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Does Convenience Come with a Price? The Impact of Remote Testimony on Expert Credibility and Decision-Making

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DOES CONVENIENCE COME WITH A PRICE? THE IMPACT OF REMOTE
TESTIMONY ON EXPERT CREDIBILITY AND DECISION-MAKING

by

Ashley Cheyenne Trow Jones

A Dissertation
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and the School of Psychology
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved by:

Dr. Craig Warlick, Committee Chair

Dr. Melanie Leuty

Dr. Donald Sacco

Dr. William Johnson

Dr. Ashley Batastini

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ABSTRACT

Legal cases involving expert testimony, especially by forensic mental health professionals, is increasingly relying on remote testimony to reduce associated costs and increase availability of such services. There is some evidence to show that expert testimony delivered via videoconference (VC) is comparable to expert testimony delivered in person; however, the most compelling evidence for this claim is unpublished. Other evidence across disciplines showed relative comparability between VC and in-person modalities across various types of outcomes. Based on both unpublished and published findings, this study tested the hypothesis that minimal differences in measures of expert credibility, efficacy, and weight assigned to testimony evidence would be found when testimony was delivered in person and via VC, with significant differences when testimony was delivered by telephone. To test this hypothesis, jury-eligible M-Turk workers provided their perceptions about a forensic psychological expert witness after viewing a videotaped mock court scenario. The videotaped scenario showed the witness testifying either physically in the courtroom, by telephone (audio-only), or using a two-way video conference system. MANOVA and ordinal regression tests demonstrated negligible differences in perceptions of the expert as well as decisions made based on their testimony. These findings provide clearer support for the implementation of remote testimony in courts. Recommendations for psychological expert witnesses are made based on these findings to better serve justice-involved persons and incorporate research-supported techniques into practice.

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DEDICATION

I would like to dedicate this work to my husband and son. Ryan Jones happily sacrificed so much to support me in pursuing my passions; both Ryan and Lucas have given me immense patience and grace with the things that I myself had to sacrifice.

Thank you both.

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CHAPTER I – INTRODUCTION

Until relatively recently, the only way an unavailable witness could provide testimony was through written deposition (Federal Rules of Evidence, 2000). As technology progressed, courts experimented with telephones as an alternative avenue of providing testimony (Croft, 1991). Despite the increased reliability and convenience, courts resisted its use by implementing unnecessarily restrictive conditions for the admission of telephone testimony during the 1980's. However, after an elderly home-bound woman residing in Florida was allowed to testify via telephone in a New York case in *Ferrante v. Ferrante* (1985), courts more readily allowed telephone testimony. Similarly, *Maryland v. Craig* (1990) added one-way video testimony to the list of acceptable testimony modalities when the Supreme Court determined that a child's testimony against an abuser, delivered via closed-circuit television, was constitutional when the child feared they would be harmed by the defendant if in the same room. Such technology allows the witness to be seen and heard by participants in the courtroom as they deliver their testimony from a remote location.

Since the *Maryland v. Craig* (1990) ruling, video testimony (both one- and two-way) has been applied in a variety of legal settings, such as terrorism cases, immigration hearings, and food stamp appeals court (Lederer, 2004a; Haas, 2006). Although the Supreme Court has yet to agree on whether two-way video testimony is constitutional (for review, see Aguinaga, 2014), courts continue to apply such technology, particularly in cases of expert testimony by mental health professionals (Miller et al., 2008). The increased use of remote testimony is often motivated by cost-control. Specifically, defendants or the presiding jurisdiction must pay for expert witnesses – a cost which is

exacerbated by witnesses who are not local, thereby requiring the witness to travel for the case. Unfortunately, many defendants have lower incomes than the general population, making costs more burdensome than they would be for others (Nagin & Waldfogel, 1998). Rural communities are also less likely to have local expert witnesses, resulting in both more frequent use of costly non-local experts, and local experts who, while knowledgeable in their fields, are not qualified to provide expert testimony. These “occasional experts,” as coined by Grisso (1987), may unknowingly provide subpar testimony (for the same price as a trained expert). In cases of both local and non-local experts, defendants in rural communities are at a disadvantage.

The rise in application of remote testimony, although effective in reducing costs, has prompted questions about the myriad ways that remote testimony may influence other aspects of a case, including perceptions by jurors, attorneys, defendants, and subsequent decision-making (Lederer, 1994; 2009). Research has explored aspects of remote testimony implementation, such as defendant and attorney satisfaction with video consultation (McDonald, Morgan, & Metze, 2016) and the influence of video testimony on trial verdict (as cited in Lederer, 2009). However, the few known studies on trial verdict were not published, so the applicability of the findings are questionable. Additionally, further research is needed on remote testimony and how perceptions of the expert witness may differ depending on whether he/she is physically or virtually present. These are important areas to explore because past research has demonstrated a relationship between perceptions of expert witnesses and trial outcomes. Therefore, it is unclear if, and how, remote testimony may indirectly influence trial outcomes via perceptions of the expert offering key testimony.

The current study aims to measure the influence different testimony modalities (in-person, video, telephone) may have on potential decision-makers' perceptions of the expert's credibility, efficacy, social presence, and the weight assigned to expert testimony when making legal decisions. Better understanding the inadvertent influences of remote testimony may provide guidance to legal professionals when advising their clients and witnesses, as certain testimony modalities may result in reduced credibility of expert witnesses on the stand—a factor known to influence trial outcomes. This risk concerns mental health expert witnesses especially, first because it jeopardizes their adherence to relevant ethical principles, such as mental health professionals' obligation to “do no harm” to those they serve (Principle A, American Psychological Association [APA], 2017) and secondly because they are often involved in high-stakes cases. An unpublished pilot study found that difference in perceptions of credibility between trial transcripts describing different testimony modalities (expert witness testifying in person or via video conference) were negligible (falling below $p = .05$; Lederer, 2009). These findings are promising, as they suggest first that an expert's credibility remains relatively intact while testifying via video conference and second that a more externally valid study may yield similar results. The legal history of remote testimony is briefly reviewed next, followed by an overview of current literature on outcomes associated with both remote and in-person mechanisms in legal contexts.

Constitutionality and Suitability of Remote Testimony

Telephone Testimony

It is possible for testimony via telephone to be permitted at the judge's discretion, in lieu of a written deposition, when a witness is unavailable under Rule 804 of the

Federal Rules of Evidence (2000). Witness testimony via deposition or telephone are considered exceptions to the hearsay rule which would otherwise render such evidence untrustworthy. Conditions for exceptions to the hearsay rule include an unavailable witness whose testimony does not meet certain criteria (e.g., statements made under impression of imminent death; *Federal Rules of Evidence*, 2000). Testimony via telephone was occasionally used in the 1980's—the ability to deliver testimony in real time and direct or cross-examine the witness proving useful in cases exceptional circumstances preventing the witness's in-person testimony. The practice, however met opposition via an unreasonably high threshold required for proving a witness's "exceptional circumstances." *Ferrante v. Ferrante* (1985) was one of the most visible cases in which this high threshold was met, demonstrating for other courts how exceptions to the hearsay rule could be met.

This precedent led to an increase in use of telephone testimony (Croft, 1991); over time, district courts upheld the opinion that telephone testimony does not violate a defendant's right to confront witnesses (6th Amend., U.S. Const.), as was the opinion in *People v. Topping* (1988). Topping was found guilty of sexual assault and burglary after the victim's treating physician following the assault testified to the victim's injuries and demeanor. The physician, located in Kentucky, was permitted to testify via telephone for the trial in Colorado given the cost associated with travel, a decision Topping objected to. The decision to allow telephone testimony was not only affirmed at trial but upheld on appeal, the appellate judge's concluding remarks reflecting a modern interpretation of constitutional law:

“Face to face is a figure of speech and ... the essence of the language really means a right to confrontation and cross-examination. ... It does not mean the right to gaze upon ... an individual and note whether ... a drop of perspiration pours fourth from [his] forehead...”

