1.75</td>
</tr>
<tr>
<td>Foundation</td>
<td>5.22</td>
<td>1.22</td>
</tr>
</tbody>
</table>

**Foundation.** The ANOVA that tested the differences between each of the five conditions and perceptions of expert “Foundation” was not significant (F (4, 82) = .61, p = .66). Although there were no significant differences between groups, the condition that received the foundation manipulation had the lowest “Foundation” mean, (see Table 4 for all means).

Table 4

*Average Ratings of Expert “Foundation” by Condition*

<table>
<thead>
<tr>
<th>Condition/Present Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>5.67</td>
<td>1.18</td>
</tr>
<tr>
<td>Field</td>
<td>5.31</td>
<td>1.49</td>
</tr>
<tr>
<td>Trust</td>
<td>5.40</td>
<td>1.24</td>
</tr>
<tr>
<td>Consistency</td>
<td>5.78</td>
<td>1.31</td>
</tr>
<tr>
<td>Foundation</td>
<td>5.22</td>
<td>1.44</td>
</tr>
</tbody>
</table>

**Verdict.** Verdict decisions were split slightly in favor of “Guilty” verdicts (56%) over “Not Guilty” verdicts (44%). With a range of 0-100% (i.e., higher ratings reflective of more guilt), guilt ratings were also slightly higher (M = 64.01, SD = 25.99).
Discussion

Even though the differences between the experimental conditions and the control group were not significant for each persuasion factor, the means trended in the intended direction. Specifically, the mean rating for each persuasion factor was lower in the respective persuasion factor manipulation condition compared to the control group and other conditions. Because of this, the pilot materials were once again strengthened for the main study.
Chapter 8: Main Study Method

Participants

The sample comprised of American juror-qualified participants on Amazon’s Mechanical Turk (M-Turk) via CloudResearch. A power analysis was run in G*Power (Erdfelder et al., 1996) for a chi-square goodness of fit test with an effect size of Cohen’s $w = .25$, $\alpha = .05$, a power of $\beta = .80$, and 46 degrees of freedom. G*Power indicated that a minimum of 467 participants were needed for the above parameters. To account for possible attrition and missing data, data was collected for an additional 25 percent of the minimum sample. Data were collected on 583 participants. Only respondents from the United States could access the survey, and participants that provided nonsensical responses or responses that demonstrated a lack of English fluency in open-ended English fluency screeners were omitted. To ensure higher data quality, only CloudResearch approved participants were used, and duplicate IP addresses and suspicious geocode locations were blocked. CloudResearch also verifies worker country location. In total, 20 participants were removed, for a final sample of 563 participants. Participants were 40% male, 60% female, and ages ranged from 20-79 ($M = 43$, $SD = 13$). About 78% of the sample identified as White, 8% as Asian, 7% as African, and 3% as Hispanic.

Procedure

As part of the consent form, participants read that they needed to complete screener questions in order to determine their eligibility for the study. After consenting to

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5 This was largest number of degrees of freedom amongst all of the models including the main model as well as the moderation models. This effect size was chosen because past literature (e.g., Koehler et al., 2016; Thompson & Scurich, 2019) demonstrated that the anticipated effects are not very large.
participate in the current study, participants completed screener questions that assessed whether they were juror qualified. The survey routed participants who were considered not juror qualified to a screen that explained that they were not eligible for the study, and they were thanked for their time. Participants were permitted to complete the screener items (i.e., the same screener used in the pilot) only once. Participants who were juror qualified read a case summary about a crime, a direct examination of a forensic expert, a cross-examination of the forensic expert, closing arguments and jury instructions. These are the same materials that were used in the pilot study. After reading the above case materials, participants then completed manipulation checks (i.e., perceptions of the expert), attention check items, recommended a verdict and guilt rating, completed source and message credibility scales, and completed individual difference measures and demographics.

Materials

Juror Qualification Items

The screener questions determined if participants were juror qualified and therefore eligible to participate in the study. Potential participants indicated whether they were 18 years or older, a U.S. citizen, proficient in English, and had no previous felony convictions. If a participant answered “no” to being at least 18 or proficient in English, they were routed out of the survey and thanked for their time (see Appendix B).

Case summary

Participants read a description about a pending case in which the only evidence against the defendant was fingerprint evidence. The case summary was the same used in
Garrett and Mitchell (2013) and Mitchell and Garrett (2019). Specifically, participants read:

“A convenience store was robbed. The robber wore a mask and showed a gun but did not fire the gun. When running from the store, the robber’s hand caught on the door, causing him to drop the gun. No other person handled the gun before it was secured by the police. The police arrested a person who was found in the vicinity shortly after the robbery. No proceeds of the crime were found on this person, and the clerk at the convenience store has not been able to identify this person as the robber because the robber wore a mask. A fingerprint examiner compared fingerprints taken from the handle of the gun dropped at the crime scene to the fingerprints taken from the Defendant on an inked card. The fingerprint examiner issued a report concluding that: ‘A fingerprint recovered from the gun matched the right thumb of the defendant.’”

**Direct and Cross-examination**

For the direct examination, all participants read the same transcript in which the prosecutor guided the forensic expert’s testimony via questioning (see Appendix C). For the cross-examination, participants read a transcript in which the defense attorney questioned the forensic expert on his testimony. Sixteen different versions of the cross-examination manipulated the expert’s consistency, field, foundation, and trustworthiness.

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6 Consistent with past mock juror studies (e.g., McQuiston-Surrett & Saks, 2009; Schkler & Diamond, 1999; Scurich & John, 2013; Thompson et al., 2013), this case description was kept simple and focused on the fingerprint evidence to avoid possible bolstering of the fingerprint evidence through other corroborating evidence. However, the case description might be adapted based on pilot data. For example, if there are floor effects for verdict (i.e., a majority of participants recommend a not guilty verdict) in the control conditions, more evidence against the defendant will be added.
The cross-examination for each condition contained the presence (i.e., manipulation) or absence (i.e., control) of questions that reduced the consistency, field, foundation, and trustworthiness of the expert (see Appendix D). These trial materials were based off of the materials used in Garrett and Mitchell (2013), Lieberman and colleagues (2008), and Thompson and Scurich (2019).

**Closing Arguments**

In a brief paragraph, identical for all participants, the prosecutor’s closing argument highlighted the strength of the forensic expert’s testimony and asked jurors to render a guilty verdict. The defense attorney’s closing argument highlighted the weaknesses in the forensic expert’s testimony (i.e., those presented in cross-examination) and asked jurors to render a not guilty verdict (see Appendix E).

**Jury Instructions**

Jury instructions were the same instructions used in Lieberman et al. (2008) because they were based on pattern instructions used in a number of jurisdictions around the country (e.g., Nevada and California) and were written in a style designed to maximize comprehension (Lieberman & Sales, 1997). They also provided instructions regarding physical evidence and limitations associated with this type of evidence (see Appendix F).

**Verdict**

Participants indicated whether they recommended a “guilty” or “not guilty” verdict for the defendant and the probability that the defendant was guilty of the crime (i.e., from 0-100%) (see Appendix G).
**Perceptions of Expert**

Participants indicated their perceptions of the expert’s field, trustworthiness, consistency, and foundation on a 7-point Likert scales (1-Not at all, 7-Definitely; Appendix H).

**Attention Check Items**

To ensure that participants read and comprehended the trial materials, specifically the manipulations, participants completed attention check items (e.g., “How many years of experience did the fingerprint expert have in the field?”; Appendix H).

**The Witness Credibility Scale**

Participants completed the Witness Credibility scale developed by Brodsky et al. (2010). The scale is comprised of 20 bipolar adjectives (e.g., dishonest/honest) that participants rate on a 10-point Likert scale. Higher ratings indicate more agreement with the adjectives and higher overall scale scores indicate more credibility. The scale contains four subscales made up of five items each: likeability, trustworthiness, knowledge, and confidence ($\alpha = .98$, $\omega_H = .89$; see Appendix I).

**Message Credibility Scale**

Participants completed the three-item Message Credibility Scale (Appelman & Sundar, 2016; see Appendix J) by indicating the extent to which the expert testimony was “accurate,” “authentic,” and “believable.” The adjectives were rated on a 7-point Likert scale (1-Not at all, 7-Very). Responses for all three items were combined for each participant and served as an overall message credibility score ($\alpha = .95$, $\omega_H = .01$).

**Individual Differences**

**Need for Cognition.** Participants completed the 18-item Need for Cognition short
scale (Cacioppo et al., 1984; see Appendix K). Participants rated their agreement with each item on a 5-point Likert scale (1-Extremely Uncharacteristic of Me, 5-Extremely Characteristic of Me; e.g., “I would prefer complex to simple problems”). Together, the 18 items demonstrated good reliability ($\alpha = .95$, $\omega_H = .85$).

**Legal Fiction Consumption.** Similar to Kim and colleagues (2009), participants responded to the item, “How often do you watch television programs that focus on legal issues in criminal trials (e.g., CSI: Crime Scene Investigation, Law and Order) or other programs about forensic evidence?” on a 5 point (1-Never, 2-Rarely, 3-Sometimes, 4-Often, 5-Quite Frequently) scale.  

**Legal System Attitudes.** To measure attitudes toward the legal system, participants completed the Pretrial Juror Attitude Questionnaire (PJAQ; Lecci & Myers, 2008). The PJAQ is a revised version of the commonly used Juror Bias Scale (Kassin & Wrightsman, 1983) and measures overall conviction proneness and prosecution bias via six subscales: 1) conviction proneness (5 items; e.g., “Criminals should be caught and convicted by any means necessary,” $\alpha = .74$, $\omega_H = .60$), 2) system confidence (6 items; e.g., “When it is the suspect’s word against the police officer’s, I believe the police,” $\alpha = .79$, $\omega_H = .73$), 3) cynicism toward the defense (7 items; e.g., “Defense lawyers are too willing to defend individuals they know are guilty,” $\alpha = .69$, $\omega_H = .65$), 4) racial bias (4 items; e.g., “Minority suspects are likely to be guilty, more often than not,” $\alpha = .45$, $\omega_H = .07$), 5) social justice (4 items; e.g., “Rich individuals are almost never convicted of their crimes,” $\alpha = .59$, $\omega_H = .48$), and 6) innate criminality (4 items; e.g., “Once a criminal,

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7 Kim et al. (2009) asked participants specifically about CSI. This item was adapted to include a broader range of forensic crime shows.
always a criminal”; $\alpha = .73$, $\omega_H = .73$; see Appendix L). Participants rated their agreement with each statement on a 5-point Likert scale (1-Strongly Disagree, 5-Strongly Agree). Together the items demonstrated good reliability ($\alpha = .88$, $\omega_H = .80$). This measure has been shown to predict juror verdict preferences and has explained variation in guilt judgments over and above the traditional Juror Bias Scale and legal authoritarianism (Lecci & Myers, 2008).

**Forensic Science Attitudes.** To measure attitudes toward forensic science, participants completed the FFEBS; Smith & Bull, 2012). The FEEBS measures jurors’ pretrial bias for forensic evidence via two factors including pro-prosecution beliefs about forensic science (i.e., beliefs about the infallibility and conclusiveness of forensic science, e.g., “Forensic evidence always eventually identifies the guilty person”) and pro-defense beliefs about forensic science (i.e., high expectations for the presence of forensic science evidence and a reliance on this type of evidence for conviction; e.g., “If no forensic evidence is recovered from a crime scene, the defendant is probably innocent of the crime”). Because the two subscales (i.e., pro-prosecution beliefs, pro-defense beliefs) represent two distinct factors (Smith & Bull, 2012), they were not combined into an overall score. Participants rated their agreement with the 10 items (5 items per scale) using a Likert type scale (1-Strongly Disagree, 5-Strongly Agree; see Appendix M). Both the pro-prosecution ($\alpha = .75$, $\omega_H = .51$) and pro-defense scales ($\alpha = .86$, $\omega_H = .82$) demonstrated good reliability.

**Authoritarianism.** To measure authoritarianism, participants completed the Very Short Authoritarianism Scale (VSA; Bizumic & Duckitt, 2018). The six-item VSA comprises three subscales that measure 1) conservativism or authoritarian submission,
e.g., “It’s great that many young people today are prepared to defy authority), 2) traditionalism or conventionalism (e.g., “God’s laws about abortion, pornography, and marriage must be strictly followed before it is too late), and 3) authoritarianism or authoritarian aggression (e.g., “The facts on crime and the recent public disorders show we have to crack down harder on troublemakers, if we are going to preserve law and order). However, because two of the three subscales are too highly correlated, all six items are usually combined to represent a higher-order authoritarianism factor (Bizumic & Duckitt, 2018). Participants rated their agreement with each item on a Likert type scale (1- Very Strongly Disagree, 9- Very Strongly Agree; see Appendix N). Higher scores indicated more authoritarian beliefs (α = .88, ωH = .62).

Demographics

Participants indicated their gender, age, race, level of education, and political affiliation (see Appendix O).
Chapter 9: Results

Data Cleaning

Data were first examined for missingness. There were little missing data and there were no patterns of missingness, so missing data were treated as data missing completely at random (Scheffer, 2002). Hot deck imputation is a practical method for dealing with missing data by replacing missing values with values from similar variables (Myers, 2011). Hot deck imputation imputed missing values for continuous variables. Missing values for two variables regarding perceptions of the expert, “Trustworthiness” and “Foundation” were imputed using basic hot deck imputation in that missing values were imputed based on the previous value within the variable. This is because I did not want to impose a relationship between each of these variables and any other variable as these relationships are those that are hypothesized. The other data that were missing were specific items within a scale. For these variables, data were ordered using an item from the same scale that had no missing values. For example, imputation for Need for Cognition item 2 were ordered by Need for Cognition item 1. The data were ordered in this way because the items within each scale should be correlated and ordering the data by similar items should preserve this correlation. Items that needed to be reverse coded were ordered by other reverse coded items within the scale for imputation.

Manipulation Checks

ANOVA

To test the effectiveness of the manipulations of the four persuasion factors, Type II ANOVAs were run with the five manipulation conditions as the grouping variable and
perceptions of the expert as the dependent variables.\(^8\)

**Field.** The ANOVA that tested differences between each of the five conditions and perceptions of expert “Field” was significant \((F(4, 166) = 5.01, p < .01)\). Tukey’s post hoc test revealed that the mean for the condition that manipulated field \((M = 5.00)\) was significantly lower than the mean for the foundation condition \((M = 6.26, p < .001)\), the mean for the consistency condition \((M = 5.86, p = .028)\), and the control condition \((M = 6.03, p = .01)\). Although the mean difference between trustworthiness and field was only marginally significant \((p = .07)\), the field condition had the lowest “Field” mean, suggesting that the field manipulation was effective in reducing perceptions of the expert’s “Field” (see Table 5 for all means).

**Table 5**

*Average Ratings of Expert “Field” by Condition*

<table>
<thead>
<tr>
<th>Condition/Present Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>6.03</td>
<td>1.08</td>
</tr>
<tr>
<td>Field</td>
<td>5.00</td>
<td>1.37</td>
</tr>
<tr>
<td>Trust</td>
<td>5.78</td>
<td>1.33</td>
</tr>
<tr>
<td>Consistency</td>
<td>5.86</td>
<td>1.23</td>
</tr>
<tr>
<td>Foundation</td>
<td>6.26</td>
<td>1.06</td>
</tr>
</tbody>
</table>

**Trustworthiness.** The ANOVA that tested differences between each of the five conditions and perceptions of expert “Trustworthiness” was not significant \((F(4, 166) = 1.76, p = .14)\). Although there were no significant differences between groups, the trustworthiness condition had the lowest “Trustworthiness” mean, suggesting that the trustworthiness manipulation was somewhat effective in reducing perceptions of the

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\(^8\) Only the five conditions in which only one persuasion factor was manipulated, and the control group were included for the ANOVAs.
expert’s “Trustworthiness” (see Table 6 for all means).

**Table 6**

*Average Ratings of Expert “Trustworthiness” by Condition*

<table>
<thead>
<tr>
<th>Condition/Present Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
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<tbody>
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<tr>
<td>Trust</td>
<td>5.19</td>
<td>1.55</td>
</tr>
<tr>
<td>Consistency</td>
<td>5.44</td>
<td>1.78</td>
</tr>
<tr>
<td>Foundation</td>
<td>5.90</td>
<td>1.62</td>
</tr>
</tbody>
</table>

**Consistency.** The ANOVA that tested the differences between each of the five conditions and perceptions of expert “Consistency” was significant (*F* (4, 166) = 9.01, *p* < .01). Tukey’s post hoc test revealed that the mean for the consistency condition (*M* = 3.89) was significantly lower than the control condition (*M* = 5.70, *p* < .001), the field condition (*M* = 5.03, *p* = .01), the trustworthiness condition (*M* = 5.39, *p* < .001) and the foundation condition (*M* = 5.71, *p* < .001), suggesting that the consistency manipulation was effective in reducing perceptions of the expert’s “Consistency” (see Table 7 for all means).

**Table 7**

*Average Ratings of Expert “Consistency” by Condition*

<table>
<thead>
<tr>
<th>Condition/Present Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>5.70</td>
<td>1.19</td>
</tr>
<tr>
<td>Field</td>
<td>5.03</td>
<td>1.38</td>
</tr>
<tr>
<td>Trust</td>
<td>5.39</td>
<td>1.32</td>
</tr>
<tr>
<td>Consistency</td>
<td>3.89</td>
<td>1.97</td>
</tr>
<tr>
<td>Foundation</td>
<td>5.71</td>
<td>1.44</td>
</tr>
</tbody>
</table>

**Foundation.** The ANOVA that tested the differences between each of the five conditions and perceptions of expert “Foundation” was not significant (*F* (4, 166) = .42, *p*
= .79). The condition with the lowest “Foundation” mean was the trustworthiness condition \((M = 5.00)\), followed by the foundation condition \((M = 5.23)\), suggesting that the foundation manipulation was not effective in reducing perceptions of the expert’s “Foundation” (see Table 8 for all means).

Table 8

*Average Ratings of Expert “Foundation” by Condition*

<table>
<thead>
<tr>
<th>Condition/Present Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>5.39</td>
<td>1.39</td>
</tr>
<tr>
<td>Field</td>
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<td>1.29</td>
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<tr>
<td>Trust</td>
<td>5.00</td>
<td>1.33</td>
</tr>
<tr>
<td>Consistency</td>
<td>5.35</td>
<td>1.34</td>
</tr>
<tr>
<td>Foundation</td>
<td>5.23</td>
<td>1.75</td>
</tr>
</tbody>
</table>

**Persuasion Factors on Credibility**

Before testing the full proposed structural equation model, the influence of each of the persuasion factor manipulations on Expert and Message Credibility was examined. This was primarily to determine whether the factor manipulations or the continuous factor perception ratings were more appropriate for the model because Martire et al. (2020) found that perceptions of the persuasion factors were better than the manipulations at predicting credibility. Two regression analyses tested whether 1) the field andtrustworthiness manipulations predicted “Expert Credibility” and 2) the consistency and foundation manipulations predicted “Message Credibility.” Neither the field nor trustworthiness manipulations predicted “Expert Credibility” \((F (2, 559) = .63, p = .54)\), rejecting Hypotheses 1 and 2. Neither the consistency nor foundation manipulations predicted “Message Credibility” \((F (2, 559) = 2.56, p = .08)\), rejecting Hypotheses 3 and 4.

It is possible that the manipulations were not strong enough or did not produce
enough variability in order to affect credibility. However, perceptions of the expert on the four persuasion factors might have significantly influenced credibility. Therefore, two regressions tested whether 1) perceptions of expert “Field” and “Trustworthiness” predicted “Expert Credibility” and 2) perceptions of expert “Consistency” and “Foundation” predicted “Message Credibility.” Both perceptions of expert “Field” \( (b = .34, p < .01) \) and “Trustworthiness” \( (b = .37, p < .01) \) predicted “Expert Credibility” \( (F(2, 559) = 110.5, R^2 = .28, p < .01) \). Both perceptions of expert “Consistency” \( (b = .37, p < .01) \) and “Foundation” \( (b = .30, p < .01) \) predicted “Message Credibility” \( (F(2, 559) = 270.5, R^2 = .49, p < .01) \). Because the perceptions of the expert influenced credibility, perceptions rather than the manipulation factors were used for further analyses and presented in the structural equation models.