~Van Cise, presiding judge

People v. Topping (1988).

Such sentiments were echoed in later cases, one such case being *Gonsoir v. State* (1990). Gonsoir, on trial for driving under the influence with an excessive blood alcohol content (BAC), objected to the telephone testimony of a witness whose flight was cancelled, delaying their arrival to court for several days, citing an inability to observe their demeanor as a violation of his constitutional right. The judge, citing *People v. Topping* (1988), allowed the telephone testimony as the scope of the witness’s testimony included toxicology test reports, the credibility of which were not under question.

Video Testimony

Maryland v. Craig (1990) set a new precedent for future courts. It gave judges a reason to allow remote testimony, specifically one-way video testimony, of victims when there is reason to believe that testifying in open court would cause distress. Doing so would allow the courts to uphold substantial social policy. The judges in this case also asserted that, although in-person testimony is always ideal, one-way video testimony does not violate the defendant’s right to confront and cross-examine witnesses testifying against them, as they have these opportunities when using such technology (*Maryland v. Craig*, 1990). This decision was interpreted by some courts to also apply to telephone testimony, as the decision applied to cases in which a witness is both unavailable and

requiring an alternative mode of testimony (Croft, 1991). Since then, both video and telephone testimony have been used frequently without significant opposition (Croft, 1991).

Despite being permissible in the case of *Maryland v. Craig*, several other cases determined conditions under which remote testimony would *not* be permitted. For example, an appellate judge ruled that one-way video testimony by forensic expert witnesses in a criminal trial was not constitutional, as video testimony was used without an expressed need to do so (*Gentry v. Deuth*, 2004). Similarly, a court ruled that a child's general fear of the courtroom is not reason enough to allow the child to testify using video technology, asserting the need for the child to fear the person they are confronting, to justify its use (*United States v. Moses*, 1998). In sum, judges agree that one-way video testimony is effective in protecting young or vulnerable victims from emotional distress but should not be applied liberally without good reason (Brooks, 2012).

A conservative interpretation of the *Craig* decision leads one to conclude that the ruling applies only to one-way testimony where the court can both see and hear the witness, but the witness cannot see or hear the court; however, several judges have applied the *Craig* test to two-way testimony, where both the court and witness can see and hear each other, in other abuse cases. For example, in *United States v. Weekley* (1997), the judge determined that the child's legitimate fear of his kidnapper and abuser was reason enough to permit his testimony using two-way technology—a decision later upheld in similar abuse cases (e.g., *United States v. Rouse*, 1997). However, other judges have concluded differently. For example, in *United States v. Gigante* (1999), two-way testimony by a government-protected witness was used to prosecute prominent gang

member Vincent Gigante. On appeal, it was determined that the *Craig* test did not apply to decisions of two-way testimony because the *Craig* test was intended for one-way testimony only.

Some scholars have made a case for two-way testimony to be permitted under the *Craig* rule (e.g., Mulkey, 2014), stating that two-way testimony should be allowed in cases when there is significant public policy to be preserved in doing so, such as a defendant's right to confrontation of witnesses against them. In fact, some judges have granted permission to use two-way testimony to adult witnesses who, although not afraid to confront the defendant, had legitimate barriers to appearing in court, such as medical orders to not travel. In *Horn v. Quarterman* (2007), a witness to the prosecution was undergoing treatment for a terminal illness in a different state from where the trial took place. Similarly, a witness in a different case was unable to travel to a court hearing because he was elderly and ill (*United States v. Benson*, 2003).

Since *Maryland v. Craig* (1990), testimony using videoconference technology (both one-way and two-way, hereon referred to as VC) in court has increased in popularity (Miller, 1991). This development posed new questions to judges and scholars: what are the circumstances under which VC testimony is constitutional and when is VC testimony considered suitable? Indeed, these are the questions on which there is much scholarly debate (for a historical review of this debate, see Aguinaga, 2014). Because constitutionality and suitability are not mutually exclusive by nature, these questions resulted in professionals taking several different sides of the debate: (1) that two-way video testimony is neither constitutional nor suitable, (2) is constitutional but not suitable,

and (3) that it is both constitutional and suitable. These positions are briefly summarized below.

- 1) Not only have some cases outright found VC testimony unconstitutional (see *Gentry v. Deuth*, 2004, *United States v. Yates*, 2004, and *United States v. Moses*, 1998), but legal scholars have argued that the use of VC testimony infringes upon the defendant's right to confront witnesses against him or her (Smith, 2013; Garofano, 2007; Gurrieri, 2011), going so far as to conclude that the 6th amendment would need to be amended before VC testimony could be applied (Smith, 2013).
- 2) Some judges and scholars have opined that, while not violating a defendant's right to confrontation, VC testimony is harmful to a trial in other ways by introducing distractions or disruptions (Haas, 2006).
- 3) Finally, others argue that VC testimony is not only constitutional but advantageous to the legal system for several reasons (Tokson, 2007). Specifically, VC testimony is constitutional because it still allows the witness to be seen, heard, and cross-examined by the defendant and their attorney (Aguinaga, 2014; Tokson, 2007). In fact, there are some situations in which a defendant's rights may be violated by prohibiting VC testimony. When travel to court is not feasible, for example, it would be in the defendant's best interest for the witness to appear via VC, rather than submit a written deposition that does not allow for direct confrontation (see *United States v. Gigante*, 1999). Other scholars have even called for the development of a new rule permitting the use of VC testimony so

courts can use such technology without risk of penalty (Montell, 2011; Gurrieri, 2011).

Benefits of Remote Testimony. Given the need to reduce trial costs and delays in court proceedings, the increased use of remote testimony has been suggested (American Bar Association, 1984). More specific to the present study, Miller (1991) noted that forensic psychiatrists, who frequently testify in court, would benefit from the implementation of remote testimony because of the time and cost dedicated to travelling for trial (see also Miller et al., 2008). Some regions in the U.S. do not have the ease of access to healthcare professionals, particularly ones qualified to conduct forensic mental health assessments or provide expert testimony (Miller et al., 2008; Grisso, 1987). Without such access or resources to pay for evaluations, some jurisdictions may be incentivized to simply drop charges or offer quick plea deals that may infringe on a defendant's rights (e.g., if they would otherwise be found incompetent to proceed).

Criticisms of Remote Testimony. In addition to concerns of constitutionality, other concerns have been used to discourage common use of remote testimony including: (1) lack of social presence, (2) disruptions that detract from overall efficiency of the trial, (3) nature of physiologically processing video information, and (4) ethical risks. Some scholars suggest that a lack of social or emotional presence, characterized by feelings of connectedness and proximity, in technology-mediated interactions hinders the emotional connection and nonverbal communication between the jurors or defendant and witness, resulting in differential trial outcomes (Short, Williams, & Christie, 1976). A lack of presence has been known to influence perceptions of the witness (e.g., ratings of sensitivity, social ability, warmth) and how accurate objects, events, and people appear to

be (Lombard & Ditton, 2006). There are concerns that remote testimony results in a lack of presence for the expert witness, making them seem more separated from the courtroom or the defendant's reality (Garofano, 2007). One study on asylum hearings, rather than criminal trials, found that using VC testimony resulted in a higher likelihood that refugees would be denied asylum (Walsh & Walsh, 2007), which was anecdotally attributed to the refugee defendant's lack of emotionality while testifying.

Others point to inconveniences and disruptions to otherwise efficient court proceedings as reason enough to forego remote testimony. One study reported attorneys' dissatisfaction after immigrants used VC testimony to appear in court hearings. Among cited problems with VC use was poor internet connections, difficulty translating the witness's testimony by an interpreter, and barriers to nonverbal communication (e.g., eye contact, body language; Haas, 2006).

Some research also suggests that people process visual information from videos differently than in-person, as processing video information is more visually complex (Granot, Balcetis, Feigenson, & Tyler, 2018). For example, the number of items to visually attend to within a short amount of time, variations in picture vividness, and discrepancies between the camera perspective and the perspective required to attend to particular information, can detract a person from fully or accurately attending to the information required of them. Because of these and other differences people tend to believe in the accuracy of video information more so than other types of information and are less able to discern between accurate and inaccurate interpretations of video evidence (Granot et al., 2018). Thus, it is possible that jurors, unbeknownst to them, are not scrutinizing VC testimony as closely as they would live witnesses.

No research has measured the processing of video compared to in-person information from the macro-level perspective described by Granot and colleagues (2018); two studies, however, compared video to in-person trial scenarios and their effects on trial outcomes. One study used live, color video, black-and-white video, audio, and transcript modalities to compare measures of restitution and perceptions of the expert witness (Williams et al., 1975). Results found that money awarded to plaintiffs did not differ between live, video, and transcript-only presentations and experts were perceived as equally honest and objective across all presentations. However, it was found that experts in the live presentation were rated as more competent than experts in the transcript-only presentation; no differences between live and video presentations were found, suggesting that expert testimony via VC or deposition will differ minimally from in-person testimony. However, the dated nature and particular methodology of this study is insufficient to draw firm conclusions without additional research.

Another, more recent, study found that when comparing in-person trial stimuli with video or trial transcript stimuli, experts in the transcript condition were seen as more understandable, informative, and less confusing compared to the video condition (Pezdek, Avila-Mora, & Sperry, 2009). Similarly, jurors felt the expert witness had a greater impact on a case in the transcript condition compared to the video condition. Given the discrepancy between this study and Williams et al. (1975), differences in perceptions and outcomes in trials using video information are not reliable; therefore, more evidence is needed to conclude that the mere presence of video information significantly impacts trial outcomes.

Finally, it was suggested that witnesses may be tempted to present distorted or dishonest testimony if allowed to testify remotely. Lederer (2004; 2009) speculated that a lack of physical proximity between the expert witness and the defendant may reduce the emotional connection and external cues that remind witnesses of the serious nature of courtroom testimony and to instill empathy with the defendant. Lederer suggested that these nuanced exchanges in a courtroom could contribute to a witness's ultimate decision to be truthful and uphold the oath they took upon taking the stand. This is a bold claim with large, widespread implications that has yet to be supported with empirical research (Lederer, 2004; 2009). Nevertheless, this concern was considered here for the sake of comprehensiveness.

In totality, consequences of remote testimony use range from relatively minor inconvenience (e.g., poor internet connection) to violating defendants' constitutional rights, and perjury. Although some consequences garnered more empirical support than others over the years, the possibility alone of some consequences (e.g., witness perjury) justifies research on the matter—if only to clarify which consequences are most unlikely to occur.

The Influence of Testimony Modality on Courtroom Participants and their Decisions

Beyond the concerns highlighted above, there remains uncertainty considering the influence of remote testimony on trial participants' perceptions of the witness, specifically experts, and subsequently their decision making (Khalifa, Saleem, & Stankard, 2007). Although a handful of studies have explored the impact of video testimony on participant satisfaction, trial outcomes, and perceptions of witnesses, more evidence is clearly needed before scholars can conclude that remote testimony does not

have a negative impact on jury perceptions of witnesses and trial outcomes (Lederer, 1994; 2004; 2009). Extant research related to these constructs are discussed next.

Satisfaction

Studies conducted on trial participants' satisfaction with remote testimony reported positive feedback for such practices (for review, see Khalifa, Saleem, & Stankard, 2007). Miller and colleagues (2008), who followed a custody case in which VC testimony was used, found that the judge, attorneys, and family involved in the process had positive feedback regarding VC technology and appreciated the reduction in cost associated with the expert not traveling. McDonald and colleagues (2016) likewise found that VC consultations between attorneys and their clients were rated between "okay" and "excellent," with no differences in working alliance, trust, procedural fairness, or satisfaction with representation as a result of using VC.

Trial Outcomes

Several studies have been conducted on testimony modality and trial outcomes with mixed findings. As a key example, two experiments yielded contradictory results. In one experiment, mock jurors' verdicts did not change when a child eyewitness testified in person or closed-caption television (Goodman et al., 1998), while another experiment found that the defendant was less likely to be found guilty by the jury when children testified via closed-caption television because the witness appeared to be less accurate (Orcutt et al., 2001). Another series of unpublished studies were said to reveal no differences in juror verdict when comparing in-person and video testimony by experts (Lederer, 2009).

Perceptions of Expert Witnesses

Witness Credibility. Witness credibility is a measurable component of expert witnesses and includes factors such as knowledge and trustworthiness (Cramer, Brodsky, & DeCoster, 2009). Understanding witness credibility is useful in two ways. First, it quantifies testimony performance so that feedback can be provided to witnesses. Second, it provides a framework for assessing how other trial participants perceive witnesses so the field can better understand how to improve a witnesses' performance. There is evidence that perceived expert credibility impacts trial outcomes (Cooper & Neuhaus, 2000; Cramer et al., 2009; Cramer et al., 2011), demonstrating a need to understand and, when possible, control dynamic factors that may exaggerate such effects in court proceedings. Some scholars have suggested modifying jury instruction to acknowledge such effects, or even adding rules to trial proceedings that would permit experts from the defense and prosecution to testify on factors that influence expert credibility (and therefore influence jury decision-making) in trials (Friedland, 1989), with the hope of increasing jurors' ability to fact-find in criminal trials (Ingulli, 1986).

Differences in witness credibility appear to result from differences in both static (e.g., juror gender; Brodsky et al., 2009) and dynamic factors (e.g., eye contact; Neal & Brodsky, 2008). Static or relatively unchanging factors have impacted perceptions of credibility in past research; for example, female jurors rated likeable witnesses as more credible than less likeable witnesses (Brodsky et al., 2009; see also Neal, Guadagno, Eno, & Brodsky, 2012). Dynamic factors, or those capable of manipulation or change, have also impacted perceptions of credibility. In one study, witnesses with low overall confidence (conveyed through both nonverbal and verbal cues, including interrupted

speech patterns, frequent pauses, and requests for questions to be repeated) were perceived as less credible than witnesses with high confidence (including loud, rapid speech and good posture; Cramer et al., 2011). In another study, witness poise (as measured by the Observer Witness Efficacy Scale, OWES; Cramer, DeCoster, Neal, & Brodsky, 2013) also predicted ratings of witness credibility.

Although other factors are not theoretically relevant to expert credibility (e.g., witness demeanor; Blumenthal, 1993), it is speculated that marginally relevant factors act as cues for more theoretically relevant factors (e.g., witness demeanor a cue for trustworthiness). This is expected to also be the case in trials using remote testimony and may be one mechanism through which trial-based outcomes, such as jury verdict, vary across different trials and scenarios.

Importantly, perceptions of expert credibility can also have an impact on trial outcomes, including juror verdict and sentencing decisions. For example, when witness credibility was operationalized as a plaintiff experts' credentials and whether they were paid for their testimony, credibility was partially negatively correlated with juror verdict such that higher-credentialed experts who were paid more were associated with verdicts that were less favorable to the plaintiff; whereas, when the witness was paid less, there was no difference in verdicts across credentials (Cooper & Neuhaus, 2000). In a separate study, expert credibility was found to moderate the relationship between expert confidence and death penalty recommendations (Cramer, et al., 2011; Cramer et al., 2009).