**Persuasion Factors on Persuasion**

To test Hypotheses 5, 5a, and Research Question 1, an ANOVA tested whether there were differences between the experimental conditions that contained the presence/absence of each of the four persuasion factors on persuasion (i.e., Guilt ratings). The ANOVA indicated that there were no differences between experimental conditions on Guilt ratings \( (F(15, 546) = .92, R^2 = .02, p = .55, \) see Table 9).
Table 9
Mean Guilt Ratings by Condition

<table>
<thead>
<tr>
<th>Condition/Factors Present</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>65.33</td>
<td>28.53</td>
</tr>
<tr>
<td>Field</td>
<td>65.32</td>
<td>28.49</td>
</tr>
<tr>
<td>Trust</td>
<td>65.42</td>
<td>25.92</td>
</tr>
<tr>
<td>Consistency</td>
<td>53.49</td>
<td>29.91</td>
</tr>
<tr>
<td>Foundation</td>
<td>65.74</td>
<td>29.18</td>
</tr>
<tr>
<td>Field/Trust</td>
<td>64.91</td>
<td>29.66</td>
</tr>
<tr>
<td>Field/Consist.</td>
<td>51.74</td>
<td>31.05</td>
</tr>
<tr>
<td>Field/Found.</td>
<td>56.72</td>
<td>28.18</td>
</tr>
<tr>
<td>Trust/Consist.</td>
<td>68.68</td>
<td>24.77</td>
</tr>
<tr>
<td>Trust/Found.</td>
<td>64.47</td>
<td>30.86</td>
</tr>
<tr>
<td>Consist./Found.</td>
<td>62.26</td>
<td>26.97</td>
</tr>
<tr>
<td>Field/Trust/Consist.</td>
<td>62.14</td>
<td>29.30</td>
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<tr>
<td>Field/Trust/Found.</td>
<td>58.74</td>
<td>32.92</td>
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<td>Field/Consist./Found.</td>
<td>59.31</td>
<td>29.88</td>
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<td>Trust/Consist./Found.</td>
<td>64.09</td>
<td>27.00</td>
</tr>
<tr>
<td>Field/Trust/Consist./Found.</td>
<td>59.86</td>
<td>32.03</td>
</tr>
</tbody>
</table>

Main Model

The proposed model (Hypotheses 6-9; see Figure 1) hypothesized that because “Field” and “Trustworthiness” are source cues, they would both positively predict “Expert Credibility”. Because “Consistency” and “Foundation” are message cues, I hypothesized that they would both positively predict “Message Credibility.” I also hypothesized that both Expert and Message Credibility would predict “Guilt.” Lastly, I hypothesized that “Expert Credibility” and “Message Credibility” would covary and all four of the perceptions would covary with each other. This proposed model was tested using structural equation modeling.

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9 Guilt was used as the outcome instead of Verdict because the estimator used (i.e., Maximum Likelihood) required all endogenous variables to be continuous.
Descriptive Statistics

The descriptive statistics for the main variables (i.e., “Field”, “Trustworthiness”, “Consistency”, “Foundation”, “Guilt”, “Expert Credibility”, and “Message Credibility”) are shown in Table 10 and correlations are presented in Table 11. All variables had a skew of less than |2|. Of the 563 participants who provided a verdict, 317 (56.3%) chose “Not guilty” and 246 (43.7%) chose “Guilty.”

Table 10

Descriptive Statistics for Main Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
<th>Skew</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>5.55</td>
<td>1.37</td>
<td>1-7</td>
<td>-.85</td>
<td>.29</td>
</tr>
<tr>
<td>Trust</td>
<td>5.52</td>
<td>1.33</td>
<td>1-7</td>
<td>-.91</td>
<td>.05</td>
</tr>
<tr>
<td>Consistency</td>
<td>4.96</td>
<td>1.61</td>
<td>1-7</td>
<td>-.47</td>
<td>-.53</td>
</tr>
<tr>
<td>Foundation</td>
<td>5.29</td>
<td>1.31</td>
<td>1-7</td>
<td>-.55</td>
<td>-.23</td>
</tr>
<tr>
<td>Message Credibility</td>
<td>5.69</td>
<td>1.27</td>
<td>1-7</td>
<td>-1.02</td>
<td>.78</td>
</tr>
<tr>
<td>Expert Credibility</td>
<td>7.78</td>
<td>1.72</td>
<td>1-10</td>
<td>-1.10</td>
<td>1.47</td>
</tr>
<tr>
<td>Guilt</td>
<td>61.56</td>
<td>29.16</td>
<td>0-100</td>
<td>-.36</td>
<td>-1.18</td>
</tr>
</tbody>
</table>

Table 11

Main Variable Correlations

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Field</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Trust</td>
<td>0.546</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Consist</td>
<td>0.540</td>
<td>0.578</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Found</td>
<td>0.474</td>
<td>0.506</td>
<td>0.605</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Guilt</td>
<td>0.426</td>
<td>0.492</td>
<td>0.611</td>
<td>0.549</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Mess Cred</td>
<td>0.605</td>
<td>0.684</td>
<td>0.657</td>
<td>0.594</td>
<td>0.579</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>7. Exp Cred</td>
<td>0.454</td>
<td>0.481</td>
<td>0.414</td>
<td>0.432</td>
<td>0.291</td>
<td>0.637</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Assumptions

Structural equation modeling assumptions were assessed. All variables were mean centered. The “Guilt” was rescaled by multiplying the variable by .1 so that the
covariance matrix was not ill-scaled. Pairwise scatterplots indicated that the assumptions of linearity and bivariate homoscedasticity were met. A max $R^2$ of .86, variance inflation factors below 10 (i.e., all variation inflation factors were < 3.15) and condition indices below 30 (i.e., all condition indices were < 3.91) indicated that there was no multivariate collinearity. One observation had a Cook’s distance of .09 and a significant hat value of .07, so it was considered a multivariate outlier and was removed from further analyses. Boxplots, qqplots, skew and kurtosis indices indicated univariate and multivariate normality. The covariance matrix was positive definite and not ill-scaled.

**Measurement model**

The measurement model consisted of the four “Expert Credibility” sub-scales (i.e., Likeability, Confidence, Knowledgeable, Trustworthiness) the three scale items for the “Message Credibility” measure. Analyses examining measurement fit utilized Maximum Likelihood estimation with robust standard errors and unit loading identification.

Fit indices that are commonly used for structural equation modeling are reported. These include the Chi-square test statistic ($X^2$), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the standardized root mean square residual (SRMR). Although a probability value of < .05 for a Chi-square test statistic indicates the model does not fit the data, Chi-square tests are sensitive to sample size. Specifically, larger samples tend to yield significant Chi-square tests even when the difference between the model and data is not meaningful. Therefore, I relied on CFI, RMSEA, and SRMR. Cutoffs for a good fitting model include CFI > .90, RMSEA < .08, and SRMR < .08 (Hooper et al., 2008; Kline, 2015). However, RMSEA values between
.08 and .10 can also be considered a mediocre fit (MacCallum et al., 1996).

The measurement model demonstrated acceptable fit ($X^2 (13) = 106.09, p < .01$, $CFI = .96$, $RMSEA = .11$, $90\% CI = [.10, .13]$, $SRMR = .03$, $AIC = 10852.93$). Residual correlational units were examined for the misfit of bivariate associations. All correlations ranged between $|.000|$ and $|.087|$ and none reached the value (.1) considered as a misfit. Thus, the measurement model was not re-specified and was retained for all of the following structural equation models.

**Proposed Model**

The full structural equation model demonstrated poor fit ($X^2 (46) = 359.31, p < .01$, $CFI = .91$, $RMSEA = .11$, $90\% CI = [.10, .12]$, $SRMR = .13$, $AIC = 17219.36$). All regression paths and all covariances were significant (see Figure 7 for all $\beta$s). It should be noted that, although by itself, Expert Credibility positively predicted Guilt ratings ($b = 4.98, p < .001$), when Message Credibility was added as a predictor, the relationship between Expert Credibility and Guilt became negative. This was due to a significant interaction between Expert Credibility and Message Credibility on Guilt ratings ($F (3, 558) = 106.30, b = 1.68, p < .001$). At higher levels of Message Credibility, increases in Expert Credibility did affect Guilt ratings. However, at average and lower levels of Message Credibility, as Expert Credibility increased, Guilt ratings decreased.

Indirect effects were also calculated to examine the mediating effects of Expert Credibility and Message Credibility on Guilt ratings. The indirect effects of all four persuasion factors, Field ($\beta = -.05$), Trustworthiness ($\beta = -.05$), Consistency ($\beta = .35$), and

---

10 All tables, figures, and indirect effects report standardized coefficients ($\beta$) to facilitate ease of comparison. However, in text, I report unstandardized direct effects ($b$) for ease of interpretation of the effect of individual IVs on the DV.
Foundation ($\beta = .20$), on Guilt were significant (see Table 12). This indicates that the effects of Field and Trustworthiness on Guilt ratings are significant through the persuasion factors’ influence on Expert Credibility and that the effects of Consistency and Foundation on Guilt ratings are significant through the persuasion factors’ influence on Message Credibility.
Figure 7

*Proposed SEM*

*Note.* All coefficients reported are standardized (β).
Table 12

Proposed Model Indirect Effects of IVs on Guilt

<table>
<thead>
<tr>
<th>IV</th>
<th>β</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>-.05</td>
<td>[.03, .09]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>Trust</td>
<td>-.05</td>
<td>[-.07, -.02]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>Consist</td>
<td>.35</td>
<td>[.28, .43]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>Found</td>
<td>.20</td>
<td>[.13, .27]</td>
<td>&lt;.01*</td>
</tr>
</tbody>
</table>

*p < .05.

Alternative Models

Several theoretically driven alternative models were run to examine whether they were a better fit to the data than the proposed model. All alternative models utilized the same measurement model as the proposed model.

Alternative Model 1

Compared to the hypothesized model (i.e., main model), the first alternative model added paths between each of the four perception factors and both “Expert Credibility” and “Message Credibility” (see Figure 8). People might not compartmentalize and actually use source cues (e.g., trustworthiness) to influence their perception of the credibility of the message. Likewise, people might use cues about a message’s credibility (e.g., foundation) to influence their perceptions of the credibility of a source. In this way, all four persuasion factors might influence both aspects of credibility (i.e., source and message).

The alternative model demonstrated acceptable fit ($X^2 (42) = 246.81; p < .01$, CFI = .95, RMSEA = .09, 90% CI = [.08, .10], SRMR = .04, AIC = 22714.68). All regression paths were significant except “Expert Credibility” regressed on “Consistency” ($b = .05$, $p$
Indirect effects were also calculated to examine the mediating effects of Expert Credibility and Message Credibility on Guilt ratings. The indirect effects of three of the four persuasion factors, Field ($\beta = -.01$), Trustworthiness ($\beta = -.02$), and Foundation ($\beta = -.01$), on Guilt were significant (see Table 13). This indicates that the effects of Field, Trustworthiness, and Consistency on Guilt ratings are significant through the persuasion factors’ influence on Expert Credibility and Message Credibility.
Figure 8

Alternative Model 1 SEM

Note. All coefficients reported are standardized (β).
Table 13

Alternative Model 1 Indirect Effects of IVs on Guilt

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>-.008</td>
<td>[-.015, -.001]</td>
<td>.02*</td>
</tr>
<tr>
<td>Trust</td>
<td>-.015</td>
<td>[-.027, -.002]</td>
<td>.02*</td>
</tr>
<tr>
<td>Consist</td>
<td>-.002</td>
<td>[-.008, .003]</td>
<td>.38</td>
</tr>
<tr>
<td>Found</td>
<td>-.006</td>
<td>[-.011, -.001]</td>
<td>.03*</td>
</tr>
</tbody>
</table>

*p < .05.

Alternative Model 2

Compared to the proposed (i.e., main model), the second alternative model added paths between each of the four perception factors and “Guilt” (see Figure 9). The main model hypothesized that “Expert Credibility” and “Message Credibility” mediated the effect of the four persuasion factors on “Guilt” ratings. This alternative model tested whether there was a direct, as well as an indirect effect, of the persuasion factors on “Guilt.”

The alternative model demonstrated poor fit ($X^2(42) = 339.74, p < .01, \text{CFI} = .92, \text{RMSEA} = .11, 90\% CI = [.10, .12], \text{SRMR} = .13, \text{AIC} = 20262.75$). All regressions were significant except for “Field” and “Trustworthiness” regressed on “Guilt” (see Figure 9 for all $\beta$ s). Indirect effects were also calculated to examine the mediating effects of Expert Credibility and Message Credibility on Guilt ratings. The indirect effects of all four persuasion factors, Field ($\beta = .07$), Trustworthiness ($\beta = -.04$), Consistency ($\beta = .09$), and Foundation ($\beta = .15$), were significant (see Table 14). This indicates that the effects of Field and Trustworthiness on Guilt ratings are significant through the persuasion factors’ influence on Expert Credibility and that in addition to the direct effects of Consistency and Foundation, Consistency and Foundation affect Guilt ratings through the
persuasion factors’ influence on Message Credibility.

**Figure 9**

*Alternative Model 2 SEM*

*Note. All coefficients reported are standardized (β).*
Alternative Model 3

The third alternative model was a combination of alternative model 1 and 2. Specifically, compared to the proposed model, alternative model 3 added 1) paths between each of the four perception factors and both “Expert Credibility” and “Message Credibility,” and 2) paths between each of the four perception factors and “Guilt” (see Figure 10).

The full model demonstrated acceptable fit ($X^2(38) = 166.58, p < .01$, CFI = .96, RMSEA = .08, 90%CI = [.07, .09], SRMR = .03, AIC = 16977.98). All regression paths were significant except “Expert Credibility” regressed on “Consistency” ($b = .50, p = .25$) and “Guilt” regressed on “Field” ($b = .10, p = .22$) and “Trustworthiness” ($b = -.04, p = .53$; see Figure 10 for all $\beta$s). Indirect effects were also calculated to examine the mediating effects of Expert Credibility and Message Credibility on Guilt ratings. The indirect effects of three of three of the four persuasion factors, Field ($\beta = .004$), Trustworthiness ($\beta = -.01$), and Foundation ($\beta = -.002; p = .05$), on Guilt were significant (see Table 15). This indicates that in addition to the direct effects of Consistency and Foundation on Guilt ratings, the effects of Field, Trustworthiness, and Foundation on

Table 14

Alternative Model 2 Indirect Effects of IVs on Guilt

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>.07</td>
<td>[.04, .09]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>Trust</td>
<td>-.04</td>
<td>[-.07, -.02]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>Consist</td>
<td>.09</td>
<td>[.05, .13]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>Found</td>
<td>.15</td>
<td>[.09, .22]</td>
<td>&lt; .01*</td>
</tr>
</tbody>
</table>

*p < .05.
Guilt ratings are significant through the persuasion factors’ influence on Expert Credibility and Message Credibility.

**Figure 10**

*Alternative Model 3 SEM*

*Note.* All coefficients reported are standardized ($\beta$).
Table 15

Alternative Model 3 Indirect Effects of IVs on Guilt

<table>
<thead>
<tr>
<th>IV</th>
<th>β</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>.004</td>
<td>[.001, .008]</td>
<td>.01*</td>
</tr>
<tr>
<td>Trust</td>
<td>-.006</td>
<td>[-.012, .000]</td>
<td>.04*</td>
</tr>
<tr>
<td>Consist</td>
<td>-.001</td>
<td>[-.003, .001]</td>
<td>.36</td>
</tr>
<tr>
<td>Found</td>
<td>-.002</td>
<td>[-.005, .000]</td>
<td>.05</td>
</tr>
</tbody>
</table>

*p < .05.

Model Comparison

A comparison between the acceptable two models, Alternative model 1 and Alternative model 3 revealed a significant chi-square difference ($X^2 = 92.41, p < .001$). Alternative model 3 was the better fitting model with a lower chi-square, AIC, RMSEA, and SRMR (see Table 16). Although Alternative model 3 is the better fitting model, Alternative model 1 was used to test the individual differences (in addition to the originally proposed models) because, of the models that demonstrated acceptable fit, it was closest to the originally hypothesized model and was the more parsimonious model.

Table 16

Model Comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>$X^2$</th>
<th>df</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>AIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Model 3</td>
<td>166.58</td>
<td>38</td>
<td>.96</td>
<td>.08</td>
<td>.03</td>
<td>16977.98</td>
</tr>
<tr>
<td>Alternative Model 1</td>
<td>246.81</td>
<td>42</td>
<td>.95</td>
<td>.09</td>
<td>.04</td>
<td>22714.68</td>
</tr>
<tr>
<td>Alternative Model 2</td>
<td>339.74</td>
<td>42</td>
<td>.92</td>
<td>.11</td>
<td>.13</td>
<td>20262.75</td>
</tr>
<tr>
<td>Proposed Model</td>
<td>359.31</td>
<td>46</td>
<td>.91</td>
<td>.11</td>
<td>.13</td>
<td>17219.36</td>
</tr>
</tbody>
</table>
**Individual Differences**

Several individual differences were added to the proposed model and Alternative model 1 to examine hypothesized moderating effects of each of the individual differences on the various significant relationships in the model.\(^\text{11}\) No measurement models were included in the individual difference models because using the R package, lavaan, latent variables cannot be used for interaction terms. Thus, each of the individual difference measures were averaged into a single scale score (see Table 17 for individual difference correlations).

**Table 17**

*Individual Difference Correlation Matrix*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Need for Cognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Authoritarianism</td>
<td>-.183</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ProPros. Forensic Attitudes</td>
<td>-.007</td>
<td>.109</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4. ProDefen. Forensic Attitudes</td>
<td>-.062</td>
<td>.215</td>
<td>.483</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Legal System Attitudes</td>
<td>-.237</td>
<td>.537</td>
<td>.254</td>
<td>.450</td>
<td></td>
</tr>
<tr>
<td>6. Legal Fiction Consumption</td>
<td>.037</td>
<td>.171</td>
<td>.059</td>
<td>.204</td>
<td>.134</td>
</tr>
</tbody>
</table>

**Need for Cognition**

Averaged Need for Cognition scores ranged from 1 to 5 with a mean of 3.52 (SD = .84). NFC scores were not skewed (-.72). After adding NFC to the model, assumptions were reassessed. Pairwise scatterplots indicated that the assumptions of linearity and bivariate homoscedasticity were met. A max \(R^2\) of .70, variance inflation factors below 10 (i.e., all variation inflation factors were < 3.13) and condition indices below 30 (i.e.,

\(^{11}\) Although the proposed model demonstrated poor fit, it was still initially used to test the hypothesized individual difference models.
all condition indices were < 3.90) indicated that there was no multivariate collinearity. One observation had a Cook’s distance of .06 and a significant hat value of .07, so it was considered a multivariate outlier and was removed from further analyses. Boxplots, qqplots, skew and kurtosis indices indicated univariate and multivariate normality. The covariance matrix was positive definite and not ill-scaled.

**NFC Proposed Model.** Interaction terms were created between NFC and 1) Consistency, 2) Foundation, 3) Expert Credibility, and 4) Message Credibility. It was hypothesized that NFC would moderate the relationships between Consistency and Message Credibility, Foundation and Message Credibility, Expert Credibility and Guilt, Message Credibility and Guilt, and would have a direct effect on Guilt (Hypotheses 10-12a).

The proposed model demonstrated poor fit ($X^2 (42) = 214.07, p < .01$, CFI = .84, RMSEA = .086, 90%CI = [.078, .094], SRMR = .08, AIC = 20649.43). NFC did not moderate any of the predicted relationships (see Figure 12 for all $\beta$s). However, at lower levels of NFC (i.e., one standard deviation below the mean), there were conditional indirect effects of all four persuasion factors on Guilt (see Table 18).

To further examine the effect of NFC as a moderator in the proposed model, the proposed moderated mediation model (i.e., Figure 11) was compared to a model that only included a direct effect of NFC on Guilt. The model that included only a direct effect of NFC and not a moderation demonstrated poor fit ($X^2 (14) = 283.12, p < .01$, CFI = .81, RMSEA = .16, 90%CI = [.14, .18], SRMR = .10, AIC = 11538.46). There was no significant difference between the two models ($X^2 = 20.21, p = .68$) indicating that NFC as a moderator did not improve model fit.
Figure 11

NFC Model

Note. All coefficients reported are standardized ($\beta$).
NFC Alternative Model. As demonstrated in previous alternatives to the proposed model, all four persuasion factors seem to influence both Expert and Message credibility. Thus, similar to alternative model 1 previously presented, an alternative NFC model was run. The NFC alternative model included paths from all four persuasion factors to both Expert and Message credibility. Because it was hypothesized that NFC would influence message credibility factors (i.e., Consistency and Foundation), and previous models demonstrated that all four factors influence message credibility, the alternative NFC model tested moderating relationships between each of the four persuasion factors and NFC on message credibility, as well as moderating relationships between Expert Credibility and Guilt and Message Credibility and Guilt.

The alternative model demonstrated acceptable fit ($\chi^2(52) = 110.53, p < .01$, CFI = .94, RMSEA = .045, 90% CI = [.037, .054], SRMR = .06, AIC = 23331.90). NFC did

<table>
<thead>
<tr>
<th>IV</th>
<th>(\beta)</th>
<th>95% CI</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field (-1SD)NFC</td>
<td>-.05</td>
<td>[-.08, -.02]</td>
<td>.01*</td>
</tr>
<tr>
<td>Field (+1SD)NFC</td>
<td>-.01</td>
<td>[-.04, .01]</td>
<td>.37</td>
</tr>
<tr>
<td>Trust (-1SD)NFC</td>
<td>-.05</td>
<td>[-.09, -.02]</td>
<td>.01*</td>
</tr>
<tr>
<td>Trust (+1SD)NFC</td>
<td>-.01</td>
<td>[-.04, .01]</td>
<td>.37</td>
</tr>
<tr>
<td>Consist (-1SD)NFC</td>
<td>.27</td>
<td>[.16, .37]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>Consist (+1SD)NFC</td>
<td>.33</td>
<td>[.23, .42]</td>
<td>.49</td>
</tr>
<tr>
<td>Found (-1SD)NFC</td>
<td>.17</td>
<td>[.08, .25]</td>
<td>.07</td>
</tr>
<tr>
<td>Found (+1SD)NFC</td>
<td>.18</td>
<td>[.09, .26]</td>
<td>.10</td>
</tr>
</tbody>
</table>

*\(p < .05\).
not moderate any of the predicted relationships or directly affect Guilt ($b = -2.24, p = .07$; see Figure 12 for all $\beta$s). There were no conditional indirect effects of either of the four persuasion factors on Guilt (see Table 19).

To further examine the effect of NFC as a moderator, the alternative moderated mediation model (i.e., Figure 12) was compared to the alternative model that only included a direct effect of NFC on Guilt. The model that included only a direct effect of NFC and not a moderation demonstrated mediocre fit ($X^2 (10) = 112.12, p < .01, CFI = .92, RMSEA = .07, 90\% CI = [.05, .09], SRMR = .04, AIC = 11319.83$). There was no significant difference between the two models ($X^2 = 42.32, p = .46$) indicating that NFC as a moderator did not improve model fit.
Figure 12

*NFC Alternative Model*

*Note.* All coefficients reported are standardized ($\beta$).
Legal System Attitudes

Averaged legal system attitudes scores ranged from 1 to 5 with a mean of 2.74 ($SD = .57$). Legal system attitudes scores were not skewed (.15). After adding legal system attitudes to the model, structural equation modeling assumptions were reassessed. Pairwise scatterplots indicated that the assumptions of linearity and bivariate homoscedasticity were met. A max $R^2$ of .70, variance inflation factors below 10 (i.e., all variation inflation factors were < 3.14) and condition indices below 30 (i.e., all condition indices were < 3.93) indicated that there was no multivariate collinearity. There were no outliers. Boxplots, qqplots, skew and kurtosis indices indicated univariate and multivariate normality. The covariance matrix was positive definite and not ill-scaled.

Legal System Attitudes Proposed Model. Interaction terms between legal system attitudes and each of the four persuasion factors were created because it was hypothesized that legal system attitudes would moderate the relationships between

### Table 19

**NFC Alternative Model Conditional Indirect Effects of IV on Guilt**

<table>
<thead>
<tr>
<th>Field</th>
<th>IV</th>
<th>β</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>(-1SD)NFC</td>
<td>-.006</td>
<td>[-.012, .001]</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>(+1SD)NFC</td>
<td>-.001</td>
<td>[-.004, .002]</td>
<td>.41</td>
</tr>
<tr>
<td>Trust</td>
<td>(-1SD)NFC</td>
<td>-.011</td>
<td>[-.023, .000]</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>(+1SD)NFC</td>
<td>-.003</td>
<td>[-.011, .004]</td>
<td>.40</td>
</tr>
<tr>
<td>Consist</td>
<td>(-1SD)NFC</td>
<td>-.002</td>
<td>[-.005, .002]</td>
<td>.42</td>
</tr>
<tr>
<td></td>
<td>(+1SD)NFC</td>
<td>-.001</td>
<td>[-.002, .001]</td>
<td>.49</td>
</tr>
<tr>
<td>Found</td>
<td>(-1SD)NFC</td>
<td>-.005</td>
<td>[-.010, .000]</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>(+1SD)NFC</td>
<td>-.001</td>
<td>[-.004, .002]</td>
<td>.43</td>
</tr>
</tbody>
</table>

*p < .05.*
Consistency and Message Credibility, Foundation and Message Credibility, Field and Expert Credibility, and Trustworthiness and Expert Credibility. A direct effect of legal system attitudes on Guilt was also hypothesized and included in the model (Hypotheses 13 and 14).

The proposed model demonstrated poor fit ($X^2 (42) = 196.90, p < .01$, CFI = .84, RMSEA = .09, 90%CI = [.08, .10], SRMR = .09, AIC = 15811.73). Legal system attitudes did not moderate any of the predicted relationships (see Figure 13 for all $\beta$s) but it did have a direct effect on Guilt ($b = .47, p < .001$) such that every one unit increase in legal system attitudes resulted in a .47 increase in Guilt ratings. There were conditional indirect effects of each of the four persuasion factors on Guilt at both low (i.e., one standard deviation below the mean) and high levels (i.e., one standard deviation above the mean) of legal system attitudes (see Table 20).

To further examine the effect of legal system attitudes as a moderator, the proposed moderated mediation model (i.e., Figure 13) was compared to the proposed model that only included a direct effect of legal system attitudes on Guilt. The model that included only a direct effect of legal system attitudes and not a moderation demonstrated poor fit ($X^2 (14) = 238.79, p < .01$, CFI = .78, RMSEA = .17, 90%CI = [.15, .19], SRMR = .12, AIC = 11075.73). There was no significant difference between the two models ($X^2 = 9.83, p = 1.00$) indicating that legal system attitudes as a moderator did not improve model fit.
Figure 13

Legal System Attitudes Model

Note. All coefficients reported are standardized (β).
Table 20

*Legal System Attitudes Proposed Conditional Indirect Effects of IVs on Guilt*

<table>
<thead>
<tr>
<th>IV</th>
<th>( \beta )</th>
<th>95% CI</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field (-1SD)LegSysAtt</td>
<td>-.031</td>
<td>[-.056, -.007]</td>
<td>.01*</td>
</tr>
<tr>
<td>(+1SD)LegSysAtt</td>
<td>-.023</td>
<td>[-.044, -.002]</td>
<td>.03*</td>
</tr>
<tr>
<td>Trust (-1SD)LegSysAtt</td>
<td>-.031</td>
<td>[-.056, -.007]</td>
<td>.01*</td>
</tr>
<tr>
<td>(+1SD)LegSysAtt</td>
<td>-.026</td>
<td>[-.049, -.003]</td>
<td>.03*</td>
</tr>
<tr>
<td>Consist (-1SD)LegSysAtt</td>
<td>.308</td>
<td>[.226, .389]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>(+1SD)LegSysAtt</td>
<td>.263</td>
<td>[.170, .355]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>Found (-1SD)LegSysAtt</td>
<td>.196</td>
<td>[.120, .273]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>(+1SD)LegSysAtt</td>
<td>.123</td>
<td>[.037, .210]</td>
<td>.01*</td>
</tr>
</tbody>
</table>

*\( p < .05 \).*

**Legal system attitudes Alternative Model.** As demonstrated in previous

alternatives to the proposed model, all four persuasion factors seem to influence both

Expert and Message credibility. Thus, an alternative model that was similar to previous

alternative individual difference models was run. The alternative legal system attitudes

model included paths from all four persuasion factors to both Expert and message

credibility and their respective interactions with legal system attitudes (see Figure 14). In

addition, it is possible that legal system attitudes also indirectly affect Guilt by moderating how jurors use Expert and Message Credibility information. Interactions between

legal system attitudes and Expert Credibility on Guilt and legal system attitudes and

Message Credibility on Guilt were also tested in the alternative model.

The alternative model demonstrated acceptable fit \( \chi^2 (48) = 111.91, p < .01, \text{CFI} = .94, \text{RMSEA} = .05, 90\%CI = [.04, .06], \text{SRMR} = .06, \text{AIC} = 20736.40 \). Legal system attitudes did not moderate any of the predicted relationships (see Table 21 for all \( \beta \)s) but
it did have a direct effect on Guilt ($b = .47, p < .001$). There were no conditional indirect effects of any of the four persuasion factors on Guilt (see Table 22).

To further examine the effect of legal system attitudes as a moderator, the alternative moderated mediation model (i.e., Figure 14) was compared to the alternative model that only included a direct effect of legal system attitudes on Guilt. The model that included only a direct effect of legal system attitudes and not a moderation demonstrated poor fit ($X^2 (10) = 64.83, p < .01, \text{CFI} = .95, \text{RMSEA} = .10, 90\% CI = [.08, .12], \text{SRMR} = .08, \text{AIC} = 10858.16$). There was no significant difference between the two models ($X^2 = 27.21, p = .90$) indicating that legal system attitudes as a moderator did not improve model fit.
Figure 14

*Legal System Attitudes Alternative Model*

Note. All coefficients reported are standardized ($\beta$).
Table 21

Coefficients for Moderated Paths in Figure 14

<table>
<thead>
<tr>
<th>Moderated Path</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LegSysAtt*Field</td>
<td>-.04</td>
<td>.45</td>
</tr>
<tr>
<td>LegSysAtt*Trust</td>
<td>-.02</td>
<td>.66</td>
</tr>
<tr>
<td>LegSysAtt*Consist.</td>
<td>.00</td>
<td>1.0</td>
</tr>
<tr>
<td>LegSysAtt*Found.</td>
<td>.01</td>
<td>.82</td>
</tr>
<tr>
<td>Message Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LegSysAtt*Field</td>
<td>.03</td>
<td>.54</td>
</tr>
<tr>
<td>LegSysAtt*Trust</td>
<td>-.03</td>
<td>.61</td>
</tr>
<tr>
<td>LegSysAtt*Consist.</td>
<td>-.03</td>
<td>.54</td>
</tr>
<tr>
<td>LegSysAtt*Found.</td>
<td>-.06</td>
<td>.18</td>
</tr>
<tr>
<td>Guilt ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LegSysAtt*ExpertCred.</td>
<td>.05</td>
<td>.26</td>
</tr>
<tr>
<td>LegSysAtt*MessageCred.</td>
<td>-.01</td>
<td>.73</td>
</tr>
</tbody>
</table>

*p < .05.

Table 22

Legal System Attitudes Alternative Model Conditional Indirect Effects of IVs on Guilt

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)LegSysAtt</td>
<td>-.003</td>
<td>[-.007, .001]</td>
<td>.15</td>
</tr>
<tr>
<td>(+1SD)LegSysAtt</td>
<td>-.003</td>
<td>[-.008, .001]</td>
<td>.12</td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)LegSysAtt</td>
<td>-.004</td>
<td>[-.011, .002]</td>
<td>.19</td>
</tr>
<tr>
<td>(+1SD)LegSysAtt</td>
<td>-.009</td>
<td>[-.019, .000]</td>
<td>.05</td>
</tr>
<tr>
<td>Consist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)LegSysAtt</td>
<td>-.001</td>
<td>[-.002, .001]</td>
<td>.55</td>
</tr>
<tr>
<td>(+1SD)LegSysAtt</td>
<td>-.002</td>
<td>[-.006, .003]</td>
<td>.50</td>
</tr>
<tr>
<td>Found</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)LegSysAtt</td>
<td>-.001</td>
<td>[-.003, .001]</td>
<td>.27</td>
</tr>
<tr>
<td>(+1SD)LegSysAtt</td>
<td>-.005</td>
<td>[-.010, .000]</td>
<td>.07</td>
</tr>
</tbody>
</table>

*p < .05.
Attitudes Toward Forensics

Because the Forensic Evidence Evaluation Bias Scale (FEEBS) comprises two independent subscales, each subscale (pro-prosecution bias, pro-defense bias) was included in separate structural equation models and treated as two separate individual differences. Both subscales tested Hypotheses 15 and 16.

Pro-prosecution Forensic Attitudes Proposed Model. Averaged pro-prosecution forensic attitude (FEEBSpp) scores ranged from 1 to 5 with a mean of 2.61 ($SD = .79$). FEEBSpp scores were not skewed (.42).

After adding FEEBSpp to the model, structural equation modeling assumptions were reassessed. Pairwise scatterplots indicated that the assumptions of linearity and bivariate homoscedasticity were met. A max $R^2$ of .70, variance inflation factors below 10 (i.e., all variation inflation factors were $< 3.16$) and condition indices below 30 (i.e., all condition indices were $< 3.92$) indicated that there was no multivariate collinearity. There were no outliers. Boxplots, qqplots, skew and kurtosis indices indicated univariate and multivariate normality. The covariance matrix was positive definite and not ill-scaled.

Interaction terms between pro-prosecution forensic attitudes and each of the four persuasion factors were created because it was hypothesized that pro-prosecution forensic attitudes would moderate the relationships between Consistency and Message Credibility, Foundation and Message Credibility, Field and Expert Credibility, and Trustworthiness and Expert Credibility. Interaction terms between pro-prosecution forensic attitudes and Expert Credibility and pro-prosecution forensic attitudes and Message Credibility were created because it was hypothesized that pro-prosecution forensic attitudes would
moderate the paths between Expert Credibility and Message Credibility on Guilt. A direct effect of pro-prosecution forensic attitudes on Guilt was also hypothesized and included in the model.

The proposed model demonstrated poor fit ($X^2 (56) = 220.81, p < .01, \text{CFI} = .83, \text{RMSEA} = .08, 90\%CI = [.07, .09], \text{SRMR} = .07, \text{AIC} = 20712.29$). Pro-prosecution attitudes did not moderate any of the predicted relationships (see Figure 15 for all $\beta$s) but did have a direct effect on Guilt ($b = .16, p = .03$). There were conditional indirect effects of each of the four persuasion factors on Guilt (see Table 23).

To further examine the effect of pro-prosecution forensic attitudes as a moderator, the proposed moderated mediation model (i.e., Figure 15) was compared to the alternative model that only included a direct effect of pro-prosecution attitudes on Guilt. The model that included only a direct effect of pro-prosecution attitudes and not a moderation demonstrated poor fit ($X^2 (14) = 202.09, p < .01, \text{CFI} = .81, \text{RMSEA} = .16, 90\%CI = [.14, .17], \text{SRMR} = .10, \text{AIC} = 11447.75$). There was a significant difference between the two models ($X^2 = 56.23, p = .02$), indicating that the model without pro-prosecution forensic attitudes was a better fitting model. However, both were poor fitting models.
Figure 15

*Pro-Prosecution Forensic Attitudes Model*

*Note.* All coefficients reported are standardized (β).
Table 23

Pro Prosecution Proposed Model Conditional Indirect Effects of IVs on Guilt

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)ProPros</td>
<td>-.041</td>
<td>[-.078, -.004]</td>
<td>.03*</td>
</tr>
<tr>
<td>(+1SD)ProPros</td>
<td>-.022</td>
<td>[-.044, .001]</td>
<td>.05</td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)ProPros</td>
<td>-.046</td>
<td>[-.085, -.008]</td>
<td>.02*</td>
</tr>
<tr>
<td>(+1SD)ProPros</td>
<td>-.023</td>
<td>[-.049, .002]</td>
<td>.06</td>
</tr>
<tr>
<td>Consist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)ProPros</td>
<td>.355</td>
<td>[.248, .462]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>(+1SD)ProPros</td>
<td>.260</td>
<td>[.182, .338]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>Found</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)ProPros</td>
<td>.141</td>
<td>[.033, .249]</td>
<td>.01*</td>
</tr>
<tr>
<td>(+1SD)ProPros</td>
<td>.198</td>
<td>[.120, .277]</td>
<td>&lt; .01*</td>
</tr>
</tbody>
</table>

* $p < .05$.

Pro-prosecution Forensic Attitudes Alternative Model. As demonstrated in previous alternatives to the proposed model, all four persuasion factors seem to influence both Expert and Message credibility. Thus, an alternative model that was similar to previous alternative individual difference models was run. The alternative pro-prosecution model included additional paths from all four persuasion factors to both Expert and message credibility and their respective interactions with pro-prosecution forensic attitudes (see Figure 16).

The alternative model demonstrated acceptable fit ($X^2 (48) = 131.48, p < .01$, CFI = .93, RMSEA = .06, 90%CI = [.05, .07], SRMR = .05, AIC = 23685.78). The interaction between pro-prosecution forensic attitudes and Consistency on Expert Credibility was significant ($b = -1.21, p = .02$) as well as the interaction between pro-prosecution forensic attitudes and Foundation on Expert Credibility ($b = 1.6, p = .02$, see Table 24 for all moderated path $\beta$s). There were no conditional indirect effects of any of the four
persuasion factors on Guilt (see Table 25).

To further examine the effect of pro-prosecution forensic attitudes as a moderator, the alternative moderated mediation model (i.e., Figure 16) was compared to the alternative model that only included a direct effect of pro-prosecution attitudes on Guilt. The model that included only a direct effect of pro-prosecution attitudes and not a moderation demonstrated good fit ($X^2(10) = 34.48$, $p < .01$, CFI = .98, RMSEA = .07, $90\% CI = [.05, .09]$, SRMR = .04, AIC = 11230.18). There was a significant difference between the two models ($X^2 = 49.48$, $p = .03$), indicating that the model without pro-prosecution forensic attitudes was a better fitting model.
Figure 16

Pro-Prosecution Forensic Attitudes Alternative Model

*Note.* All coefficients reported are standardized (β).
Table 24

*Coefficients for Moderated Paths in Figure 16*

<table>
<thead>
<tr>
<th>Moderated Path</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPAtt*Field</td>
<td>-.02</td>
<td>.71</td>
</tr>
<tr>
<td>PPAtt*Trust</td>
<td>-.07</td>
<td>.17</td>
</tr>
<tr>
<td>PPAtt*Consist.</td>
<td>-.10</td>
<td>.02*</td>
</tr>
<tr>
<td>PPAtt*Found.</td>
<td>.11</td>
<td>.02*</td>
</tr>
<tr>
<td>Message Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPAtt*Field</td>
<td>.06</td>
<td>.23</td>
</tr>
<tr>
<td>PPAtt*Trust</td>
<td>-.04</td>
<td>.42</td>
</tr>
<tr>
<td>PPAtt*Consist.</td>
<td>.02</td>
<td>.82</td>
</tr>
<tr>
<td>PPAtt*Found.</td>
<td>-.06</td>
<td>.25</td>
</tr>
<tr>
<td>Guilt ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPAtt*ExpertCred.</td>
<td>.01</td>
<td>.76</td>
</tr>
<tr>
<td>PPAtt*MessageCred.</td>
<td>-.07</td>
<td>.09</td>
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</table>

*p < .05.