Some evidence suggests that the relationship between expert credibility and trial outcomes is better explained through mediation relationships rather than real-world

observations. In one study, expert likeability was positively correlated to expert credibility for female jurors, but ultimately unrelated to punishment (Brodsky et al., 2009). Brodsky and colleagues speculated that the relationship between expert credibility and sentencing decisions still existed, but perhaps through a facet of credibility other than likeability. The presence of remote technology in a witness's testimony provides a new point of evaluation and may act as a cue for witness likeability or expertise, resulting in differential perceptions of witnesses who use remote testimony compared to in-person testimony.

Witness Efficacy. Witness efficacy, or the extent to which an expert witness's testimony is effective, is another method of quantifying perceptions of witness testimony. Measures of witness efficacy capture the witness's ability to provide an objectively good-quality testimony. Efficacy is different from credibility in that efficacy addresses a more intuitive feeling or assumption that the witness succeeded in testifying. As an example, consider a highly educated forensic scientist who holds a high position in her lab but provides testimony that is timid, inconsistent, and lackluster; contrast her testimony to a newly hired bachelor's level forensic science intern who testifies in a manner that allows little skepticism or speculation, is confident, and compelling. The education and background of the expert are cues of credibility, whereas the presentation of the testimony are cues of efficacy.

Virtually no research on witness efficacy exists, limiting the data that hypotheses can be based on. Anecdotally, remote testimony limits the extent to which observers can evaluate components of efficacy—namely, an expert's poise (e.g., confidence, trial preparedness) and communication, especially nonverbal cues (e.g., eye contact,

posture)—as these traits are either mediated in VC testimony or entirely unavailable in telephone testimony. Thus, it is presently unclear in what ways remote testimony will affect perceptions of witness efficacy.

Present Study

To date, most of the research on remote testimony is theoretical or lacks a control group. Little research exists in which testimony modality was manipulated to allow causal relationships to be inferred and consequences measured, let alone that of expert witnesses specifically. Therefore, the primary purpose of the present study was to experimentally examine whether testimony modality leads to differences in perceptions of expert witnesses and their testimony. Although exploratory, this study also examined secondary factors that may have influenced the observed relationship, or lack thereof. Specifically, the influence of participants' perceptions of the expert's social presence was measured. Such research must be conducted to draw more accurate conclusions about the consequences of remote modalities on testimony and better justify its use for this purpose. To better understand the implications of remote testimony, the following research questions were addressed.

Research Questions

Primary

- (1) Does the mode of expert testimony delivery (i.e., in person, telephone, video conference) affect perception of the witness's credibility?
- (2) Does the mode of testimony delivery affect perception of the witness's efficacy?
- (3) Does the mode of testimony delivery affect perception of the expert witness's social presence in court?

- (4) Does the weight assigned to expert testimony evidence differ depending on the mode of testimony delivery?

Secondary

- (5) Can the relationship between testimony modality and perceptions of expert credibility and efficacy be explained by perception of social presence?

Research Hypothesis

Primary

- (1) It was expected that there would be a statistically significant between-group differences in participants' scores on the Witness Credibility Scale (WCS; Brodsky, Griffin, & Cramer, 2010) across the three modality conditions.
- a. There would be no differences in WCS scores between in-person and video testimony formats.
 - b. WCS scores would be lower for the telephone condition than both the in-person or video conference conditions.
- (2) It was expected that there would be statistically significant between-group differences in participants' scores on the Observed Witness Efficacy Scale (OWES; Cramer et al., 2013) across the three modality conditions.
- a. There would be no differences in OWES scores between in-person and video testimony formats
 - b. OWES scores would be lower for the telephone condition than both the in-person or video conference conditions

- (3) It was expected there would be statistically significant between-group differences in participants' scores on the Social Presence Scale (SPS; Perse et al., 1992) across the three modality conditions.
- a. There would be no differences in scores on the SPS between in-person and video testimony formats.
 - b. SPS scores would be lower for the telephone condition than both the in-person or video conference conditions.
- (4) It was expected that there would be statistically significant between-group differences regarding the weight participants will assign to the testimony evidence across the three modality conditions.
- a. There would be no difference in scores of assigned weight between in-person and video testimony formats.
 - b. Scores of assigned weight would be lower between the telephone testimony condition and both in-person and video testimonies.

Secondary

- (5) The relationships between testimony modality and scores on the WCS and OWES would be mediated by participants' scores on the SPS.
- a. SPS scores would be positively correlated with scores on the WCS and OWES.
 - b. SPS scores would fully mediate the relationship between testimony modality and both WCS and OWES scores.

CHAPTER II – METHOD

Sample

A nationally representative sample of jury-eligible participants was recruited from Amazon Mechanical Turk (MTurk), a crowdsourcing website used for study participation. In an effort to obtain a sample representative of the U.S.A. jury pool in terms of gender, age, race, and education, participants were asked to confirm they were over the age of 18, a U.S. citizen, fluent in English, and did not have any felony convictions. Because the MTurk participant pool, on average, consists of primarily participants who are women, well-educated, and from the U.S. (Ross, Zaldivar, Irani, & Tomlinson, 2010), a gender quota was employed to ensure an evenly distributed sample across genders. A power analysis using a power value of .80 and an alpha level of .05 indicated a minimum total of 252 participants were needed to detect effect sizes of at least $\eta^2 = 0.25$ using the planned statistical analyses. To account for potential missing or invalid data that may need to be removed, this minimum was oversampled by 5%, resulting in a final target sample of 265.

The final sample of 275 was obtained with 51.6% male ($n = 143$) with a mean age of 43.71 ($SD = 12.04$) years, and a mean education of 15.08 ($SD = 2.07$) years, equivalent to an Associate's degree. The sample was 77.8% White ($n = 214$), 8.7% Black ($n = 24$), 8.7% Asian/Pacific Islander ($n = 24$), 1.8% multiracial ($n = 5$), and 1.1% Native American/Alaska Native ($n = 3$). Approximately 9.5% of the sample identified as Hispanic or Latinx ($n = 26$). Overall, the sample was politically left-leaning, $M = 2.63$, $SD = 1.26$, on a scale of 1 (*Very liberal/left-wing*) to 7 (*Very conservative/right-wing*). Approximately 46.9% participants reported living in a suburban area ($n = 127$), 32.4%

living in an urban area ($n = 89$), and 20.0% living in a rural area ($n = 55$). About 23.6% of participants reported previously serving on a jury ($n = 65$), and 17.1% endorsed having personally experienced symptoms of a mental illness ($n = 47$). As a group, participants were generally familiar with telecommunications, $M = 3.81$ $SD = 1.02$, on a scale of 1 (*not familiar at all*) to 5 (*extremely familiar*). Participant characteristics by condition and total sample are reported in Table 1.

Measures and Materials

Prior to randomization, participants reviewed an informed consent document. Following exposure to the trial stimulus, all participants were administered the WCS, OWES, SPS, experimenter-derived questions regarding assigned weight of the testimony evidence and expert investment in providing testimony, validity checks, and a demographic form. All dependent measures are reproduced in Appendix C.

Informed Consent

Interested participants viewed an informed consent form before proceeding to the eligibility items. The form described the voluntary nature of the survey and participants' rights to withdraw consent and their participation at any time during the survey. It also described the nature and purpose of the study, as well as the minimal foreseeable risks and benefits to participation (see Appendix A). Participants provided their electronic consent by electing to proceed to the next page of the survey.

Testimony Modality Video Stimulus

In the present study, testimony modality was manipulated via a videotaped trial. The video stimulus lasted about 10 minutes and included three volunteer actors representing a judge, an attorney, and an expert witness. The video was filmed from the

vantage point of a juror in the jury box, simulating the view that a juror would have while observing a trial in person. In the in-person testimony condition, the video showed the expert sitting in the witness stand while providing testimony directly to the court. In the telephone condition, the video depicted a telephone sitting on top of the witness stand from which the expert witness was heard testifying to the court through speaker mode. Because the expert was testifying by telephone, she was not physically visible. In the VC condition, the trial video showed a screen displaying the expert's image in front of the witness stand; the expert was pictured in a neutral office setting.