Table 25

*Pro Prosecution Alternative Model Conditional Indirect Effects of IVs on Guilt*

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)ProPros</td>
<td>-.006</td>
<td>[-.014, .001]</td>
<td>.09</td>
</tr>
<tr>
<td>(+1SD)ProPros</td>
<td>-.002</td>
<td>[-.005, .001]</td>
<td>.17</td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)ProPros</td>
<td>-.012</td>
<td>[-.024, .000]</td>
<td>.05</td>
</tr>
<tr>
<td>(+1SD)ProPros</td>
<td>-.006</td>
<td>[-.013, .002]</td>
<td>.14</td>
</tr>
<tr>
<td>Consist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)ProPros</td>
<td>-.004</td>
<td>[-.009, .002]</td>
<td>.17</td>
</tr>
<tr>
<td>(+1SD)ProPros</td>
<td>.001</td>
<td>[-.001, .003]</td>
<td>.39</td>
</tr>
<tr>
<td>Found</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)ProPros</td>
<td>-.001</td>
<td>[-.003, .001]</td>
<td>.25</td>
</tr>
<tr>
<td>(+1SD)ProPros</td>
<td>-.005</td>
<td>[-.011, .000]</td>
<td>.07</td>
</tr>
</tbody>
</table>
As shown in Figure 17, slopes at one standard deviation below the pro-prosecution forensic attitudes (FEEBSpp) mean \((b = -0.22, SE = 0.112, 95\% CI [-0.439, -0.0003])\), the slope at the FEEBSpp mean \((b = -0.32, SE = 0.160, 95\% CI [-0.629, -0.0005])\) and one standard deviation above the FEEBSpp mean \((b = -0.41, SE = 0.208, 95\% CI [-0.819, -0.0006])\) were significant, indicating that as FEEBSpp scores increased, Consistency had a larger negative effect on Expert Credibility.

**Figure 17**

*Pro-prosecution* *Consistency interaction on Expert Credibility*
As shown in Figure 18, slopes at one standard deviation below the FEEBSpp mean ($b = .29, SE = .130, 95\% CI [.030, .542]$), the slope at the FEEBSpp mean ($b = .41, SE = .187, 95\% CI [.043, .777]$) and one standard deviation above the FEEBSpp mean ($b = .53, SE = .243, 95\% CI [.056, 1.011]$) were significant, indicating that as FEEBSpp scores increased, Foundation had a larger positive effect on Expert Credibility.

**Figure 18**

*Pro-prosecution* foundation interaction on Expert Credibility
Pro-Defense Forensic Attitudes

Averaged pro-defense forensic attitude scores ranged from 1 to 5 with a mean of 2.86 ($SD = .91$). Pro-defense forensic attitude scores were not skewed (.20). After adding pro-defense forensic attitudes to the model, structural equation modeling assumptions were reassessed. Pairwise scatterplots indicated that the assumptions of linearity and bivariate homoscedasticity were met. A max $R^2$ of .70, variance inflation factors below 10 (i.e., all variation inflation factors were < 3.14) and condition indices below 30 (i.e., all condition indices were < 3.98) indicated that there was no multivariate collinearity. There were no outliers. Boxplots, qqplots, skew and kurtosis indices indicated univariate and multivariate normality. The covariance matrix was positive definite and not ill-scaled.

Pro-defense Forensic Attitudes Proposed Model. Interaction terms between pro-defense forensic attitudes and each of the four persuasion factors were created because it was hypothesized that pro-defense forensic attitudes would moderate the relationships between Consistency and Message Credibility, Foundation and Message Credibility, Field and Expert Credibility, and Trustworthiness and Expert Credibility. Interaction terms between pro-defense forensic attitudes and Expert and Message Credibility were created to test the hypothesized moderated paths between Expert and Message Credibility and Guilt. A direct effect of pro-defense forensic attitudes on Guilt was also hypothesized and included in the model.

The proposed model demonstrated poor fit ($X^2 (56) = 248.16, p < .01, CFI = .80, RMSEA = .084, 90\% CI = [.077, .091], SRMR = .10, AIC = 21889.44$). Pro-defense forensic attitudes did not moderate any of the predicted relationships (see Figure 19 for
all Bs) but it did have a direct effect on Guilt ($b = .29, p < .01$) such that every one unit increase in pro-defense forensic attitudes resulted in a .29 unit increase in Guilt. There were conditional indirect effects of each of the four persuasion factors on Guilt, particularly at low levels of pro-defense forensic attitudes (see Table 26).

To further examine the effect of pro-defense forensic attitudes as a moderator, the proposed moderated mediation model (i.e., Figure 19) was compared to the alternative model that only included a direct effect of pro-defense attitudes on Guilt. The model that included only a direct effect of pro-defense attitudes and not a moderation demonstrated poor fit ($X^2 (14) = 262.21, p < .01$, CFI = .76, RMSEA = .18, $90\% CI = [.16, .19]$, SRMR = .15, AIC = 11589.56). There was a significant difference between the two models ($X^2 = 58.94, p = .01$), indicating that the model without pro-defense forensic attitudes as a moderator was a better fitting model. However, both were poor fitting models.
Figure 19

Pro-Defense Forensic Attitudes Model

Note. All coefficients reported are standardized (β).
Table 26

*Pro Defense Proposed Model Conditional Indirect Effects of IVs on Guilt*

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>-.04</td>
<td>[-.08, -.01]</td>
<td>.01*</td>
</tr>
<tr>
<td>(-1SD)ProDef</td>
<td>-.04</td>
<td>[-.08, -.01]</td>
<td>.01*</td>
</tr>
<tr>
<td>(+1SD)ProDef</td>
<td>-.02</td>
<td>[-.05, .01]</td>
<td>.14</td>
</tr>
<tr>
<td>Trust</td>
<td>-.06</td>
<td>[-.10, -.01]</td>
<td>.01*</td>
</tr>
<tr>
<td>(-1SD)ProDef</td>
<td>-.06</td>
<td>[-.10, -.01]</td>
<td>.01*</td>
</tr>
<tr>
<td>(+1SD)ProDef</td>
<td>-.02</td>
<td>[-.04, .01]</td>
<td>.14</td>
</tr>
<tr>
<td>Consist</td>
<td>.25</td>
<td>[.14, .35]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>(-1SD)ProDef</td>
<td>.25</td>
<td>[.14, .35]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>(+1SD)ProDef</td>
<td>.33</td>
<td>[.24, .42]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>Found</td>
<td>.12</td>
<td>[.02, .23]</td>
<td>.02*</td>
</tr>
<tr>
<td>(-1SD)ProDef</td>
<td>.12</td>
<td>[.02, .23]</td>
<td>.02*</td>
</tr>
<tr>
<td>(+1SD)ProDef</td>
<td>.20</td>
<td>[.13, .27]</td>
<td>&lt; .01*</td>
</tr>
</tbody>
</table>

*Pro-defense forensic attitudes Alternative Model.* As demonstrated in previous alternatives to the proposed model, all four persuasion factors seem to influence both Expert and Message credibility. Thus, an alternative model that was similar to previous alternative individual difference models was run. The alternative pro-defense forensic attitudes model included paths from all four persuasion factors to both Expert and message credibility and their respective interactions with pro-defense forensic attitudes (see Figure 20).

The alternative model demonstrated acceptable fit ($X^2(48) = 113.05, p < .01$, CFI = .93, RMSEA = .06, 90%CI = [.05, .06], SRMR = .08, AIC = 21657.14). The interactions between pro-defense forensic attitudes and Trustworthiness ($b = -1.12, p = .02$) and pro-defense attitudes and Foundation ($b = 1.86, p < .01$) on Expert Credibility were significant (see Table 27 for all moderated path $\beta$s). There were no conditional indirect effects of any of the four persuasion factors on Guilt (see Table 28).
The interaction between pro-defense forensic attitudes and Trustworthiness \((b = -1.10, p < .01)\) on Message Credibility was significant. Pro-defense forensic attitudes also significantly directly predicted guilt \((b = .29, p < .01)\) such that every one unit increase in pro-defense forensic attitudes resulted in a .29 increase in Guilt.

To further examine the effect of pro-defense forensic attitudes as a moderator, the alternative moderated mediation model (i.e., Figure 20) was compared to the alternative model that only included a direct effect of pro-defense attitudes on Guilt. The model that included only a direct effect of pro-defense attitudes and not a moderation demonstrated poor fit \((X^2(10) = 98.31, p < .01, \text{CFI} = .92, \text{RMSEA} = .13, 90\% CI = [.11, .15], \text{SRMR} = .11, \text{AIC} = 11372.00)\). There was a marginal significant difference between the two models \((X^2 = 46.03, p = .05)\), indicating that the model without pro-defense forensic attitudes as a moderator was a better fitting model. However, both were poor fitting models.
Figure 20

Pro-Defense Forensic Attitudes Alternative Model

Note. All coefficients reported are standardized (β).
Table 27

*Coefficients for Moderated Paths in Figure 20*

<table>
<thead>
<tr>
<th>Moderated Path</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDAAtt*Field</td>
<td>.01</td>
<td>.79</td>
</tr>
<tr>
<td>PDAAtt*Trust</td>
<td>-.09</td>
<td>.02*</td>
</tr>
<tr>
<td>PDAAtt*Consist.</td>
<td>-.06</td>
<td>.16</td>
</tr>
<tr>
<td>PDAAtt*Found.</td>
<td>.12</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>Message Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDAAtt*Field</td>
<td>.08</td>
<td>.10</td>
</tr>
<tr>
<td>PDAAtt*Trust</td>
<td>-.13</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>PDAAtt*Consist.</td>
<td>-.04</td>
<td>.46</td>
</tr>
<tr>
<td>PDAAtt*Found.</td>
<td>-.01</td>
<td>.84</td>
</tr>
<tr>
<td>Guilt ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDAAtt*ExpertCred.</td>
<td>.06</td>
<td>.22</td>
</tr>
<tr>
<td>PDAAtt*MessageCred.</td>
<td>.02</td>
<td>.76</td>
</tr>
</tbody>
</table>

*p < .05.

As shown in Figure 21, slopes at one standard deviation below the pro-defense forensic attitudes (FEEBSpd) mean ($b = -.22, SE = .099, 95\% CI [.415, -.027]) and the slope at the FEEBSpd mean ($b = -.323, SE = .145, 95\% CI [-.608, -.040]) and one standard deviation above the FEEBSpd mean ($b = -.43, SE = .190, 95\% CI [-.800, -.052]) were significant, indicating that as FEEBSpd scores increased, Trustworthiness had a larger negative effect on Expert Credibility.
Figure 21

*Pro-defense*Trustworthiness interaction on Expert Credibility

As shown in Figure 22, slopes at one standard deviation below the FEEBSpd mean \((b = .37, SE = .127, 95\% CI [.115, .616])\), the slope at the FEEBSpd mean \((b = .535, SE = .186, 95\% CI [.169, .90])\) and one standard deviation above the FEEBSpd mean \((b = .70, SE = .245, 95\% CI [.222, 1.186])\) were significant, indicating that as FEEBSpd scores increased, Foundation had a larger positive effect on Expert Credibility.
As shown in Figure 23, slopes at one standard deviation below the FEEBSpd mean ($b = -.22, SE = .054, 95\% CI [-.323, -.111]$), the slope at the FEEBSpd mean ($b = -.32, SE = .079, 95\% CI [-.473, -.162]$) and one standard deviation above the FEEBSpd mean ($b = -.42, SE = .104, 95\% CI [-.623, -.213]$) were significant, indicating that as FEEBSpd scores increased, Trustworthiness had a larger negative effect on Message Credibility.
Figure 23

Pro-defense*Trustworthiness interaction on Message Credibility

![Graph showing the interaction between Pro-defense and Trustworthiness on Message Credibility.](image)

Table 28

Pro Defense Alternative Model Conditional Indirect Effects of IVs on Guilt

<table>
<thead>
<tr>
<th>IV</th>
<th>β</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD) ProDef</td>
<td>-.007</td>
<td>[-.014, .001]</td>
<td>.08</td>
</tr>
<tr>
<td>(+1SD) ProDef</td>
<td>-.002</td>
<td>[-.005, .001]</td>
<td>.28</td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD) ProDef</td>
<td>-.010</td>
<td>[-.019, .000]</td>
<td>.05</td>
</tr>
<tr>
<td>(+1SD) ProDef</td>
<td>-.004</td>
<td>[-.012, .003]</td>
<td>.23</td>
</tr>
<tr>
<td>Consist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD) ProDef</td>
<td>-.002</td>
<td>[-.005, .002]</td>
<td>.33</td>
</tr>
<tr>
<td>(+1SD) ProDef</td>
<td>.001</td>
<td>[-.002, .003]</td>
<td>.58</td>
</tr>
<tr>
<td>Found</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD) ProDef</td>
<td>-.002</td>
<td>[-.005, .001]</td>
<td>.23</td>
</tr>
<tr>
<td>(+1SD) ProDef</td>
<td>-.004</td>
<td>[-.009, .002]</td>
<td>.18</td>
</tr>
</tbody>
</table>

*p < .05.
**Legal Fiction Consumption (CSI)**

Of the 562 participants that responded to the CSI question, 12% indicated that they never watch legal fiction, 26% indicated that they rarely watch legal fiction, 35% indicated that they sometimes watch, 18% indicated they watch often, and 9% indicated that they watch frequently. After adding legal fiction consumption to the original model, structural equation modeling assumptions were reassessed. Pairwise scatterplots indicated that the assumptions of linearity and bivariate homoscedasticity were met. A max $R^2$ of .7, variance inflation factors below 10 (i.e., all variation inflation factors were < 3.13) and condition indices below 30 (i.e., all condition indices were < 9.38) indicated that there was no multivariate collinearity. There were no outliers. Boxplots, qqplots, skew and kurtosis indices indicated univariate and multivariate normality. The covariance matrix was positive definite and not ill-scaled.

**Legal Fiction Consumption Proposed Model.** Interaction terms were created between legal fiction consumption and each of the four persuasion factors because it was hypothesized that legal fiction consumption would moderate the relationships between Consistency and Message Credibility, Foundation and Message Credibility, Field and Expert Credibility, and Trustworthiness and Expert Credibility (Hypotheses 17-17a).

The proposed model demonstrated poor fit ($X^2 (42) = 289.51, p < .01, CFI = .83, RMSEA = .09, 90\% CI = [.08, .10], SRMR = .09, AIC = 22831.47$). The interaction between legal fiction consumption and Trustworthiness on Expert Credibility was significant ($b = -.11, p = .01$; see Figures 24 & 25). There were conditional indirect effects of each of the four persuasion factors on Guilt (see Table 29).

To further examine the effect of legal fiction consumption as a moderator, the
proposed moderated mediation model (i.e., Figure 24) was compared to the proposed model that only included a direct effect of legal fiction on Guilt. The model that included only a direct effect of legal fiction and not a moderation demonstrated poor fit ($X^2 (14) = 288.35, p < .01, \text{CFI} = .80, \text{RMSEA} = .19, 90\% \text{CI} = [.17, .20], \text{SRMR} = .12, \text{AIC} = 11836.44$). There was not a significant difference between the two models ($X^2 = 24.28, p = .67$).
Figure 24

Legal Fiction Consumption Model

Note. All coefficients reported are standardized (β).
As shown in Figure 25, slopes at the lowest levels of legal fiction consumption, 1-Never \( (b = 0.56, SE = 0.14, 95\% CI[0.29, 0.84]) \), 2-Rarely \( (b = 0.59, SE = 0.10, 95\% CI[0.40, 0.79]) \), and 3-Sometimes \( (b = 0.56, SE = 0.14, 95\% CI[0.29, 0.84]) \) were significant, indicating that less frequent legal fiction consumption resulted in a greater influence of Trustworthiness information on Guilt ratings.

**Figure 25**

*Legal Fiction* \(^*\) *Trustworthiness on Expert Credibility*
As demonstrated in previous individual difference alternative models, all four persuasion factors seem to influence both Expert and Message credibility. Thus, an alternative model that was similar to previous legal fiction consumption model included paths from all four persuasion factors to both Expert and message credibility and their respective interactions with legal fiction consumption (see Figure 26).

The alternative model demonstrated acceptable fit ($\chi^2 (34) = 99.53, p < .01$, CFI = .95, RMSEA = .06, 90%CI = [.05, .07], SRMR = .05, AIC = 27083.22). The interaction between legal fiction consumption and Trustworthiness was significant ($b = -.13, p < .01$; see Table 30). Of the four persuasion factors, there was only a conditional indirect effect of Legal fiction consumption, specifically at lower levels of consumption (see Table 31).

To further examine the effect of legal fiction consumption as a moderator, the

---

Table 29

**Legal Fiction Proposed Conditional Indirect Effects of IVs on Guilt**

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field (-1SD)LegFic</td>
<td>-.020</td>
<td>[-.036, -.004]</td>
<td>.02*</td>
</tr>
<tr>
<td>(+1SD)LegFic</td>
<td>-.036</td>
<td>[-.064, -.009]</td>
<td>.01*</td>
</tr>
<tr>
<td>Trust (-1SD)LegFic</td>
<td>-.047</td>
<td>[-.077, -.018]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>(+1SD)LegFic</td>
<td>-.017</td>
<td>[-.036, .001]</td>
<td>.07</td>
</tr>
<tr>
<td>Consist (-1SD)LegFic</td>
<td>.299</td>
<td>[.206, .392]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>(+1SD)LegFic</td>
<td>.299</td>
<td>[.207, .392]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>Found (-1SD)LegFic</td>
<td>.196</td>
<td>[.110, .281]</td>
<td>&lt; .01*</td>
</tr>
<tr>
<td>(+1SD)LegFic</td>
<td>.141</td>
<td>[.051, .231]</td>
<td>&lt; .01*</td>
</tr>
</tbody>
</table>

*p < .05.
alternative moderated mediation model (i.e., Figure 26) was compared to the alternative model that only included a direct effect of legal fiction on Guilt. The model that included only a direct effect of legal fiction and not a moderation demonstrated good fit ($X^2 (10) = 114.06, p < .01$, CFI = .98, RMSEA = .07, 90% CI = [.05, .09], SRMR = .04, AIC = 11618.88). There was a significant difference between the two models ($X^2 = 1618.80, p < .001$), indicating that the model without legal fiction as a moderator was a better fitting model.
Figure 26

Legal Fiction Consumption Alternative Model

Note. All coefficients reported are standardized (β).
Table 30

*Coefficients for Moderated Paths in Figure 26*

<table>
<thead>
<tr>
<th>Moderated Path</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LegFic*Field</td>
<td>.02</td>
<td>.66</td>
</tr>
<tr>
<td>LegFic*Trust</td>
<td>-.14</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>LegFic*Consist.</td>
<td>.04</td>
<td>.46</td>
</tr>
<tr>
<td>LegFic*Found.</td>
<td>.06</td>
<td>.23</td>
</tr>
<tr>
<td>Message Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LegFic*Field</td>
<td>.02</td>
<td>.72</td>
</tr>
<tr>
<td>LegFic*Trust</td>
<td>-.08</td>
<td>.09</td>
</tr>
<tr>
<td>LegFic*Consist.</td>
<td>.03</td>
<td>.60</td>
</tr>
<tr>
<td>LegFic*Found.</td>
<td>-.01</td>
<td>.87</td>
</tr>
</tbody>
</table>

*p < .05.

Table 31

*Legal Fiction Alternative Model Conditional Indirect Effects of IVs on Guilt*

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>-003</td>
<td>[-.006, .001]</td>
<td>.11</td>
</tr>
<tr>
<td>(-1SD)LegFic</td>
<td>-004</td>
<td>[-.009, .001]</td>
<td>.13</td>
</tr>
<tr>
<td>(+1SD)LegFic</td>
<td>-003</td>
<td>[-.008, .001]</td>
<td>.15</td>
</tr>
<tr>
<td>Trust</td>
<td>-015</td>
<td>[-.028, -.002]</td>
<td>.02*</td>
</tr>
<tr>
<td>(-1SD)LegFic</td>
<td>-.003</td>
<td>[-.008, .002]</td>
<td>.37</td>
</tr>
<tr>
<td>(+1SD)LegFic</td>
<td>-.002</td>
<td>[-.006, .002]</td>
<td>.90</td>
</tr>
<tr>
<td>Consist</td>
<td>.000</td>
<td>[-.002, .002]</td>
<td>.37</td>
</tr>
<tr>
<td>(-1SD)LegFic</td>
<td>-.002</td>
<td>[-.006, .002]</td>
<td>.37</td>
</tr>
<tr>
<td>(+1SD)LegFic</td>
<td>-.003</td>
<td>[-.007, .001]</td>
<td>.14</td>
</tr>
</tbody>
</table>

*p < .05.
**Authoritarianism**

Averaged authoritarianism scores ranged from 1 to 9 with a mean of 4.24 ($SD = 2.06$). Authoritarianism scores were not skewed (.26). After adding authoritarianism to the model, structural equation modeling assumptions were reassessed. Pairwise scatterplots indicated that the assumptions of linearity and bivariate homoscedasticity were met. A max $R^2$ of .70, variance inflation factors below 10 (i.e., all variation inflation factors were $< 3.13$) and condition indices below 30 (i.e., all condition indices were $< 3.90$) indicated that there was no multivariate collinearity. There were no outliers. Boxplots, qqplots, skew and kurtosis indices indicated univariate and multivariate normality. The covariance matrix was positive definite and not ill-scaled.

**Authoritarianism Proposed Model.** Interaction terms between authoritarianism and each of the four persuasion factors were included in the model because it was hypothesized that authoritarianism would moderate the relationships between Consistency and Message Credibility, Foundation and Message Credibility, Field and Expert Credibility, and Trustworthiness and Expert Credibility. Interaction terms between authoritarianism and Expert and Message Credibility were also created because it was hypothesized that authoritarianism would moderate the relationships between Expert and Message Credibility on Guilt (Hypotheses 18-19).

The proposed model demonstrated mediocre fit ($X^2 (56) = 253.61, p < .01$, CFI = .86, RMSEA = .07, 90% CI = [.06, .08], SRMR = .07, AIC = 28114.77). The interaction between authoritarianism and Expert Credibility on Guilt was significant ($b = -.80, p = .04$) as well as the interaction between authoritarianism and Message Credibility on Guilt ($b = 1.09, p = .02$; see Figure 27 for all $\beta$s). Authoritarianism had a marginal direct effect
on Guilt ($b = .97, p = .053$). All four persuasion factors had conditional indirect effects on Guilt at various levels of authoritarianism (see Table 3).

To further examine the effect of authoritarianism as a moderator, the proposed moderated mediation model (i.e., Figure 27) was compared to the proposed model that only included a direct effect of authoritarianism on Guilt. The model that included only a direct effect of authoritarianism and not a moderation demonstrated poor fit ($X^2 (14) = 279.93, p < .001$, CFI = .80, RMSEA = .19, $90\% CI = [.17, .20]$, SRMR = .12, AIC = 15628.14). There was not a significant difference between the two models ($X^2 = 41.94, p = .68$) indicating that authoritarianism as a moderator did not improve model fit.
Figure 27

Authoritarianism Model

Note. All coefficients reported are standardized (β).

As shown in Figure 28, at one standard deviation below the authoritarianism (LA) mean, the slope was not significant (\(b = .34, SE = .187, 95\% CI [-.032, .702]\)), but both of the slopes at the authoritarianism mean (\(b = .64, SE = .127, 95\% CI [.398, .898]\)) and one standard deviation above the authoritarianism mean (\(b = .96, SE = .169, 95\% CI [.6294, .]\)).
1.294)) were significant, indicating that as authoritarianism increased, Message Credibility had a larger positive effect on Guilt ratings.

Figure 28

Authoritarianism *Message Credibility interaction on Guilt
As shown in Figure 29, at one standard deviation below the authoritarianism mean, the slope was not significant ($b = -.103, SE = .114, 95\% CI [-.327, .121]$), but both of the slopes at the authoritarianism mean ($b = -.25, SE = .070, 95\% CI [-.392, -.116]$) and one standard deviation above the authoritarianism mean ($b = -.40, SE = .100, 95\% CI [-.601, -.207]$) were significant, indicating that as authoritarianism increased, Expert Credibility had a larger negative effect on Guilt ratings.
Table 32

**Authoritarianism Proposed Conditional Indirect Effects of IVs on Guilt**

<table>
<thead>
<tr>
<th>IV</th>
<th>β</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)Auth</td>
<td>-.004</td>
<td>[-.026, .017]</td>
<td>.69</td>
</tr>
<tr>
<td>(+1SD)Auth</td>
<td>-.062</td>
<td>[-.100, -.024]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)Auth</td>
<td>-.007</td>
<td>[-.044, .029]</td>
<td>.70</td>
</tr>
<tr>
<td>(+1SD)Auth</td>
<td>-.043</td>
<td>[-.075, -.011]</td>
<td>.01*</td>
</tr>
<tr>
<td>Consist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)Auth</td>
<td>.256</td>
<td>[.167, .346]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>(+1SD)Auth</td>
<td>.333</td>
<td>[.219, 4.446]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>Found</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-1SD)Auth</td>
<td>.174</td>
<td>[.096, .253]</td>
<td>&lt;.01*</td>
</tr>
<tr>
<td>(+1SD)Auth</td>
<td>.151</td>
<td>[.060, .242]</td>
<td>&lt;.01*</td>
</tr>
</tbody>
</table>

* *p < .05.

**Authoritarianism Alternative Model.** As demonstrated in previous alternatives to the proposed model, all four persuasion factors influence both Expert and Message credibility (with the exception of Consistency). Thus, an alternative model that was similar to other individual difference alternative models was run. The alternative authoritarianism model included paths from all four persuasion factors to both Expert and message credibility and their respective interactions with authoritarianism (see Figure 30). In addition, it is possible that authoritarianism does not directly affect Guilt, but instead indirectly affects Guilt by moderating how jurors use Expert and Message Credibility information. Interactions between authoritarianism and Expert Credibility on Guilt and authoritarianism and Message Credibility on Guilt were also tested in the alternative model.

The alternative model demonstrated good fit ($X^2 (49) = 105.90, p < .01$, CFI = .95, RMSEA = .05, 90%CI = [.04, .06], SRMR = .04, AIC = 31045.81, see Figure 30 and
Table 3 for all $\beta$s). In addition to a direct effect of authoritarianism on Guilt ($b = 1.60$, $p < .001$), the interaction between authoritarianism and Message Credibility on Guilt was significant ($b = 1.16$, $p = .01$) as well as the interaction between authoritarianism and Expert Credibility on Guilt ($b = -.88$, $p = .02$; see Figures 28 & 29). There were no conditional indirect effects of any of the four persuasion factors on Guilt (see Table 34).

To further examine the effect of authoritarianism as a moderator, the alternative moderated mediation model (i.e., Figure 30) was compared to the alternative model that only included a direct effect of authoritarianism on Guilt. The model that included only a direct effect of authoritarianism and not a moderation demonstrated poor fit ($X^2(10) = 108.74$, $p < .01$, $CFI = .93$, $RMSEA = .13$, $90\% CI = [.11, .16]$, $SRMR = .06$, $AIC = 15411.58$). There was not a significant difference between the two models ($X^2 = 28.35$, $p = .65$) indicating that authoritarianism as a moderator did not improve model fit.
Figure 30

Authoritarianism Alternative Model

Note. All coefficients reported are standardized (β).
Table 33

Coefficients for Moderated Paths in Figure 30

<table>
<thead>
<tr>
<th>Moderated Path</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auth*Field</td>
<td>.08</td>
<td>.06</td>
</tr>
<tr>
<td>Auth*Trust</td>
<td>-.01</td>
<td>.79</td>
</tr>
<tr>
<td>Auth*Consist.</td>
<td>-.04</td>
<td>.16</td>
</tr>
<tr>
<td>Auth*Found.</td>
<td>-.02</td>
<td>.66</td>
</tr>
<tr>
<td>Message Credibility ~</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auth*Field</td>
<td>.02</td>
<td>.56</td>
</tr>
<tr>
<td>Auth*Trust</td>
<td>-.04</td>
<td>.34</td>
</tr>
<tr>
<td>Auth*Consist.</td>
<td>-.03</td>
<td>.61</td>
</tr>
<tr>
<td>Auth*Found.</td>
<td>-.04</td>
<td>.34</td>
</tr>
<tr>
<td>Guilt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auth*ExpertCred.</td>
<td>.10</td>
<td>.02*</td>
</tr>
<tr>
<td>Auth*MessageCred.</td>
<td>-.09</td>
<td>.04*</td>
</tr>
</tbody>
</table>

* $p < .05.$

Table 34

Authoritarianism Alternative Conditional Indirect Effects of IVs on Guilt

<table>
<thead>
<tr>
<th>IV</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>.000</td>
<td>[-.001, .001]</td>
<td>.76</td>
</tr>
<tr>
<td>(-1SD)Auth</td>
<td>-.009</td>
<td>[-.018, .000]</td>
<td>.05</td>
</tr>
<tr>
<td>(+1SD)Auth</td>
<td>-.013</td>
<td>[-.026, .000]</td>
<td>.06</td>
</tr>
<tr>
<td>Trust</td>
<td>-.001</td>
<td>[-.009, .006]</td>
<td>.76</td>
</tr>
<tr>
<td>(-1SD)Auth</td>
<td>-.013</td>
<td>[-.026, .000]</td>
<td>.06</td>
</tr>
<tr>
<td>(+1SD)Auth</td>
<td>.000</td>
<td>[-.002, .002]</td>
<td>.76</td>
</tr>
<tr>
<td>Consist</td>
<td>-.001</td>
<td>[-.006, .005]</td>
<td>.85</td>
</tr>
<tr>
<td>(-1SD)Auth</td>
<td>-.001</td>
<td>[-.006, .005]</td>
<td>.85</td>
</tr>
<tr>
<td>(+1SD)Auth</td>
<td>.000</td>
<td>[-.003, .003]</td>
<td>.77</td>
</tr>
<tr>
<td>Found</td>
<td>-.004</td>
<td>[-.008, .001]</td>
<td>.10</td>
</tr>
</tbody>
</table>

* $p < .05.$
**Individual Difference Regressions**

Because the influence of the above individual differences on guilt is documented in the literature, regression analyses tested whether each individual difference alone directly affected guilt. All continuous predictors were mean centered. Regression assumptions including linearity, normality, homoscedasticity, and independence of residuals were assessed with histograms, boxplots, qqplots, residual plots, and Tukey’s test of independence.

**NFC**

With NFC as the predictor and Guilt as the outcome, a simple regression was significant, \((F(1, 560) = 4.92, p = .03, R^2 = .007)\). NFC significantly negatively predicted Guilt \((b = -3.25, p = .03)\) such that every one unit increase in NFC resulted in a 3.25 reduction in Guilt. However, after adding the other variables (i.e., Field, Trustworthiness, Consistency, Foundation, Message Credibility, and Expert Credibility) into the regression \((F(7, 554) = 70.35, R^2 = .47, p < .001)\), NFC was no longer a predictor of Guilt \((b = -1.29, p = .24)\).

**Authoritarianism**

With authoritarianism as the predictor and Guilt as the outcome, a simple regression was significant, \((F(1, 560) = 5.26, p = .02, R^2 = .008)\). Authoritarianism significantly positively predicted Guilt \((b = 1.36, p = .02)\) such that every one unit increase in authoritarianism resulted in a 1.36 increase in Guilt. However, after adding the other variables (i.e., Field, Trustworthiness, Consistency, Foundation, Message Credibility, and Expert Credibility) into the regression \((F(7, 554) = 70.36, R^2 = .46, p < .001)\), authoritarianism was no longer a predictor of Guilt \((b = .53, p = .23)\).
**Legal System Attitudes**

With Legal system attitudes as the predictor and Guilt as the outcome, a simple regression was significant, \( (F(1, 560) = 59.41, p < .001, R^2 = .108) \). Legal system attitudes significantly positively predicted Guilt \( (b = 15.72, p < .001) \) such that every one unit increase in legal system attitudes resulted in a 15.72 increase in Guilt. After adding the other variables (i.e., Field, Trustworthiness, Consistency, Foundation, Message Credibility, and Expert Credibility) into the regression \( (F(7, 554) = 74.86, R^2 = .49, p < .001) \), legal system attitudes remained a significant predictor of Guilt, but its influence reduced \( (b = 6.89, p < .001) \) such that when controlling for the other variables in the model, a one unit increase in legal system attitudes resulted in a 6.89 increase in Guilt.

**Pro-prosecution Forensic Attitudes**

With pro-prosecution forensic attitudes as the predictor and Guilt as the outcome, a simple regression was not significant, \( (F(1, 560) = .21, p = .64, R^2 < .001) \).

**Pro-defense Forensic Attitudes**

With pro-defense forensic attitudes as the predictor and Guilt as the outcome, a simple regression was significant, \( (F(1, 560) = 94.82, p < .001, R^2 = .14) \). Pro-defense forensic attitudes significantly positively predicted Guilt \( (b = 12.25, p < .001) \) such that every one unit increase in pro-defense forensic attitudes resulted in a 12.25 increase in Guilt. After adding the other variables (i.e., Field, Trustworthiness, Consistency, Foundation, Message Credibility, and Expert Credibility) into the regression \( (F(7, 554) = 74.69, R^2 = .49, p < .001) \), pro-defense forensic attitudes remained a significant predictor of Guilt, but its influence reduced \( (b = 4.50, p < .001) \) such that when controlling for the other variables in the model, a one unit increase in pro-defense forensic attitudes resulted in a 4.50 increase in Guilt.
in a 4.50 increase in Guilt.

**CSI Viewing**

With CSI viewing as the predictor and Guilt as the outcome, a simple regression was marginally significant, \((F (1, 560) = 3.72, p = .054, R^2 = .005)\). CSI viewing marginally predicted Guilt \((b = 2.12, p = .054)\) such that as CSI viewing increased, participants reported a 2.12 increase in Guilt. However, after adding the other variables (i.e., Field, Trustworthiness, Consistency, Foundation, Message Credibility, and Expert Credibility) into the regression \((F (7, 554) = 70.26, p < .001, R^2 = .47)\), CSI was no longer a marginally significant predictor of Guilt \((b = .85, p = .30)\).
Chapter 10: Discussion

This chapter reviews the purposes and hypotheses of the study and reviews their respective results. The chapter concludes by discussing implications for both theory and the field, as well as future directions and limitations.

Main Purposes of the Study

The main purposes of the study were to 1) extend the ExPEx (Martire et al., 2020) in a more ecologically valid context, 2) synthesize the persuasion and credibility literature, and 3) examine several individual differences as potential moderators of the relationships between persuasion factors, credibility, and persuasion.

Ecologically Valid Extension of ExPEx. One of the purposes of the current study was to extend part of Martire and colleagues’ (2020) ExPEx model to a more ecologically valid context. One way the current study accomplished this was by presenting expert information via a cross-examination rather than an “expert report” (Martire et al., 2020). This was a more ecologically valid context because in the United States, jurors receive such information via direct testimony from an expert witness during trial. Thus, it was important to examine whether the effects found in Martire et al. (2020) would occur when the factor information was presented via a different method (e.g., cross-examination). The current study extended Martire and colleagues (2020) findings in a more ecologically valid context by demonstrating that 1) highlighting the weaknesses of an expert’s field, trustworthiness, and consistency via cross-examination was effective in reducing the respective perceptions of the expert and 2) perceptions of the expert’s field, trustworthiness, consistency, and foundation was associated with credibility (i.e., expert and message) and guilt ratings. A second way the current study increased ecological
validity was by presenting information on only four factors rather than all eight because jurors often will not receive information on all eight factors during trial. Third, the study increased ecological validity by using more concrete and realistic manipulations because some of the manipulations used in Martire et al. (2020) were somewhat unrealistic. For example, Martire et al. (2020) manipulated the foundation factor by stating that gait analysis does or does not allow for comparison. The issue with this in the context of a trial in the United States is that although some sciences that yield poor comparisons are admitted to trial, a science that could not make comparisons at all would not be admitted. To ensure that the current study’s findings might replicate in a real trial context, it was important to use factor information that might actually appear in a real cross-examination.

Fourth, the study increased ecological validity by using a more well-known type of expert (i.e., fingerprint expert) as opposed to a less commonly known expert (i.e., gait analysis expert). Because people tend to believe that commonly known forensic sciences (e.g., fingerprint) are accurate and persuasive (Lieberman et al., 2008), it was important to examine whether the effects occur with a more well-known expert. In the current study, persuasion factor manipulations were associated with factor perceptions of a fingerprint analyst and factor perceptions of the analyst were associated with perceptions of credibility and guilt ratings. These findings show that the ExPEx model (Martire et al., 2020) extends to more well-known forensic experts such as a latent print analyst.

**Persuasion and Credibility Literature Synthesis.** A second purpose of the study was to synthesize Martire et al.’s (2020) persuasion factors with the source credib-
ility and message credibility literature. The current study examined whether the persuasion factors field and trustworthiness act as source credibility cues and therefore influence the expert’s credibility. In addition, the study examined whether the persuasion factors consistency and foundation act as message credibility cues and therefore influence the credibility of the expert’s message/testimony. Results indicate that field and trustworthiness are associated with expert credibility and consistency and foundation are associated with message credibility.

However, results also indicate that foundation is also associated with expert credibility, and field and trustworthiness are also associated with message credibility. This suggests that some persuasion factors serve as both message and source credibility cues, whereas other persuasion factors such as consistency only influence one type of credibility (i.e., message credibility). Perhaps consistency only serves as a message credibility cue because this factor specifically relates to whether the expert’s message is consistent with or similar to the message of other experts. The other three factors might be associated with both source and message credibility because of the nature of the factors and their manipulations. Field refers to the expert’s experience in the field. Although hypothesized to solely influence source credibility, it makes sense that field was also associated with message credibility because a message is likely not credible if it comes from an inexperienced source. Trustworthiness refers to the expert’s intention to convey objective, unbiased information. Although hypothesized to solely influence source credibility, it also makes sense that trustworthiness was also associated with message credibility because the credibility of a message is inherently dependent on the source’s objectivity and intentions for conveying a message. If a source is known to be
biased and subjective, the information that the source provides (i.e., message) is difficult
to trustworthiness and be viewed as credible. Similarly, foundation refers to the reliability
and accuracy of the field. Although hypothesized to solely influence message credibility,
it makes sense that foundation was also associated with source credibility because it
would be difficult to view an expert as credible if the field they represent is not credible.
These findings demonstrate that the persuasion factors do not distinctly serve as either
source or message cues – they often serve as both and are associated with both source and
message credibility. These findings also demonstrate that although source and message
credibility are distinct constructs (Lang, 2000), they share quite a bit of overlap. Future
research should examine which credibility cues (i.e., source or message) the other four
persuasion factors studied in Martire et al. (2020) serve as.

Grounded in persuasion literature and consistent with Martire et al.’s (2020)
findings, results of the present study demonstrated that persuasion factor perceptions of
the expert indirectly affected guilt ratings. In the hypothesized model, field and
trustworthiness were associated with expert credibility and consistency and foundation
were associated with message credibility. Both types of credibility were associated with
persuasion (i.e., guilt ratings). The current study’s findings add to the persuasion and
credibility literature by providing evidence that the association between message
credibility and persuasion (i.e., guilt ratings) is stronger than the association between
source credibility and persuasion. Past research has neglected to do a direct comparison
of both message and source credibility’s influence on persuasion. Because some dual
cognitive processing models posit that source cues serve as heuristics and the use of
heuristics result in more shallow processing (Ratneshwar & Chaiken, 1991), the finding
that message credibility influences persuasion more than source credibility is reassuring that jurors engage in more elaborate or systematic processing. This finding also supports the body of literature that demonstrates that message content is more influential in determining persuasion than source credibility (Austin & Dong, 1994; Mondak, 1990; Slater & Rouner, 1996). However, the finding that both source credibility and message credibility influence persuasion seems to be consistent with Kruglanski and Thompson’s (1999) unimodel of cognitive processing. Specifically, jurors appear to use all types of information – both heuristic cues (i.e., source cues) and non-heuristic cues (i.e., message credibility cues) – in their decision making.