The videotaped trial portrayed a portion of a mock contested competency hearing. The trial script (see Appendix B) included the testimony and cross-examination of a forensic psychology expert. The videos were filmed in an active courtroom maintained by the University of Memphis Law School Cecil C. Humphreys School of Law that had all elements of a typical courtroom: a judge's bench, witness stand, jury box, and traditional emblems (e.g., state seal, the American flag).

Volunteer actors were recruited from The University of Southern Mississippi to play the roles of the expert, judge, and attorney. All actors had experience in related areas (e.g., law, forensic psychology) to increase the authenticity of the trial video. In exchange for volunteering their time, actors received a monetary gift card of \$25.00 and refreshments for the one day needed to film the three trial portions. The same actor played the same role in every video to eliminate potential confounds of gender, race, or individual differences. To accommodate changes in research protocols during the COVID-19 pandemic, actors made voice recordings of their roles in their own homes using a microphone headset and computer with voice recording capabilities, with the

exception of the expert witness actor. Because of this, all actors except for the expert witness were not visible in the video stimulus and their speech tone, rate, and inflections remained the same across conditions. The expert witness, who is viewed in the video stimulus, made efforts to keep their speech tone and inflections the same across all three recordings.

Despite efforts to control actor characteristics, each condition had several key differences (e.g., lack of expert physical appearance in the phone condition, an alternate physical backdrop for the VC condition); however, these differences are inherent in the use of different, remote modalities, and therefore are part of the primary empirical question. As such, differences created by the modalities themselves cannot be controlled and are therefore not considered extraneous.

Witness Credibility Scale

The Witness Credibility Scale (WCS; Brodsky et al., 2010) is a 20-item scale that measures four factors (each consisting of five items) encompassing the construct of credibility: likeability, confidence, trustworthiness, and knowledge. Each item features paired adjectives and 10 points on a bipolar scale format. The full version of the measure is available in the original article describing its validation (Brodsky et al., 2010). Examples of the items include “dressed formally/informally,” “disrespectful/respectful,” and “dishonest/honest.” The measure had adequate reliability both for the total score and each factor ($\alpha = .95$ overall, and all factors $\alpha > .86$). Both internal consistency and intercorrelations between factors were acceptable across several studies, $\alpha > .80$ (as cited by Brodsky et al., 2010). The WCS has acceptable construct validity, as it was developed using several theories on source credibility (Brodsky et al., 2010). It is also correlated

with a scale derived from Shapiro's theory of credibility (1988) that measures both credibility and a lack thereof. Positive inter-item correlations ranged from $r = .12-.79$, suggesting adequate convergence. Conversely, negatively inter-item correlations ranged from $r = -.28$ to $-.61$, suggested adequate divergent validity. Of the 50 inter-item correlations, 92% of the correlations were significant to at least $p < .05$. The scale appeared to be a sufficient method of measuring credibility, as it accounted for 70% of the variance in scores among witnesses (Brodsky et al., 2010). Participants completed the full WCS scale after viewing the trial video. The measure demonstrated adequate reliability in the present study, $\alpha = .98$.

Observed Witness Efficacy Scale

The Observed Witness Efficacy Scale (OWES; Cramer et al., 2013) is an 18-item measure utilizing a 5-point Likert-type response style ranging from "not well" to "very well." Examples of the questions include "Remain calm under cross-examination," "Be comfortable on the witness stand," and "Provide more than 'yes/no' answers." Average scores are calculated for this measure. It is presumed to have acceptable construct validity, as it is essentially an adaptation of the theory-driven measure Witness Self Efficacy Scale (WSES; Cramer et al., 2010). Confirmatory factor analyses of the OWES revealed a similar two-factor structure to the WSES (Cramer et al., 2013). The two factors of the OWES are positively correlated with similar factors of the WCS; the poise factor of the OWES was positively correlated with witness confidence of the WCS and communication style of the OWES was positively correlated with trustworthiness, likeability, and knowledge of the WCS. Internal consistency for the OWES appears adequate, with factor loadings exceeding .87. There is evidence for the predictive validity

of the OWES in that factors, namely poise and communication, predict perceived witness credibility (as measured by the WCS) and juror verdict (Cramer et al., 2013). Because the original scale does not account for the possibility that some aspects of the expert witness could be unobservable (e.g., *avoid* fidgeting; Cramer et al., 2013), an “N/A or Not Observed” scale option was added to account for items that could not reasonably be assessed due to the testimony modality (e.g., assessing posture in phone testimony condition). Items endorsed as N/A were not calculated into the average score. Internal consistency in the present study was adequate, $\alpha = .88$.

Perceived Social Presence

Because no measure for perceived social presence has been validated, an approach to measuring this construct that has been in prior research (Perse et al., 1992) was used in the present study. Four questions based on social presence theory (Short, Williams, & Christie, 1976) were used to quantify the quality of telecommunications. Each asked the respondent to rate the person of interest on a 5-point Likert-type scale, with a positive attribute at one end of the scale and a negative attribute at the other. The word pairs used for each item were sociable-unsociable, warm-cold, personal-impersonal, and sensitive-insensitive. In the original study, the measure yielded an overall reliability coefficient of $\alpha = .63$, demonstrating acceptable reliability (Short et al., 1976). In the present study, internal consistency was improved, $\alpha = .86$.

Assigned Weight of Evidence

Weight assigned to testimony evidence was measured using one researcher-derived question similar to those used in previous research (Visher, 1987). Specifically, this item was: “When making decisions about a case, jurors have to decide how

important, or how heavily weighted, some evidence is compared to other evidence in the case. Considering all facts of the case, how much weight would you assign the expert's testimony, with 0% being no weight at all, and 100% being all of the weight any evidence in the case could receive."

Expert Investment

The expert's investment in providing testimony was measured using one researcher-derived item worded; "how invested do you think this expert was in providing her testimony today?" with values ranging from 1 or "highly uninvested" to 7 or "highly invested."

Measures of Individual Differences

To measure individual differences that were related to the stimulus, several single-item measures were derived. First, to measure participants' familiarity with technology, two items were used, including "how familiar would you say you are with... telecommunications (e.g., videoconferencing)?" and "how familiar would you say you are with...social media (e.g., Facebook, Twitter)?" Values ranged from 1 "not familiar at all" to 5 "extremely familiar." Second, to quantify past experiences related to the experimental stimulus, two items were included: "have you ever served on a jury?" and "have you ever had experience with symptoms of a mental illness and/or a mental health diagnosis?" Both items had binary no/yes response options. Last, a single item was added to measure individual differences related to attraction to the expert: "How attractive did you find the expert witness?" with responses ranging from 1 "highly unattractive" to 5 "highly attractive."

Standard Demographic Form

To measure the demographic compilation of the sample and account for individual differences in some analyses, a de-identified demographic form was administered at the end of the survey, addressing group characteristics (e.g., age, education, political orientation).

Validity and Manipulation Checks

To ensure successful manipulation and participant attention, one true/false manipulation check (i.e., “was technology used by the expert to deliver their testimony?”) and two attention checks (e.g., “Please select the number 2”) were embedded within all survey conditions.

Procedure

Participant Recruitment

A brief description of the study, eligibility criteria, and opportunities for compensation was posted to MTurk’s website. Those interested clicked a link provided within the MTurk solicitation and were redirected to the Qualtrics survey where they read a full informed consent page. Participants were also informed that they need to have audio capabilities on their computer. Participants who elected to continue with the survey provided their electronic consent. Prior to beginning the study, consenting participants verified their age, citizenship, and felony status to ensure eligibility. Participants who did not meet eligibility criteria were directed to the end of the survey and were not compensated. Additional measures available through MTurk and Qualtrics, such as setting quotas for number of participants from each gender by condition, were taken to ensure data quality and random sampling.

Study Procedure

Participants were randomly assigned to only one of the three trial conditions and were instructed to watch the corresponding trial video. A setting was enabled in Qualtrics so that participants could not proceed to the survey questions until the approximate time of the video elapsed. This precaution increased the likelihood that participants would actually view and attend to the video. To reduce frustration, participants were informed that they were not able to proceed until the timer elapsed. After the video, participants completed the assessment battery in which they answered questions about their attention to the video, perceptions of witness credibility and efficacy, perceptions of the witness's presence, how much they weighted the testimony content, and a series of demographic questions. All measures were counterbalanced within each condition to reduce order effects, with the demographic questionnaire always appearing last. Participants were compensated \$2.40 for the estimated 20 minutes it took to watch the testimony video and complete the questionnaires. This compensation rate was based on the federal minimum wage of \$7.25 per hour and is the newly recommended standard for MTurk workers participating in research studies (Hara et al., 2017). Participants had to complete the majority of the study (at least 90%) to earn full compensation.

Planned Statistical Analysis

Preliminary Analyses

Prior to testing the primary hypotheses, data was first checked for accuracy, missingness, and that all relevant statistical assumptions were met. Participants who failed the manipulation check and at least one attention check and/or who did not complete at least 90% of the study, were excluded from analyses. A missing data analysis

was conducted to ensure data was missing at random. Assumptions for normality were tested on all outcome variables to ensure distributions match a normal curve and were within normal levels of skewness and kurtosis using the standards of West and colleagues (1996). Internal consistency analyses were conducted on all outcome variables to ensure items within the same scale measured the same construct. Significance testing was conducted using an alpha level of $p = .01$. In cases where a null finding was hypothesized, two criteria were used to together demonstrate significance and reduce the likelihood of making a Type I error, (1) an alpha level of $p > .10$ and (2) an effect size of $d < .20$ or partial $\eta^2 < .01$ (for example, see Batastini & Morgan, 2016).

Primary Analyses

To test the hypothesis that testimony modality impacted perceptions of the expert's credibility and efficacy, a contrasted multivariate analysis of variance (MANOVA) was conducted, with testimony modality as the independent variable and total scores on the WCS (Hypothesis 1), OWES (Hypothesis 2), SPS (Hypothesis 3), and weight assigned (Hypothesis 4) as dependent variables. For the contrast analysis, the telephone condition was coded as -2 and both the in-person and videoconference conditions were coded as +1. Post-hoc univariate analyses using Bonferroni correction were used to determine univariate differences among specific conditions. Measures of effect size are reported along with test statistics and alpha values.

Secondary Analyses

To test the secondary hypotheses that the relationship between testimony modality and WCS and OWES scores was mediated by SPS scores (Hypothesis 5), a path analysis was conducted. Testimony modality was entered as the exogenous variable, WCS and

OWES scores as endogenous variables, and SPS as the mediating variable (see Appendix D).

CHAPTER III – RESULTS

Data Cleaning and Assumptions

A total of 448 men and women initiated study participation. Four respondents did not consent to participation, 74 respondents did not meet criteria for jury eligibility, 111 participants left the study prematurely, and five participants failed at least two of the three attention/manipulation checks. The final sample of 275 was analyzed to ensure that dependent measures fell within appropriate ranges. There was no missing data for the dependent variables of interest. The interquartile range rule was used to determine outliers in the dependent variables; extreme low-lying scores were identified and removed in the weight assigned to expert opinion, $n = 13$, WCS scores, $n = 15$, and OWES scores, $n = 7$, for an end sample of $N = 245$. Regarding skewness and kurtosis, all variables fell within the acceptable range (see Appendix E: Table 2 for values). All dependent variables were appropriately correlated, with Pearson's correlations ranging from $r = .23$ to $.62$.

Preliminary Analyses

To test the effectiveness of random assignment to testimony conditions, several analyses were conducted. First, chi-square analyses were conducted with testimony modality as the independent variable and gender, race, jury service, and experience with a mental illness as dependent variables. All relationships were nonsignificant, with p -values ranging from $p = .27$ to $.51$. Second, several ANOVAs were conducted with testimony modality as the independent variable and participant age, education, political orientation, and familiarity with telecommunications as dependent variables. All relationships were nonsignificant, with p -values ranging from $p = .58$ to $p = .99$, with one

exception. The relationship between testimony modality and political orientation was significant, $F(2, 271) = 3.23, p = .04$ partial $\eta^2 = .02$. Bonferonni post-hoc analyses indicated lower scores in the VC condition, $M = 2.42$, compared to the in-person condition, $M = 2.88$, indicating that those in the VC condition were significantly more “left-leaning” politically. To ensure this difference between conditions did not influence the way participants rated perceptions of the expert witness, regression analyses were conducted with political orientation as the independent variable and WCS scores, OWES scores, SPS scores, and weight assigned as dependent variables. All regression analyses were nonsignificant, with p -values ranging from $p = .25$ to $.50$. As a result, no modifications to the data analysis strategy were made.

Primary Analyses

To test Hypotheses 1, 2, 3, and 4, a contrasted one-way MANOVA was conducted. The omnibus test was nonsignificant, Pillai’s Trace: 0.03, $F(8, 540) = 0.90, p = .54$, partial- $\eta^2 = .01$, indicating no significant differences between the in-person or VC testimony conditions and the phone condition. Therefore, no post-hoc analyses were interpreted. Results partially supported our primary hypothesis that the expert and the evidence (i.e., the forensic opinion) presented during testimony would be perceived similarly when the expert appeared in-court and in video. However, use of the phone to deliver testimony did not lead to differential attitudes toward the expert. Of note, the majority of group averages on dependent measures across all three conditions fell above the respective scale mid-point, suggesting overall positive attitudes toward the expert witness and testimony evidence. Mean scores for the overall sample and by condition are reported in Table 3.

Secondary Analyses

There was no significant relationship between testimony condition and all outcome variables. Because of this Hypothesis 5 was not tested given its contingency on the existence of a relationship.

Exploratory Analyses

Participant Gender

A two-way MANOVA with both testimony modality and participant gender as independent variables revealed that there were no main effects of either testimony modality, $F(8, 534) = 0.91, p = .51$, partial $\eta^2 = .01$, or participant gender, $F(4, 266) = 1.31, p = .27$, partial $\eta^2 = .02$. Additionally, there was no interaction between the two variables, $F(8, 534) = .95, p = .48$, partial $\eta^2 = .02$. In short, the relationship, or lack thereof, between testimony modality and relevant outcome variables did not change based on participant gender.

Expert Investment in Testimony

A one-way ANOVA indicated that testimony modality did not significantly impact ratings of the expert's investment in providing testimony, $F(2, 272) = 0.19, p = .83$, partial $\eta^2 = .001$. A series of linear regression analyses revealed that ratings of expert investment significantly predicted WCS scores, $\beta = .37, r^2 = .14, p < .001$, OWES scores, $\beta = .23, r^2 = .05, p < .001$, SPS scores, $\beta = .31, r^2 = .10, p < .001$, and weight assigned to expert's opinion, $\beta = .36, r^2 = .13, p < .001$. In other words, regardless of testimony modality, participants who perceived the expert as more invested in providing testimony were more likely to also perceive the expert as more credible, efficacious, and socially present, giving more weight to the forensic opinion.