Further, expert credibility’s negative relationship with persuasion (i.e., guilt ratings) was a surprising finding. The body of source credibility research (e.g., Braunsberger, 1996; Hovland & Weiss, 1951; Pornpitakpan, 2004) shows strong evidence that source credibility is positively related to persuasion. The reason for the found negative relationship in the current study is due to an interaction between expert and message credibility. At higher levels of message credibility, expert credibility did not influence guilt ratings. However, at lower levels of message credibility, as expert credibility ratings increased, guilt ratings decreased. Although a somewhat surprising finding, this shows some support for a violated expectancies effect (i.e., persuasion is reduced when the source is credible, but the message is of low quality; Bohner et al., 2002; Tormala et al., 2006) – when the expert was rated as credible but the message was rated as uncredible, persuasion was reduced. This finding is important for expert witnesses and jury decision making because it shows that the expert’s credibility can have a backfire effect in some contexts, such as when the testimony is not very credible.
Lastly, even though expert credibility and message credibility were related, results showed that the two were distinct constructs. This is consistent with the credibility literature that discusses the two types of credibility as separate types of credibility (Lang, 2000). Because the two types of credibility are distinct and interact in their effect on persuasion, it is important that research considers both message and source credibility. The fact that expert credibility on its own positively predicts persuasion but negatively predicts persuasion once message credibility is accounted for makes a strong case for the need to consider both types of credibility for an accurate understanding of credibility’s influence on persuasion. Only considering one type of credibility can be misleading and problematic in certain contexts (e.g., jury consulting).

**Individual Differences.** The study also aimed to test several individual differences as potential moderators of the relationships between the four persuasion factors and credibility, as well as the relationships between credibility and guilt ratings. Moderators were tested for two reasons. For one, knowing whether individual differences can influence these relationships gives a more thorough understanding of those relationships and gives a more complete understanding of juror decision making when persuasion factor information is present. Second, testing individual differences as moderators potentially further explains the above relationships when certain factors are present (i.e., jurors who hold particular attitudes). As discussed below, certain individual differences are associated with particular ways of processing persuasion factors and credibility and therefore influence juror decisions.

**Need for Cognition.** Although Need for Cognition did not moderate any of the relationships between the four persuasion factors and credibility or the relationships
between credibility and guilt ratings, consistent with the juror decision making literature, NFC did negatively predict guilt ratings (Miller, Wood, et al., 2014; Sargent, 2004). However, there were conditional indirect effects of Field, Trustworthiness, and Consistency on Guilt ratings at lower levels of NFC in the hypothesized model. This means that the three persuasion factors only indirectly affect Guilt ratings when jurors are lower in NFC.

**Legal System Attitudes.** Legal system attitudes did not specifically moderate any of the hypothesized relationships, but there were conditional indirect effects of each of the four persuasion factors on Guilt ratings and both low and high levels of legal system attitudes. Further, legal system attitudes did positively predict guilt ratings. This relationship is highly expected considering the items in the measure of legal system attitudes (i.e., PJAQ) reflects conviction proneness and cynicism toward the defense (Lecci & Myers, 2008). These lack of moderation findings suggest that legal system attitudes do not affect the way mock jurors 1) use persuasion factor perceptions in their perceptions of expert and message credibility or 2) use expert and message credibility in their guilt ratings. The finding that legal system attitudes did not moderate any of the hypothesized relationships but did directly predict guilt ratings show that this individual difference does not necessarily affect the way jurors process information, but instead shows an inherent bias in guilt ratings.

**Legal Fiction Consumption.** The literature previously identified two possible directions of a supposed “CSI Effect,” with one direction resulting in a higher willingness to convict a defendant and the other direction resulting in a lower willingness to convict. Despite documentation of these effects, many studies have found no effect (Podlas,
2006). The current study found that the only effect of legal fiction consumption was the interaction between consumption and Trustworthiness on Expert Credibility. As consumption increased, Trustworthiness had a smaller influence on Expert Credibility ratings. At lower levels of consumption, Trustworthiness had a larger positive influence on Expert Credibility. In other words, perceptions of expert Trustworthiness didn’t influence Expert Credibility as much for people who consumed higher amounts of legal fiction as it did for people who consumed lesser amounts. It is interesting that, overall, people who consumed a lesser amount of legal fiction rated the expert as more credible compared to people who reported higher amounts of consumption. Somewhat in line with a “CSI Effect,” perhaps this effect is a result of legal fiction’s portrayal of forensic experts. Legal fiction often presents forensics as more accurate, scientific, and technological than it is. This inaccurate perception of forensics might have reduced credibility ratings of the expert in this study because high consumers might have expected the credibility of the expert to match that of fictional experts. When flaws to Expert Credibility were presented, it might have highlighted a large contrast between the current expert’s credibility and the credibility of fictional experts, therefore resulting in lower credibility ratings. However, other than this interaction between Trustworthiness and legal fiction consumption on Expert Credibility, the results of the current study add to the research that demonstrates little evidence of a “CSI Effect.”

It is possible that the “CSI Effect” does not occur when particular types of forensic evidence are presented but might occur for other types of evidence. For example, because people are generally familiar with the high accuracy of fingerprint analysis (Saks et al., 2016), the consumption of legal fiction might not influence people’s perception of
the discipline. However, legal fiction consumption might influence perceptions of a lesser known forensic discipline, such as ballistics, because people might use the information they see on television to inform and shape their perceptions of the discipline. It should be noted, though, that the current study really only tested one direction of the “CSI Effect” – the direction that should result in a higher willingness to convict – because forensic evidence was presented. A study in which no forensic evidence is presented against a defendant would be necessary to test whether people are less likely to convict without the presence of forensic evidence (e.g., Klentz et al., 2020).

**Authoritarianism.** There was a marginal positive direct effect of authoritarianism on guilt ratings. This finding shows support for the jury decision making literature that demonstrates conviction proneness tendencies for jurors who hold more authoritarian beliefs (Butler, 2010; Martin & Cohn, 2004; Narby et al., 1993). Although I hypothesized that authoritarianism would weaken the relationship between credibility and guilt ratings, authoritarianism moderated the relationship between message credibility and guilt such that as authoritarianism scores increased, message credibility had a larger positive effect on guilt. Authoritarianism also moderated the relationship between expert credibility and guilt such that higher authoritarianism scores resulted in expert credibility having a larger negative effect on guilt. These findings suggest that people higher in authoritarianism are more sensitive to, or are more likely to be influenced by, credibility information when deciding defendant guilt compared to people lower in authoritarianism. It is possible that people high in authoritarianism were more sensitive to credibility information because the credibility information regarded the prosecution experts. Perhaps people high in authoritarianism put more weight on the prosecution’s case and thoroughly process
prosecution evidence and evaluate prosecution experts but might not do the same for the defense. Maybe people high in authoritarianism would be less likely to consider credibility information of a defense expert in their guilt ratings.

**Pro-prosecution Forensic Attitudes.** Pro-prosecution forensic attitudes moderated the relationship between consistency ratings and expert credibility – as pro-prosecution attitudes increased, consistency had a larger negative effect on expert credibility. It is surprising that there was a negative relationship between consistency and expert credibility when accounting for pro-prosecution forensic attitudes such that as consistency increased, expert credibility decreased. It is also surprising that people who held high levels of pro-prosecution forensic attitudes were more affected by consistency information in their expert credibility ratings than people who held lower levels of pro-prosecution forensic attitudes. Because people who hold higher levels of pro-prosecution forensic attitudes believe that forensic evidence is reliable, it was hypothesized that they should be less affected by persuasion factors regarding the forensics. On the other hand, people who hold more pro-prosecution forensic attitudes might be more affected by consistency information when it is presented because perhaps they do not normally consider this type of information in their baseline perceptions of forensic experts. Maybe making consistency information salient forces people who hold pro-prosecution forensic attitudes to consider new information that had not been previously considered, but people low in pro-prosecution forensic attitudes already typically consider consistency information in their views about forensic experts.

Similarly, pro-prosecution forensic attitudes also moderated the relationship between foundation ratings and expert credibility – as pro-prosecution attitudes
increased, foundation had a larger, positive effect on expert credibility. It is possible that people who hold higher levels of pro-prosecution forensic attitudes do not typically think about or consider consistency or foundation information – but when the information is presented, jurors are forced to consider it when evaluating expert credibility. In contrast, people who hold lower levels of pro-prosecution forensic attitudes might be less likely to use foundation and consistency information in their perceptions of expert credibility because they are overall more skeptical of forensics in general, as well as the consistency and foundation information related to forensic evidence. In other words, people who hold lower levels of pro-prosecution forensic attitudes might already account for foundation and consistency information in their baseline perceptions of expert credibility.

Pro-prosecution forensic attitudes might not have moderated the relationship between the other two persuasion factors (i.e., trustworthiness and field) and expert credibility because it is likely that these other two factors are less related to overall attitudes toward forensic evidence. Pro-prosecution forensic attitudes pertain to general views about the reliability and accuracy of forensic evidence. Trustworthiness and field information pertain to the specific expert, not attitudes about forensic evidence in general. Thus, maybe pro-prosecution forensic attitudes only influence the use of factors that pertain to forensics in general (e.g., foundation, consistency).

**Pro-defense Forensic Attitudes.** Pro-defense attitudes had a direct positive effect on guilt ratings. Although, conceptually, pro-defense forensic attitudes seem like they should have a negative effect on guilt ratings, the items in the pro-defense scale reflect pro-defense attitudes when forensic evidence is *not* present. The scale reflects beliefs that every criminal leaves forensic evidence and the only way to convict a defendant is with
forensic evidence (e.g., “Police should not charge someone without forensics.”). Because forensic evidence was presented against the defendant in the current study, people who scored high on the pro-defense forensic attitudes scale should be more willing to convict the defendant.

Pro-defense forensic attitudes also moderated the relationship between three of the persuasion factors on credibility. Specifically, pro-defense attitudes moderated the relationship between 1) foundation ratings and expert credibility, 2) trustworthiness and expert credibility, and 3) trustworthiness and message credibility. As pro-defense attitudes increased, foundation had a larger positive effect on expert credibility, and trustworthiness had a larger negative effect on expert credibility and message credibility.

Pro-defense forensic attitudes likely influence the use of foundation information for the same reason stated previously regarding pro-prosecution forensic attitudes – the foundation factor pertains to general views regarding the reliability of forensic evidence. For people who hold pro-defense forensic attitudes, the presentation of foundation information likely strengthens their views that forensic evidence is the only way to convict a defendant. People who held higher pro-defense forensic attitudes were also more sensitive to trustworthiness information in their expert and message credibility ratings. Similar to the explanation provided for pro-prosecution forensic attitudes findings, maybe people who hold more pro-defense forensic attitudes are more affected by trustworthiness information when it is presented because perhaps they do not normally consider this type of information in their baseline perceptions of forensic experts. Maybe making trustworthiness information salient forces people who hold pro-defense forensic attitudes to consider new information that had not been previously considered, but people
low in pro-defense forensic attitudes already typically consider trustworthiness information in their views about forensic experts.

**Importance and Implications**

Understanding the role of experts is important to the dissertation’s foundation because the study ultimately aimed to examine an effective way of reducing the undue influence of expert testimony. Forensic evidence continues to be admitted into court (Bell, 2018) despite its high error rates and subjectivity (Garrett & Neufeld, 2009). The foundation of this research was designed to maximize implications for the legal system. Faulty forensic science has contributed to nearly half of wrongful convictions overturned by DNA evidence, making it the second largest contributing factor to wrongful convictions (Eastwood, & Caldwell, 2015; Mnookin, 2018). Thus, finding a way to reduce the influence of faulty forensic testimony should result in fewer wrongful convictions. The current study’s findings suggest that a cross-examination should help jurors better understand and use complicated testimony and is ultimately effective in exposing to the jury the subjectivity of forensic science and the inaccurate conclusions of an expert. An effective cross-examination should help jurors better critique unreliable forensic testimony – which, in turn, should serve as a buffer against unreliable science that is still admitted into court.

Two of the study’s foci were feasibility and practicality in order to optimize implications. Specifically, designing an effective cross-examination is much more practical than some of the other methods of reducing faulty science in court. Other researchers have examined the effectiveness of double-blind forensic testing on reducing errors in forensic analyses (Thompson et al., 2017). Although this method is quite effective at reducing forensic errors in the first place (compared to dealing with the issue once it gets to court), it is not currently very practical due to the time and resources it demands. Forensic labs are
backlogged and have an abundance of untested evidence (National Institute of Justice, 2010). Another method that reduces the effects of misleading forensic testimony is the use an opposing expert witness. Again, this method is not very practical because the defense is often limited in their financial resources.

Further, the current study synthesizes the Expert Persuasion Expectancy (Martire et al., 2020) with the broader source and message credibility literature. Although several of the expert persuasion factors have been examined in cross-examinations, the current study tested whether certain factors affect source or message credibility specifically. Thus, the study’s findings provide a theoretical explanation (i.e., source and message credibility) for the effectiveness of certain cross-examinations.

The results of the current study also have several practical implications for legal actors, such as jury consultants. First, results indicate that an expert’s credibility and the credibility of their testimony is associated with guilt ratings. Therefore, lawyers need to consider these two types of credibility when presenting their case. A defense attorney should be critical of the credibility of a prosecution’s forensic expert and their testimony. One way to do so is to reduce perceptions of the expert’s field, trustworthiness, and consistency. Highlighting flaws in an expert’s field, trustworthiness, and consistency reduce jurors’ perceptions of the expert in those respective factors. This not only suggests that a lawyer can use a cross examination to reduce these perceptions of a forensic expert, but it also indicates the types of flaws lawyers should highlight (i.e., field, trustworthiness, and consistency) and examples of the types of questions to ask. Lawyers can cross-examine an expert on their credentials and experience, their motives for testifying, and whether the expert’s testimony is consistent with other experts in the field.

Results also indicate that lawyers should focus not only on the credibility of the
expert, but the expert’s testimony as well. In fact, credibility of the testimony is even more important because the association between the credibility of the expert’s message and guilt ratings is greater than the association between the expert’s credibility and guilt. Thus, rather than simply focusing on the expert’s experience and trustworthiness, attorneys should focus on the testimony itself. For example, attorneys should highlight if the expert’s testimony conflicts with other experts (i.e., either through an opposing expert or through questioning).

These findings are also relevant for a forensic expert who testifies in court. An expert who wants themselves and their testimony to be perceived as more credible should consider their field, trustworthiness, consistency, and foundation. For example, an expert who wants to appear more credible might continue external training to increase perceptions of their experience (i.e., Field). An expert who wants to increase the credibility of their testimony might be prepared to present other expert opinions that are consistent with their own testimony.

The research also examined whether individual differences moderate the effectiveness of a cross-examination. Not only do the results contribute to the literature on the effect of individual differences on jury decision making behavior, knowing the effect of individual differences on processing of expert testimony has implications for the legal system. Attorneys can add individual differences that affect the processing of expert testimony to juror selection questionnaires. For example, because pro-prosecution forensic attitudes influence the way jurors use persuasion factor information, an attorney might choose to use a peremptory challenge to strike a juror who shows high scores on the FEEBS. In addition, because some individual differences, such as NFC, have a negative direct effect on Guilt ratings, defense attorneys would find it advantageous to select jurors who are higher in NFC. In contrast, a prosecutor might aim to include jurors who have high FEEBS scores and low
These considerations are especially important when the main evidence against a defendant is forensic. Perhaps these considerations can reduce the strength of the forensic evidence by helping jurors better critically evaluate forensic evidence.\textsuperscript{12} This critical evaluation should act as a safeguard against forensic science that is admitted in court but does not reach the \textit{Daubert} standard. Further, because false and misleading forensic testimony is a large contributor to wrongful convictions, reducing the influence of this testimony should reduce wrongful convictions.

\textbf{Limitations and Future Research}

The proposed study is not without limitations. First, although three of the four persuasion factor manipulations (i.e., trustworthiness, field, consistency) were effective in reducing jurors’ perceptions of the expert on those factors, the factor manipulations did not predict expert and message credibility. Further analyses demonstrated that even though the manipulations did not predict credibility, jurors’ perceptions of the expert on the four factors did predict expert and message credibility. It is likely that a factor presence/absence (i.e., dichotomous) manipulation did not result in enough variance to predict credibility, but perceptions rated on Likert scales did. Perhaps stronger manipulations that result in larger variance might be effective in predicting credibility. It should be noted that the current study’s manipulations were written to be consistent with actual information that might be currently presented in court. Although past research reports successful manipulations, forensic sciences have increased their standards. Future

\textsuperscript{12} The aim is not to have jurors completely disregard all forensic evidence, but to simply have them critically evaluate it, especially forensic science with higher error rates.
research should attempt to strengthen the factor manipulations.

It is also interesting that the foundation manipulation was the only factor that did not reduce perceptions of the expert. A possible explanation for this is that the foundation factor is more difficult to manipulate because it is much more abstract than the other three factors. Whereas consistency, trustworthiness, and field pertain to more concrete information regarding the expert and their testimony, foundation pertains to the whole forensic discipline. The reliability of forensic disciplines is not commonly known (Saks et al., 2016) – let alone how to evaluate a discipline’s reliability (i.e., error rates). Foundation might also be more difficult to manipulate because in order to change a person’s perception of the foundation factor, you need to change the person’s views about the entire discipline rather than one specific expert or message. When people hold favorable opinions about forensics (Saks et al., 2016), a brief series of questions in a cross-examination might not be enough to inform jurors and alter their beliefs about an entire discipline. The manipulations, especially foundation, might be more successfully manipulated with a different forensic expert. The current study used a fingerprint expert, which currently has a fairly high accuracy rate. Perhaps the effects of the manipulations would be larger for a forensic science that has a lower accuracy rate (e.g., tool marks).

Second, the current study only examined four of the eight factors in the ExPEx framework. Although the study would have benefitted from examining all eight factors, four were chosen for feasibility and practicality. Future research should similarly examine the other four factors (i.e., specialty, opinion, ability, and support) and all eight factors together. The current study found no interactions between the four persuasion factor manipulations on guilt ratings. This might be because the manipulations were not
strong enough to influence guilt ratings to begin with – and this explanation is supported by the fact that the manipulations did not affect credibility ratings either. It is also possible that persuasion factors do not interact because the manipulation of one factor is enough to reach the necessary “threshold” to influence persuasion (i.e., guilt ratings). Specifically, maybe reducing perceptions of the expert on one factor is enough to make a juror skeptical of the expert’s credibility, and multiple factor information is not needed. However, the lack of interactions between factors might simply be a result of the four specific factors chosen for the study. There might be interactions between the tested four persuasion factors and the other four persuasion factors that were not tested. This is why it is important to thoroughly examine the relationships between all eight ExPEx factors in order to gain a more complete understanding of how the factors influence persuasion and jury-decision making.

Third, the current study used forensic evidence as the sole piece of evidence against the defendant presented at trial. This is not all that uncommon in wrongful convictions cases, but findings regarding the effectiveness of the cross-examination might not generalize to cases in which more prosecution evidence is presented. People generally already hold favorable perceptions about the reliability of forensic evidence (Saks et al., 2016) – adding additional prosecution evidence would only strengthen the prosecution’s case and make “not guilty” verdicts (i.e., or lower guilt ratings) less likely. Additional prosecution evidence might also influence a mock juror’s perception of the credibility of the forensic expert and testimony. For example, additional prosecution evidence might corroborate or strengthen perceptions of the credibility of the forensic evidence, independently from the actual quality of the forensic evidence. Future research
should examine whether the current study’s findings replicate in cases in which more prosecution evidence is presented (e.g., eyewitness testimony).

Fourth, the current study used a forensic fingerprint analyst. This type of expert was chosen due to its common use in court and because it falls in between the error rates of other forensic disciplines (i.e., with odontology having one of the highest error rates and DNA analysis having one of the lowest error rates). It is possible that the current study’s findings are only applicable to certain types of forensic experts. For example, Martire et al. (2020) found similar patterns with a gait analysis expert, but of the forensic disciplines, gait analysis is not well known and is likely less reliable compared to other forensic disciplines. Similarly, Thompson and Scurich (2019) found that manipulating persuasion factor information of odontology testimony affected verdicts. However, both gait analysis and odontology are lesser known forensics and have significantly higher error rates than other disciplines (e.g., DNA; Saks et al., 2016). The current study’s findings might not replicate with a forensic discipline that is well known and very reliable such as DNA evidence. Specifically, because DNA evidence is considered the “gold standard” of forensics (Lieberman et al., 2008), persuasion factor information might not affect perceptions of credibility and guilt because people already have highly favorable perceptions of well-known, reliable forensic evidence. In addition, it might just be inherently more difficult to manipulate persuasion factor information of more reliable disciplines because of significantly lower error rates. Future research should test whether the effectiveness of the proposed cross-examination replicates with other types of forensic experts with both lower (e.g., DNA) and higher (e.g., firearms, toolmarks) known error rates.
Fifth, there are several common limitations in regard to mock jury research. Mock jury research is often criticized for its lack of verisimilitude and consequentiality. The criticisms regarding verisimilitude are grounded in the fact that mock jury simulations often do not resemble real jurors or jury decision making (Bornstein et al., 2017). For example, mock jurors are often asked to indicate a defendant’s guilt on a continuous scale even though this lacks ecological validity. This is a limitation for the current study because although participants chose a dichotomous guilty/not guilty verdict, continuous guilt ratings were used for structural equation modeling.

Further, it is often argued that there is a lack of consequentiality for mock jurors compared to real jurors. Real jurors’ decisions have actual consequences as they are responsible for determining the guilt or liability of a true defendant. Artificial labs and vignettes on the other hand, might make it difficult for jurors to actually believe that their decisions matter. Because of these differences, scholars have argued that jury decision making in mock jury studies differ from real juror decision making (Diamond & Zeisel, 1974; Wilson & Donnerstein, 1977). Although some studies have found no effects of consequentiality between real and mock jurors (Kaplan & Krupa, 1986; Suggs & Berman, 1979), other studies have (Diamond & Zeisel, 1974; Wilson & Donnerstein, 1977). However, it should be noted that the research that find an effect of consequentiality present mixed findings on the direction of the effect (i.e., whether ‘real’ jurors render more or less guilty verdicts than mock jurors). In addition, some research shows no consistent differences between simulated decisions and decisions with real consequences (Bornstein & McCabe, 2005; Kühberger et al., 2002). Although still a limitation to mock juror research, these mixed findings suggest that the issue of consequentiality might not
be pervasive or a consistent confound across mock jury research. Because the current study utilized vignettes, there might have been a lack of consequentiality. When faced with a real defendant and involved in a consequential trial, jurors might process persuasion factor information and credibility differently than mock jurors in the current study. For example, when there is a real possibility of a defendant spending time behind bars, a juror might rely on expert credibility less, and might be more hesitant to convict. Thus, results should be generalized to real world jury-decision making with caution.

The current study also measured pre-deliberation verdicts. Because pre and post deliberation verdicts sometimes differ (MacCoun & Kerr, 1988; Miller et al., 2011) it is possible that the pre-deliberation verdicts are not an accurate indication of how a juror ultimately votes in deliberation. During deliberation, other jurors might highlight and explain complex testimony, which might affect juror verdicts. Also, deliberations sometimes produce a “leniency effect” in which juries are more likely than individual jurors to find in favor of the defendant (MacCoun & Kerr, 1988; Miller et al., 2011). Because of jury deliberation might help jurors understand complex forensic testimony and produce a leniency effect, the use of jury deliberation in the current study might actually strengthen the effects of the cross-examination and further reduce guilty verdicts. Future research should examine whether jury deliberation influences the effects of cross-examination of a forensic expert on jury verdicts.

Lastly, even though presenting the trial through a video would be more ecologically valid and more accurately mimic true juror experience, it would not be appropriate in the current study. Bornstein et al.’s (2017) findings suggest that written trials are in some ways different than other trial mediums that did not find these same
effects (e.g., levels of processing). However, using a video format might introduce extraneous variables that might have been problematic for the current study. For example, the source credibility literature demonstrates that expert attractiveness and presentation style can influence an expert’s perceived credibility. It is possible that jurors might have been influenced by these source credibility cues in comparison to the manipulations (i.e., persuasion factors) and this might have reduced the ability to detect any effect of the manipulation on expert credibility. Although the study’s findings should be tested for generalizability (e.g., whether these effects occur with various other source credibility cues) the aim of the current study was to examine the influence of the four persuasion factors.
Chapter 11: Conclusion

Because false or misleading forensic testimony is a large contributor to wrongful convictions (Garrett & Neufeld, 2009; Innocence Project, 2020), research is needed to test ways of effectively reducing its effect on verdicts. A practical method of reducing the effect of false and misleading forensic testimony is a cross-examination of a forensic expert that highlights four factors that affect persuasion (i.e., consistency, field, foundation, and trustworthiness). It is also important to consider individual differences that might moderate this effect. The current study found perceptions of an expert’s field, trustworthiness, consistency, and foundation were positively associated with message credibility and perceptions of an expert’s field, trustworthiness, and foundation were positively associated with an expert’s credibility. Both expert and message credibility predicted guilt ratings. Further, three individual differences, authoritarianism, pro-prosecution forensic attitudes, and pro-defense forensic attitudes moderated the relationships between the four persuasion factors, credibility, and guilt. These findings have implications for the legal psychological literature, the legal system, and wrongful convictions. Attorneys can use the findings to construct effective cross-examinations of forensic experts. They can also use individual difference measures to guide peremptory challenges during selection. Ultimately, these two practices should reduce wrongful convictions.
References


Cramer, R. J., Brodsky, S. L., & DeCoste, J. (2009). Expert witness confidence and juror


https://doi.org/10.1080/03637757609375920


Frye v. United States, 293 F. 1013 (D.C., Cir. 1923).


Kim, Y. S., Barak, G., & Shelton, D. E. (2009). Examining the “CSI-effect” in the cases

https://doi.org/10.1016/j.jcrimjus.2009.07.005


https://doi.org/10.1207/S15327965PL100201


https://doi.org/10.1111/j.1559-1816.2008.00378.x


https://doi.org/10.1037/1076-8971.3.4.589


Miller, M. K., Maskaly, J., Green, M., & Peoples, C. D. (2011). The effects of


Personality and Social Psychology, 37(10), 1915-1926.  
https://doi.org/10.1037//0022-3514.37.10.1915


cognitive authority in the WWW. *Journal of the American Society for Information
Sciences, 35*, 279–289.

Daubert/Kumho implications of observer effects in forensic science: Hidden


https://doi.org/10.1177/0002764210376310


Saks, M. J., Albright, T., Bohan, T. L., Bierer, B. E., Bowers, C. M., Bush, M. A., Bush,
P. J., Casadevall, A., Cole, S. A., Denton, M. B., Diamond, S. S., Dioso-Villa, R.,
Epstein, J., Faigman, D., Faigman, L., Fienberg, S. E., Garrett, B. L., Giannelli, P.
Weak foundations, exaggerated claims. *Journal of Law and the Biosciences, 3*(3),
538-575. https://doi.org/10.1093/jlb/lsw045

https://doi.org/10.1002/bsl.2370020410

decision making: Jurors' reliance on central and peripheral information to evaluate
expert testimony. *PloS One, 12*(9), Article e0183580.

https://doi.org/10.1371/journal.pone.0183580


https://doi.org/10.1037/a0015290


https://doi.org/10.1177/107769909607300415


https://doi.org/10.1080/1068316X.2011.561800


https://doi.org/10.1111/j.1556-4029.2010.01671.x


https://doi.org/10.1177/009365094021001006


Thompson, W. C., & Scurich, N. (2019). How cross-examination on subjectivity and bias


United States v. Frazier, 387 F.3d 1244, 1263 (11th Cir. 2004).


Appendix A: Consent Form

Introduction
You are being invited to participate in a brief research study. Before you agree to begin this study, read this form carefully. It explains why we are doing the study; and the procedures, risks, discomforts, benefits and precautions involved.

You do not have to be in this study. Your participation is voluntary.

Why are we doing this study?
We are conducting a research study to learn how trial evidence impacts juror decision making. Specifically, we are examining whether individual differences (e.g., personality traits) influence how people perceive evidence presented in trial. In addition, we are interested in how case facts and lawyer arguments can influence verdicts.

Benefits of doing research are not definite; but we hope to learn useful information about how people process evidence and how it relates to their decision making. You will benefit from completing this study in the form of monetary compensation.

Why are we asking you to be in this study?
We are looking for people who are at least 18 years of age. In addition, there will be screener questions that will determine whether you fall into our target population. If you do not qualify as part of our target population (via the screener questions) you will be thanked for your time and you will not receive compensation. Approximately 555 people will participate in this study.13

What will you be asked to do if you agree to be in the study?
If you volunteer to be in this study, you will be asked to imagine that you are a juror while reading a criminal case. You will then be asked to decide a verdict and complete personality/attitudinal measures.

Your participation will take about 1 hour. MTurk does not allow for prorated compensation. In the event of an incomplete HIT, you must contact the research team and compensation will be determined based on what was completed and at the researchers' discretion. For your participation, you will be compensated $3 via Mturk if you complete at least 80% of the survey (# of questions). Qualification for the study will be assessed via screener questions at the beginning of the survey. If you do not qualify for the study, you will not receive the $2 compensation.14

What if you agree to be in the study now, but change your mind later?
This study is considered to be minimal risk of harm. This means the risks of your participation in this research are similar in type or intensity to what you encounter during

13 This will read 80 for the pilot study consent form.
14 This will read $2 for the pilot study.
your daily activities. You may experience feeling discomfort for a period of time during and after your participation in this study. We don’t expect those feelings to last. However, you may discontinue your participation at any point during the study if you feel a personally unacceptable amount of distress or discomfort.

Your participation in this study is completely voluntary. You may stop at any time. You may refuse to participate or withdraw from the study at any time without penalty.

**Who will know that you are in in this study and who will have access to the information we collect about you?**

We will not be collecting any identifying information other than your Mturk ID in order to make sure you receive compensation.

**CONFIDENTIALITY:** Your Mechanical Turk Worker ID will be used to distribute payment to you but will not be stored with the research data we collect from you. Please be aware that your MTurk Worker ID can potentially be linked to information about you on your Amazon public profile page, depending on the settings you have for your Amazon profile. We will not be accessing any personally identifying information about you that you may have put on your Amazon public profile page.

**Who can you contact if you have questions about the study?**

You may ask questions about the research at any time by emailing Jackie Kirshenbaum at jkirshenbaum@unr.edu.

**Who can you contact if you want to discuss a problem or complaint about the research or ask about your rights as a research participant?**

You may ask about your rights as a research participant. If you have questions, concerns, or complaints about this research, you may report them (anonymously if you so choose) by calling the University of Nevada, Reno Research Integrity Office at 775.327.2368.

By checking the box below, you acknowledge that you have read and agree with the information presented on this informed consent page.

___ Yes, I agree with the information on the informed consent page

___ No, I do not agree with the information on the informed consent page or do not wish to complete the study
Appendix B: Juror Qualification Items

1. Are you at least 18 years of age?
   ___ Yes
   ___ No

2. Are you a United States citizen?
   ___ Yes
   ___ No

3. Have you ever been convicted of a felony?
   ___ Yes
   ___ No

4. Are you proficient (i.e., fluent) in the English language?
   ___ Yes
   ___ No
Appendix C: Direct Examination

Later, after his arrest, the defendant was booked at the local jail where his fingerprints were taken. Those fingerprints were sent to the New Jersey State Police Forensic Laboratory Bureau for identification. At the trial, lab technician Frank Johnson presented the evidence for the prosecution.

Below is the transcript from court records of Johnson’s testimony:

Prosecuting Attorney: The prosecution calls Mr. Frank Johnson to the stand.

Prosecuting Attorney: Will you please state your name and occupation for the court?

Expert: My name is Frank Johnson, and I am a latent print analyst at CellCode Laboratories in Princeton, New Jersey.

Prosecuting Attorney: How long have you worked in the field of latent print examination?

Expert: Just under 3 years.

Prosecuting Attorney: Mr. Johnson, can you summarize the training and education you’ve had to prepare you for the duties as a latent print examiner?

Expert: I have a Bachelor of Science in Biology. I completed both the latent print technician training program and the analyst training program at CellCode. I’ve also received approximately an additional 300 hours of additional training from the FBI and other identification agencies.

Prosecuting Attorney: What are your duties as a latent print analyst?

Expert: I examine items of evidence for the presence of latent prints. I also perform comparisons of latent prints to known standards and I issue reports with my findings.

Prosecuting Attorney: Could you tell the court what a latent print is?

Expert: A latent print is the unintentional recording of your fingerprints or palm prints. When you touch a surface or an item, residue such as perspiration or body oils that might be present on your hands can then transfer the ridge detail that’s found in your fingerprints onto a surface, leaving behind a latent print.

Prosecuting Attorney: And what is meant by the expression “a latent print of value”?
Expert: That means that there is a sufficient amount of information in that latent and the ridge detail in order to either identify a person or eliminate a person as being the source of that latent print. So, it is a print that is suitable for comparison.

Prosecuting Attorney: How do you compare a latent print of value and a known print to determine if they share the same source?

Expert: I use a handheld magnifier do a side by side comparison between the two. I look for similarities and differences. After a thorough examination and comparison is completed, I am then going to determine that it either was identified with the known print or not identified.

Prosecuting Attorney: Did you examine latent prints in the current case?

Expert: Yes, sir.

Prosecuting Attorney: Were there any latent prints found? And if so, where were they located?

Expert: Yes, one latent print was found on the handle of the gun recovered at the crime scene.

Prosecuting Attorney: And was that latent print of value?

Expert: Yes, it was.

Prosecuting Attorney: Were you able to determine who the source was of that print based on your training and experience?

Expert: In my opinion, the latent print was identified as the same source as the defendant, Steven Murphy. Specifically, the latent print matched Steven’s right thumb and there were about 8 matching points of contact.

Prosecuting Attorney: Thank you, Mr. Johnson. No further questions.
Appendix D: Cross-Examination

There were 16 different cross-examinations that make up all combinations of the presence/absence of the 4 factors below.

All Condition

Next, the defense attorney began to question the expert, Mr. Johnson.

Defense Attorney: So, you’ve been working at CellCode lab for 3 years?

Expert: Yes, that’s correct.

Field {Defense Attorney: That does not seem like very long for a career.

Expert: I’ve completed the program and took several competency tests.

Defense Attorney: But you’re still starting out in your career and don’t have nearly as much experience as many of the senior examiners. Do you have a Ph.D. in any type of forensic science?

Expert: I do not have a Ph.D. I do have a B.S. in Biology, which, in combination with the training program, make me qualified to examine prints and report on them.

Defense Attorney: It isn’t uncommon for forensic analysts to attend external trainings and conferences. Have you extended your training in any of those ways?

Expert: No, we are not required to do external training, and I have not done anything like that yet. But I will plan to in the future.}

Trust {Defense Attorney: Were you paid to testify at today’s trial, Mr. Johnson?

Expert: I am always compensated for testifying in court. It takes a significant amount of time.

Defense Attorney: Do you ever testify for the defense?

Expert: No, I have not.

Defense Attorney: Does the money you are receiving from the District Attorney’s office to be here today affect your testimony?

Expert: No, of course not.

Defense Attorney: Does the District Attorney request your assistance often?
Expert: CellCode Lab is contracted with the entire state, when we are requested to examine items for prints and perform comparisons, we do.

Defense Attorney: You frequently testify for the prosecution but never testify for the defense. Would the District Attorney’s office keep calling you if you did not provide evidence of their suspects’ guilt?

Expert: The prosecution calls me to testify when the evidence supports the guilt of a defendant.

Defense Attorney: But in this case, the District Attorney was under pressure to get a conviction and they put that pressure on you. Especially, when in this case, the only physical evidence the prosecution has is a fingerprint. So it was really important that the fingerprint evidence supports a guilty verdict.

Expert: I am unaware of any pressures the District Attorney may or may not be feeling.

Defense Attorney: Isn’t it reasonable for a juror to think that you might not be the most fair and unbiased expert when you frequently team up with the prosecution to secure a conviction and never help the defense?

Expert: I don’t team up with the prosecution, so no, I don’t think that it is reasonable.

**Consistency** {Defense Attorney: But you only found 8 matching points because the print was partial. Don’t most latent print analysts use a 12-point standard in that there must be at least 12 matching points of minutiae between the latent and the known prints in order to call it a match?}

Expert: Standards vary across lab. I abide by my lab’s standards. Because the print was partial, there weren’t as many minutiae as a full print would typically have.

Defense Attorney: But other fingerprint analysts who use the common 12-point standard would not arrive at your same conclusion. Instead, they would find that only 8 matching points of minutiae do not reach standard to be considered a match.}

**Foundation** {Defense Attorney: Isn't it true that studies have found that fingerprint examiners sometimes make mistakes about the source of a fingerprint found at a crime scene?

Expert: Although latent print analysis can never be 100%, errors are rare.

Defense Attorney: But fingerprint analysis requires some interpretation, doesn’t it?
Expert: As with all science, results are interpreted. With comparisons we follow the ACE-V methodology which is universally accepted in the latent community.

Defense Attorney: You said that you compare latent and known prints by looking for similarities and differences. So, latent print experts just look at the latent print and the defendant’s prints to see if they match? The analysts just declare that the two prints match simply because they looked similar enough?

Expert: We are trained to detect those similarities and differences that make fingerprints unique. In this case, there was a high degree of similarity between the latent and defendant’s prints.

Defense Attorney: But isn’t it true that some people are wrongly convicted because of fingerprint evidence? So the field of latent print analysis isn’t all that good at what it claims to do.

Expert: Well, that’s rare. Latent print analysis is a very reliable means of identification.

Defense Attorney: But it is true. Some people have been wrongly convicted because of faulty fingerprint evidence and DNA evidence has proved that, right?

Expert: Yes, I suppose that is true, but I have never been involved with any such case.

Defense Attorney: But my point is that the field of fingerprint comparison is not always 100% accurate. The field isn’t as accurate as something like DNA, right? It is more subjective and has higher error rates.

Expert: No field in forensics can be as accurate as DNA. But fingerprint examination is very accurate and reliable. }

Defense Attorney: I want to ask you a couple of questions about the current case. The latent print you analyzed in this case was only a partial print; you couldn’t compare the entire print. So isn’t it possible that a full print might have shown some differences compared to Steven’s prints?

Expert: Yes, there could have been differences. But there was enough similarity to determine that the latent print matched the defendant.

Defense Attorney: But you only found 8 matching points because the print was partial. And can’t latent prints become destroyed or damaged?

Expert: Yes, a latent print can become damaged due to excessive handling of the surface or object that has suspected latent prints. This excessive handling might wipe away, damage, or destroy latent prints. Also, environmental conditions such as the rain or heavy humidity can damage or even destroy latent prints.
Defense Attorney: And isn’t it true that no two impressions will ever be the same in all respects? Can’t an impression vary in appearance as a result of distortion, slippage, twisting, and overlapping prints?

Expert: Yes, that’s correct.