Expert Attractiveness

A one-way ANOVA revealed that ratings of expert attractiveness significantly varied by testimony modality, $F(2, 272) = 47.06, p < .001$, partial $\eta^2 = .26$, with lower ratings of attractiveness in the phone condition, $M = 3.19$, compared to both the in-person, $M = 4.00$, [95% CI: -1.03, -0.58], and VC conditions, $M = 3.98$, [95% CI: -1.01, -.56]. Using a one-way MANCOVA, with ratings of expert attractiveness held constant, the relationship between testimony modality and the primary outcome variables remained nonsignificant, Pillai's Trace: .04, $F(4, 538) = 1.22, p = .29$, partial $\eta^2 = .02$. A series of linear regression analyses showed that expert attractiveness significantly predicted WCS scores, $\beta = .18, r^2 = .03, p = .003$, and weight assigned to the expert's opinion, $\beta = .20, r^2 = .04, p = .001$, but not OWES scores, $\beta = .07, r^2 = .01, p = .25$, or SPS scores, $\beta = .12, r^2 = .01, p = .05$. Thus, participants across conditions who rated the expert as more attractive were more likely find her more credible and assign more weight to her opinion.

Agreement with Competency Decision

A chi-square analysis was conducted to determine if testimony modality impacted participants' agreement with the expert's opinion that the defendant was competent to proceed. There was not a significant difference in decisions of competency based on testimony modality, $\chi^2 = .05, p = .98$. Across all conditions, the majority of participants agreed with the expert (89.69%, 88.89%, and 89.77% selected "competent" for in-person, VC, and phone conditions, respectively). Thus, it appears most participants went along with the expert's forensic opinion irrespective of extraneous factors like the use of remote testimony. All percentages are reported in Table 1.

An additional binary logistic regression was conducted with perceived SPS total scores as the predictor and competency decision as the outcome. The relationship was significant in that increases in SPS scores resulted in a higher likelihood participants would agree with the expert and rate the defendant as competent, $-2LL = 178.91$, $\beta = .16$, Wald statistic = 6.21, Cox & Snell $R^2 = .02$, $p = .01$. Based on these findings, social presence seems to have more bearing on participants' level of agreement than testimony modality.

Familiarity with Telecommunications

A moderation SEM model was tested, with testimony condition as the exogenous variable, familiarity with telecommunications as the moderating variable, and WCS scores, OWES scores, and weight assigned to expert opinion as endogenous variables. A separate model was tested for each endogenous variable. Results indicated that participants' increased familiarity with telecommunications predicted increases in WCS scores, $\beta = .20$, $p = .005$, but not increases in OWES scores, $\beta = .06$, $p = .42$, or weight assigned to forensic opinion, $\beta = .07$, $p = .36$. The interaction between familiarity with telecommunications and testimony condition did not significantly predict WCS scores, $\beta = -.11$, $p = .14$, OWES scores, $\beta = -.03$, $p = .72$, or weight assigned to forensic opinion, $\beta = -.06$, $p = .41$. Therefore, participants' subjective familiarity with telecommunications did not moderate the relationship between testimony modality and expert credibility, efficacy, or the weight assigned to expert opinion.

CHAPTER IV – DISCUSSION

With greater acceptability in courts, remote technologies have provided an efficient and low-cost way for experts to deliver testimony. This practice offers solutions to common barriers for courts and defendants, including more affordable access to expert testimony for underprivileged defendants and rural jurisdictions as well as reducing public health risk amid the COVID-19 pandemic. Unfortunately, research to date has been unclear about the influences of remote testimony compared to traditional testimony on factfinders and legal outcomes. Previous studies used vignettes describing the use of remote testimony or written transcripts of legal proceedings that, while useful, may be less believable or lack external validity compared to a more ecologically valid stimulus. In the context of one of the most common types of psycho-legal referrals, the current study manipulated the modality of an expert’s testimony to measure changes in perceptions of credibility and efficacy, as well as the amount of weight assigned to the expert’s opinion. Social presence of the expert and other relevant variables also were examined to determine their influence on these relationships.

Overall, a priori hypotheses were partially supported. As expected, there were no differences in participants’ perceptions of the expert or her opinion between the in-person and video conditions. However, perceptions were not less favorable in the phone condition. Importantly, participants had the opportunity to rate a trait on the OWES as “not observable,” leading to fewer characteristics of efficacy being endorsed in the phone condition. To better accommodate situations in which testimony modality may obstruct or eliminate some aspects of an expert’s presentation or behaviors, the OWES may need to be modified to include technology-specific items (e.g., “the expert appeared engaged

even through a video monitor”) or offer a response option when certain traits cannot be fully observed due to the use of technology (e.g., “N/A: the technology prevented me from being able to observe this behavior”). Modifications made to the OWES should also include recommendations on how to score N/A or unobservable items, as well as normative data on how other remote experts are rated compared to in-person experts. Secondary analyses further revealed that testimony modality did not ultimately impact participants’ ultimate legal decision, such that an overwhelming majority agreed with the expert regardless of how she testified.

Differential perceptions of the expert may still occur in the real world, but not detected in this study. It is possible that a social contract may exist between in-person court participants and expert witnesses that all responsible parties attend proceedings in person. Consider jurors who must make extensive arrangements to fulfill obligations of jury duty, such as taking unpaid leave from work, finding childcare, and paying for transportation—the sense of an implicit agreement that others would also go to similar lengths to attend in person. Experts who seem to violate this social contract may be perceived less favorably and differences in legal outcomes may arise. Participants in the present study may not have felt a social contract was present, as they completed the survey online and the expert witness was depicted in a pre-recorded hearing—this arrangement did not require either participant or expert to be physically present in the courtroom. This may have encouraged more empathic, favorable perceptions of the expert.

Results also did not support the role of social presence theory in explaining relationships among testimony modality and participants’ perceptions across outcomes of

interest. While social presence was not a compelling determinant of perceptions as a byproduct of remote technology systems, analyses showed that more social presence predicted higher perceptions of expert credibility, efficacy, more weight assigned to the expert's opinion, and greater agreement with the expert's opinion regarding defendant competency. The influence of social presence on weight participants assigned to the expert's opinion and their agreement with the forensic opinion is of particular interest as these outcomes are more directly related to the ultimate legal decision. Jurists who assign less weight to the expert's opinion simply on the basis of lower social presence may be discounting accurate information that is integral to the psycho-legal question at hand, leading to unjust outcomes for defendants. Taken together, social presence may be an especially important factor for ensuring an expert's opinion is valued in court—one that is not necessarily depreciated by the use of technology.

Results further suggest that perceptions of expert investment and attractiveness, while minimally related to testimony modality, were associated with other testimony-specific traits of the expert and how much weight participants would give to the expert's opinion. Regarding investment, it would not be unreasonable for people to assume that an expert who appears invested in providing quality testimony is, in fact, providing quality testimony (both in terms of what is being said and how it is being delivered). From this, it seems that the opinions of invested experts are subsequently weighted more heavily than those less invested. However, it is unclear which specific expert characteristics embody increased investment in testimony and to what extent this may simply be another facet of witness efficacy. As would be expected, mean expert attractiveness ratings were lower when the expert testified via phone, likely because it is rather difficult to judge

someone's physical attraction by the sound of their voice. However, attractiveness did not significantly interact with testimony modality to influence credibility, efficacy, or weight assigned to the opinion. Yet, the finding that attractiveness independently predicted credibility and evidence weight is consistent with research as early as the 1980's (Patzner, 1983) linking attraction to source credibility. While not a primary aim, this study advances the need to develop techniques for mitigating the extraneous influence of attractiveness on legal proceedings.