Defense Attorney: No further questions.
Appendix E: Closing Arguments

The *prosecuting attorney* gave the following closing argument:

It is clear, beyond a reasonable doubt, that Steven Murphy is guilty of the aggravated robbery charges against him. Not only was he found in the vicinity of the convenience store shortly after the robbery occurred, his fingerprint was on the gun he dropped when he fled. You heard the fingerprint expert testify that the print on the gun was a match to Steven Murphy. Everyone’s fingerprints are unique; no two people have the same fingerprints. Therefore, Steven Murphy is the only one who could have committed this crime. I ask that you find the defendant guilty of aggravated robbery.

The *defense attorney* gave the following closing argument:

The State has not made their case that Steven Murphy is guilty of this crime beyond a reasonable doubt. **Field** {The prosecution’s key evidence is from a latent print analyst, who might I point out, is very early on in his career and doesn’t seem to have much experience in latent print analysis. He doesn’t even have a graduate degree- let alone a graduate degree in science, and he hasn’t tried to increase his experience through other training opportunities that other analysts complete.} **Trust** {He is also frequently paid by the prosecution to testify and has never testified for the defense, which calls impartiality into question. He’s a hired gun- you can't trust that this expert isn't just being paid by the prosecution to help secure a conviction, especially when the only evidence the prosecution has is a partial fingerprint. You cannot trust this expert. I worry about his motives and lack of objectivity.} Supposedly, one of Steven’s fingerprints were on the gun. But it wasn’t even a full print. It was a partial print that could have been distorted. **Consistency** {You heard the fingerprint expert, Mr. Johnson, testify that he did not even use the accepted 12-point standard that most other fingerprint examiners use. Thus, his opinion that the latent print matches the known print is not even consistent with what other experts would say.} **Foundation** {In fact, studies show that these analysts make mistakes and people are wrongfully convicted based on fingerprint evidence. Whether or not the latent print matches a person’s fingerprints is based on subjective interpretation. A match is whatever he decides to call a match. It’s all up to interpretation. You even heard the expert say that fingerprint examination is not as accurate as DNA evidence. The whole field of fingerprint analysis isn’t even reliable.} We can’t base Mr. Murphy’s future on a chance that the expert got it right. Because we cannot be certain that the print on the gun matches Steven’s, it is not clear beyond a reasonable doubt that Steven committed this crime. I ask that you return the only just verdict, not guilty.

* There were 16 different defense closing arguments that matched the cross examination in that only the factors presented in the cross were present in the closing argument.
Appendix F: Judge's Instructions

The following are the instructions from the judge that explain the relevant laws in this case.

Ladies and Gentlemen of the Jury:

It is my duty to instruct you in the law that applies to this case, and you must follow the law as I state it to you. As jurors, it is your exclusive duty to decide all questions of fact submitted to you and for that purpose to determine the effect and value of the evidence. You must not be influenced by sympathy, prejudice or passion. The information in this case is only an accusation against the defendant that informs the defendant of the charge. You are not to consider the filing of the information or its contents as proof of the matter charged.

The evidence you are to consider consists of the testimony of the witness and the exhibits admitted into evidence. The Court has admitted physical evidence, such as fingerprint evidence, and experts' opinions concerning the analysis of such physical evidence. You are the sole judges of whether any such evidence has a tendency and reason to prove any fact at issue in this case. You should carefully review and consider all the circumstances surrounding each item of evidence, including, but not limited to, its discovery, collection, storage and analysis. If you find any item of evidence does not have a tendency and reason to prove any element of the crime's charge or the identity of perpetrator of such of the crime's charge, you must disregard such evidence.

Now I want to define the elements of the charge against the defendant. The State has charged the defendant with aggravated robbery. Robbery is defined as the intentional or knowing theft of property from the person of another by violence or putting the person in fear. In order to meet the definition of robbery, the crime must meet the following four requirements: 1) the taking of money or property from another, 2) without consent or authorization, 3) with the intent to permanently deprive them of it, 4) by force or threat of force. Aggravated robbery is a robbery that is committed with aggravating factors such as the use of a weapon causing the suffering of a victim.

A defendant is presumed innocent. This presumption continues throughout the entire trial unless you find it has been overcome by the evidence, beyond a reasonable doubt. The State has the burden of proving each element of the crime beyond a reasonable doubt.

A reasonable doubt is one for which a reason exists. A reasonable doubt is such a doubt as would exist in the mind of a reasonable person after fully, fairly and carefully considering all of the evidence or lack of evidence. Doubt, to be reasonable, must be actual and substantial, not mere possibility or speculation.
If the State has failed to prove the elements of the charged offenses beyond a reasonable doubt, it is your duty to find the defendant not guilty.
Appendix G: Verdict Form

Question: At this point, what would you estimate to be the probability that the defendant is guilty of aggravated robbery? Please choose a number between 0% and 100%, where 0% means, "absolutely sure he is not guilty" and 100% means, “absolutely sure he is guilty”: __________% 

As a juror, you are instructed to consider all of the evidence in this case carefully. You are to find against the defendant only if the evidence convinces you "beyond a reasonable doubt" that the defendant is guilty of this crime.

What verdict would you return?

_________ Not Guilty ___________ Guilty

In a sentence or two, please describe the main reason that you chose the verdict that you did:

________________________________________________________________________

________________________________________________________________________
Appendix H: Attention/Manipulation Checks

Attention Check

1. (Field) How many years of experience did the fingerprint expert have in the field of fingerprint examination?
   ___ 1 years
   ___ 3 years
   ___ 5 years
   ___ 10 years
   ___ I don’t know how many years
   ___ The testimony did not mention years of experience

2. (Consistency) According to the common standard, how many matching points of minutiae are required for a match??
   ___ 4
   ___ 7
   ___ 12
   ___ I don’t know
   ___ The testimony did not mention a standard

3. (Trustworthiness) Was the expert paid by the prosecution to testify?
   ___ No
   ___ Yes
   ___ I don’t know
   ___ The testimony did not mention whether the expert was paid

4. (Foundation) Did the defense attorney ask the expert about the subjectivity and individual interpretation regarding fingerprint examination?
   ___ No
   ___ Yes
   ___ I don’t know
   ___ The testimony did not mention subjectivity in fingerprint examination

Manipulation Check

<table>
<thead>
<tr>
<th>Not at All</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Definitely</th>
</tr>
</thead>
</table>

1. (Field) Does the expert have training, study, and/or experience in fingerprint examination?
2. (Consistency) Is the expert's assertion that the latent prints were left by the defendant consistent with what other latent print experts would say?

3. (Trustworthiness) Do you believe that the expert is fair, impartial, and objective?

4. (Foundation) Does the field of fingerprint analysis allow people to identify perpetrators from latent prints accurately and reliably?
Appendix I: Witness Credibility Scale

(Brodsky et al., 2010)

Instructions: Please rate the expert witness, Mr. Johnson, for the following items on the scale provided.
If you are unsure, please take your BEST GUESS.

Example

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Appendix J: Message Credibility
(Appelman & Sundar, 2016)

1-Not at all
7-Very

1. To what extent was the expert testimony believable?
2. To what extent was the expert testimony authentic?
3. To what extent was the expert testimony accurate?
Appendix K: Need for Cognition
(Cacioppo, Petty, & Kao, 1984)

Instructions: For each of the statements below, please indicate to what extent the statement is characteristic of you.
1 = extremely uncharacteristic
2 = somewhat uncharacteristic
3 = uncertain
4 = somewhat characteristic
5 = extremely characteristic.

1. I would prefer complex to simple problems.
2. I like to have the responsibility of handling a situation that requires a lot of thinking.
3. Thinking is not my idea of fun.
4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.
5. I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.
6. I find satisfaction in deliberating hard and for long hours.
7. I only think as hard as I have to.
8. I prefer to think about small, daily projects to long-term ones.
9. I like tasks that require little thought once I've learned them.
10. The idea of relying on thought to make my way to the top appeals to me.
11. I really enjoy a task that involves coming up with new solutions to problems.
12. Learning new ways to think doesn't excite me very much.
13. I prefer my life to be filled with puzzles that I must solve.
14. The notion of thinking abstractly is appealing to me.
15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
16. I feel relief rather than satisfaction after completing a task that required a lot of mental effort.
17. It's enough for me that something gets the job done; I don't care how or why it works.
18. I usually end up deliberating about issues even when they do not affect me personally.
Appendix L: Pretrial Juror Attitude Questionnaire (PJAQ)  
(Lecci & Myers, 2008)

Agreement rated on 5-point scale [1-Strongly Disagree, 5-Strongly Agree]

1. If a suspect runs from police, then he probably committed the crime.
2. A defendant should be found guilty if 11 out of 12 jurors vote guilty.
3. Too often jurors hesitate to convict someone who is guilty out of pure sympathy.
4. In most cases where the accused presents a strong defense, it is only because of a good lawyer.
5. Out of every 100 people brought to trial, at least 75 are guilty of the crime with which they are charged.
6. For serious crimes like murder, a defendant should be found guilty so long as there is a 90% chance that he committed the crime.
7. Defense lawyers don’t really care about guilt or innocence; they are just in business to make money.
8. Generally, the police make an arrest only when they are sure about who committed the crime.
9. Many accident claims filed against insurance companies are phony.
10. The defendant is often a victim of his own bad reputation.
11. Extenuating circumstances should not be considered; if a person commits a crime, then that person should be punished.
12. If the defendant committed a victimless crime, like gambling or possession of marijuana, he should never be convicted.
13. Defense lawyers are too willing to defend individuals they know are guilty.
14. Police routinely lie to protect other police officers.
15. Once a criminal, always a criminal.
16. Lawyers will do whatever it takes, even lie, to win a case.
17. Criminals should be caught and convicted by “any means necessary.”
18. A prior record of conviction is the best indicator of a person’s guilt in the present case.
19. Rich individuals are almost never convicted of their crimes.
20. If a defendant is a member of a gang, he/she is definitely guilty of the crime.

21. Minorities use the “race issue” only when they are guilty.

22. When it is the suspect’s word against the police officer’s, I believe the police.

23. Men are more likely to be guilty of crimes than women.

24. The large number of African Americans currently in prison is an example of the innate criminality of that subgroup.

25. A Black man on trial with a predominantly White jury will always be found guilty.

26. Minority suspects are likely to be guilty, more often than not.

27. If a witness refuses to take a lie detector test, it is because he/she is hiding something.

28. Defendants who change their story are almost always guilty.

29. Famous people are often considered to be “above the law.”
Appendix M: Forensic Evidence Evaluation Bias Scale (FEEBS)
(Smith & Bull, 2011)

Agreement rated on 5-point scale [1-Strongly Disagree, 5-Strongly Agree]

1. Every crime can be solved with forensic science. (Pro-prosecution)
2. Every criminal leaves some physical evidence behind at every crime scene. (Pro-defense)
3. If forensic evidence suggests a defendant is guilty, this should be enough to convict even if other evidence (e.g. eyewitness testimony, alibi) suggest otherwise. (Pro-prosecution)
4. Forensic evidence always eventually identifies the guilty person. (Pro-prosecution)
5. Forensic evidence always provides a conclusive answer. (Pro-prosecution)
6. Science is the most reliable way to identify the perpetrators of crimes. (Pro-prosecution)
7. If no forensic evidence is recovered from a crime scene, it means the investigators did not look hard enough. (Pro-defense)
8. If there is no forensic evidence presented in a particular case, then the jury should not convict. (Pro-defense)
9. Police should not charge someone with a serious crime unless forensic evidence is available to prove their guilt. (Pro-defense)
10. If no forensic evidence is recovered from a crime scene, the defendant is probably innocent of the crime. (Pro-defense)
Appendix N: Very Short Authoritarianism Scale
(Kravitz, Cutler, & Brock, 1993)

Instructions: please rate your agreement with the next set of statements:

1- Very Strongly Disagree
5- Unsure/Neutral
9- Very Strongly Agree

1. It’s great that many young people today are prepared to defy authority.
   (Conservatism or Authoritarian Submission) (R)
2. What our country needs most is discipline, with everyone following our leaders in unity (Conservatism or Authoritarian Submission)
3. God’s laws about abortion, pornography, and marriage must be strictly followed before it is too late. (Traditionalism or Conventionalism)
4. There is nothing wrong with premarital sexual intercourse. (Traditionalism or Conventionalism) (R)
5. Our society does NOT need tougher government and stricter laws.
   (Authoritarianism or Authoritarian Aggression) (R)
6. The facts on crime and the recent public disorders show we have to crack down harder on troublemakers, if we are going preserve law and order.
   (Authoritarianism or Authoritarian Aggression)
Appendix O: Demographics

1. What is your gender?
   ____ Male
   ____ Female
   ____ Other ______

2. What is your age?
   ________

3. What is your race/ethnicity?
   ____ White American
   ____ African American
   ____ Hispanic American
   ____ Asian American
   ____ Native American
   ____ Other ________

4. What is your highest level of education achieved?
   ____ Did not receive high school diploma or GED
   ____ High school diploma or GED
   ____ Some college
   ____ Associate Degree
   ____ Bachelor’s Degree
   ____ Master’s Degree
   ____ Doctorate Degree

5. My political views tend to be:
   ____ Very liberal
   ____ Somewhat liberal
   ____ Middle of road
   ____ Somewhat conservative
   ____ Very conservative

6. What is your political affiliation?
   ____ no affiliation
   ____ Democrat
   ____ Republican
   ____ Independent
   ____ Other ________
8. How often do you watch television programs that focus on legal issues in criminal trials (e.g., *CSI: Crime Scene Investigation, Law and Order*) or other programs about forensic evidence?
   ____ 1-Never
   ____ 2-Rarely
   ____ 3-Sometimes
   ____ 4-Often
   ____ 5-Quite frequently

7. Please write a couple of sentences about what you did yesterday. (as a test of English proficiency)
   ________________________________
Appendix P: Hypothesis Tables

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<tr>
<th>Hypothesis</th>
<th>Type</th>
<th>Outcome: Support or no Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There will be a main effect of “Field” on “Expert Credibility”, such that participants in the “Field Present” condition will rate the expert as less credible compared to participants in the “Field Absent” condition.</td>
<td>Main effect</td>
</tr>
<tr>
<td>2</td>
<td>There will be a main effect of “Trustworthiness” on “Expert Credibility”, such that participants in the “Trustworthiness Present” condition will rate the expert as less credible compared to participants in the “Trustworthiness Absent” condition.</td>
<td>Main effect</td>
</tr>
<tr>
<td>3</td>
<td>There will be a main effect of “Consistency” on “Message Credibility”, such that participants in the “Consistency Present” condition will rate the expert’s testimony as less credible compared to participants in the “Consistency Absent” condition.</td>
<td>Main effect</td>
</tr>
<tr>
<td>4</td>
<td>There will be a main effect of “Foundation” on “Message Credibility”, such that participants in the “Foundation Present” condition will rate the expert’s testimony as less credible compared to participants in the “Foundation Absent” condition.</td>
<td>Main effect</td>
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<tr>
<td>5</td>
<td>Will there be an interaction between any of the four factor manipulations on guilt ratings?</td>
<td>Interaction</td>
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Table A. Hypothesis Support for Persuasion Factors on Expert Credibility and Message Credibility.
### Table B. Hypothesis Support for Persuasion Factors and Persuasion

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<th>Type</th>
<th>Outcome: Support or no Support</th>
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<tbody>
<tr>
<td>5</td>
<td>There will be an additive effect of each of the four persuasion factors on “Verdict”. Specifically, the condition in which all four persuasion factors are present will result in the lowest likelihood of rendering a guilty verdict and the condition in which none of the four persuasion factors are present will result in the highest likelihood of rendering a guilty verdict. The other conditions will fall between these extremes, with the presence of three persuasion factors resulting in a lower likelihood of rendering a guilty verdict compared to conditions in which only one or two persuasion factors are present.</td>
<td>Interaction</td>
<td>No support</td>
</tr>
<tr>
<td>5a</td>
<td>Participants in the “Field Absent”, “Trustworthiness Absent”, “Consistency Present” and “Foundation Present” condition will rate the expert as least credible compared to all other conditions.</td>
<td>Interaction</td>
<td>No support</td>
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### Table C. Hypotheses Support for Mediation Model

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<td>6</td>
<td>“Expert Credibility” (mediator) will mediate the effects of “Field” (IV) and “Trustworthiness” (IV) on “Verdict” (DV).</td>
<td>Mediation</td>
<td>Supported</td>
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<tr>
<td>7</td>
<td>“Message Credibility” (mediator) will mediate the relationship between “Consistency” (IV) and “Foundation” (IV) and “Verdict” (DV).</td>
<td>Mediation</td>
<td>Supported</td>
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<td>8</td>
<td>“Message Credibility” will be positively correlated to “Expert Credibility.”</td>
<td>Correlation</td>
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### Table D. Hypothesis Support For Need for Cognition

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<th>Outcome: Support or no Support</th>
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<td>9</td>
<td>“NFC” will negatively predict “Verdict” controlling for other factors.</td>
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<td>Supported</td>
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<td>10</td>
<td>Higher “NFC” scores will moderate the relationships between: 1) “Expert Credibility (DV) and “Verdict” (IV), 2) “Message Credibility” (IV) and “Verdict” (DV), 3) “Consistency” (IV) and “Message Credibility” (DV), and 4) “Foundation” (IV) and “Message Credibility” (DV).</td>
<td>Moderated Mediation</td>
<td>Not Supported</td>
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<td>11</td>
<td>Higher “NFC” scores will weaken (moderate) the relationship between “Expert Credibility” and “Verdict.”</td>
<td>Moderation</td>
<td>Not Supported</td>
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<td>11a</td>
<td>Higher “NFC” scores will not moderate the relationship between “Expert Credibility” and “Verdict” (DV)</td>
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### Table E. Hypothesis Support for Attitudes Toward the Legal System

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<td>“Positive attitudes toward the legal system” will positively predict “Verdict.”</td>
<td>Main effect</td>
<td>Supported</td>
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<tr>
<td>13</td>
<td>“Positive attitudes toward the legal system” will weaken (moderate) the relationship between: 1) both “Field” (IV) and “Trustworthiness” (IV) and “Expert Credibility” (DV), and 2) both “Foundation” (IV) and “Consistency” (IV) and “Message Credibility” (DV).</td>
<td>Moderation</td>
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### Table F. Hypothesis Support for Attitudes Toward Forensic Science
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<td>“Pro-prosecution attitudes toward forensic science” will positively predict “Verdict.”</td>
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<td>15</td>
<td>“Pro-prosecution attitudes toward forensic science” will weaken (moderate) the relationship between: 1) both “Field” (IV) and “Trustworthiness” (IV) and “Expert Credibility” (DV), and 2) both “Foundation” (IV) and “Consistency” (IV) and “Message Credibility” (DV).</td>
<td>Moderation</td>
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Table G. Hypotheses for Legal Fiction Consumption

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<th>Number</th>
<th>Research Question</th>
<th>Type</th>
<th>Outcome:</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>“Legal fiction consumption” will <em>strengthen</em> (moderate) the relationship between each of the four persuasion factors and “Expert Credibility”/ “Message Credibility.”</td>
<td>Moderation</td>
<td>Not Supported</td>
</tr>
<tr>
<td>16a</td>
<td>“Legal fiction consumption” will <em>weaken</em> (moderate) the relationship between each of the four persuasion factors and “Expert Credibility”/ “Message Credibility.”</td>
<td>Moderation</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>

Table H. Hypothesis Support for Authoritarianism

<table>
<thead>
<tr>
<th>Number</th>
<th>Hypothesis</th>
<th>Type</th>
<th>Outcome: Support or no Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Higher “Authoritarianism” scores will positively predict “Verdict.”</td>
<td>Main effect</td>
<td>Supported</td>
</tr>
<tr>
<td>18</td>
<td>“Authoritarianism” will weaken (moderate) the relationship between: 1) both “Field” (IV) and “Trustworthiness” (IV) and “Expert Credibility” (DV), and 2) both “Foundation”</td>
<td>Moderation</td>
<td>Not Supported: Authoritarianism <em>strengthened</em> the relationship between both</td>
</tr>
<tr>
<td>(IV) and “Consistency” (IV) and “Message Credibility” (DV).</td>
<td>Message and Expert Credibility on guilt ratings.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>