Based on prior evidence that familiarity with a phenomenon often reduces concerns or biases, including studies on the use of videoconferencing and other digital technologies in forensic mental health assessments (Batastini et al., 2019; Batastini et al., 2021), it was relevant to explore whether participants' self-reported familiarity with telecommunication systems may have contributed to observed relationships, particularly within the VC and phone conditions. Contrary to extant research, familiarity did not moderate the relationship between any of the primary outcomes and testimony modality. Unexpectedly, participants who were more familiar with telecommunications rated the expert as more credible across all condition (even in-person), but ratings of efficacy and evidence weight were unaffected. Thus, prior use or exposure to technology-based communication methods by triers of fact may not be a particularly important consideration when testifying remotely. In total, additional research is needed to explore how extra-legal expert and courtroom variables, as well as participant characteristics, are relevant to remote testimony, and what impact they may have on legal decisions and perceptions of the expert not considered here.

Recommendations for Forensic Practitioners and Legal Personnel

The results of the present study offer some assurance in maintaining current practices as they relate to the admissibility and use of remote testimony, including phone and two-way video, as well as offering additional considerations that may be needed in future cases involving experts who are not physically in the courtroom. First, while the decision to use remote testimony remains with the presiding judge, results of this study indicate that psychological experts can use remote testimony and expect their credibility and effectiveness on the stand to remain largely intact, with minimal risk that the method of testimony will influence ultimate legal decisions. Thus, given the dual benefits of potential cost-savings (to the defendant or the court) and greater accessibility of experts, it is recommended that remote testimony be a first-choice consideration. In fact, choosing to use remote technologies may be more closely aligned with the APA General Principle of Justice (APA, 2017), particularly for rural or poorer defendants, in some cases. That is, remote testimony may help level the playing field. However, as more research is still needed, remote testimony may not be desirable in higher-stakes legal cases (e.g., high-profile or highly publicized trials, competency for execution hearings). Additionally, Luxton and colleagues (2014) outlined several circumstances in which using remote technology may be contraindicated in the context of forensic evaluations—these same guidelines may be applicable to remote testimony as well. For example, when one party (e.g., the presiding judge, an attorney) is less accepting of remote technologies, testifying remotely may be met with more skepticism; or, communities that are generally older or of a lower socioeconomic status may have more difficulty reading social cues and interpreting nonverbal communication of an expert testifying remotely.

Second, even though familiarity with technology did not have a significant impact in the present study, it remains possible that familiarity impacts other legal perceptions or outcomes not considered here, such as attitudes toward defendants who present for trial remotely or scientific evidence involving technology, such as risk predictions via machine-learning. As a precaution, it may be wise for attorneys and trial consultants to assess potential jurors for familiarity with technology during the *voir dire* process. It would be wise to consider asking the jury pool forthright questions about familiarity with technology and their ability to be fair in cases with remote testimony (e.g., “How familiar are you with remote communication methods, such as videoconferencing software or conference calls?”, “Do you think your comfort level with these technologies could change the way you view professionals who use them?” and “An expert in this case will be testifying with videoconferencing software, like Zoom. Do you believe you can view their testimony objectively and make fair decisions in the case even though they are not physically in the room?”). Attorneys whose retained expert is testifying remotely may consider removing participants less familiar with telecommunications (e.g., conference calls, Zoom videoconferencing software) from the juror pool to avoid differential trial decisions based on any preconceived attitudes. Additionally, as a means of safeguarding against any potential negative attitudes toward experts testifying remotely, retaining attorneys may build in questions about the acceptability and influences of remote testimony, as well as the expert’s investment in providing high-quality testimony, into the direct examination of forensic psychological experts. For example: “Is it typical for psychological experts such as yourself to testify remotely?” and “does the fact that you are testifying remotely change your testimony today or your opinion regarding the

defendant?” Experts may also educate the retaining party about research on remote testimony and encourage them to include such questions to ensure the expert has a chance to settle any doubts concerning their professionalism or preparedness, in turn, reducing the likelihood that remote testimony will result in differential trial outcomes.

Finally, present findings suggested that experts are perceived as more credible and efficacious, with more weight assigned to their opinions, when they are perceived as more attractive and more sociable, warm, and sensitive on the witness stand. While the influence of attractiveness has been shown for men and women professionals (Hahn & Cummins, 2017), the attributes of social presence are traditionally characterized as feminine traits and may be preferred in a woman expert. It is unknown whether the social presence as measured in this study would be similarly associated with favorable perceptions of a male expert. Research on male professionals with characteristics counter to a male stereotype (e.g., a man with effeminate hand gestures or manner of dress) is generally lacking. Until additional research provides clarity on this matter, experts should aim to present as relatable (e.g., avoiding jargon and making humble statements when appropriate, as suggested by Brodsky et al., 2009), but remain cognizant about their level of warmth and sociability.

Study Limitations and Directions for Future Research

On the surface, arguably the most significant limitation was the use of a video format to create all stimulus conditions. In other words, it could be argued that the in-person condition was not truly an in-person condition. This argument certainly has some merit. This methodology was selected for several reasons: (1) given the ongoing COVID-19 pandemic, it was a violation of health recommendations to recruit participants for in-

person data collection, (2) beyond pandemic-related restrictions, it would be impractical to re-create a live-action mock trial enough times to obtain the number of participants needed for this study without introducing extraneous variables (e.g., changes in actor presentation style, differences in participant visibility/proximity to the expert), and (3) video stimuli are commonly used when in-person trials are not feasible (see Neal & Brodsky, 2008 for an example). Given the relative novelty of this study, we believe the use of tighter experimental controls via videotaped mock hearings was a strength. Further, in the in-person condition, the expert was clearly positioned in the courtroom witness box and the camera was intentionally positioned at a distance similar to where other courtroom participants may be located; thus, there is little reason to expect participants would have been keen to any additionally relevant behavioral data had they been sitting in the courtroom in place of the camera lens.

Nonetheless, there are other limitations worth highlighting.

First, this study examines perceptions of participants in the context of a contested competency hearing, which are typically heard and decided by a judge. Because judge samples are difficult to access, layperson samples are the preferred sample of convenience (Bornstein & Breene, 2011). One literature review demonstrated that the majority of research examining psychological expert witnesses and legal decision-making used samples of “mock jurors” and even asked questions related to psycholegal decisions (i.e., decisions of competency) as well as verdict (van Es et al., 2020). Research comparing layperson and judge samples have found that in many cases, they have similar perceptions and make decisions in similar ways. For example, Weinberg and colleagues (2019) found that both laypeople and judges considered the costs associated with granting

a workplace accommodation request. Even still, additional research is needed to determine if judges would rate experts similarly to a nationally representative group of participants who do not have experience deciding legal issues. Judicial exposure to expert testimony may also minimize any negative perceptions. As gatekeepers of evidence submitted to court, studies looking at attorney perceptions would also be useful.

Second, the gender presentation of the expert in the present study was that of a woman. While no other actors were visible in the video, their voices likely offered cues as to their own gender presentation. Given that expert gender has influenced perceptions of the expert and legal decisions in the past (Neal & Brodsky, 2008), gender biases may have been present in the present study. Additional studies that manipulate gender presentations and/or gender-congruent behaviors (e.g., an expert man who presents as exceptionally sociable and warm; an expert woman as unsociable and cold) and measure individual traits, like sexist attitudes or socially conservative ideas, could provide further evidence about the presence of a gender effect.

Third, the present study does not inform cases in which the expert is a person of color and how they may be perceived. For example, Black experts who testify remotely may have the added disadvantage of being subjected to racial stereotypes, specifically that Black men and women are “lazy” and “lack discipline” (Peffley et al., 1997). While the White expert in the present study was perceived similarly when testifying both in-person and remotely, Black experts may be perceived less favorably when testifying remotely compared to in-person as it may confirm participants’ stereotyped expectations. This necessitates further research both manipulating race and measuring for related outcomes, such as racist attitudes and perceived social distance.

Fourth,, this study included the opinion of only one expert. In psycho-legal cases, particularly those that come before the court, there are likely to be expert witnesses for both the defense and prosecution. In fact, it has been recommended that more than one forensic psychological expert be employed in legal proceedings (Larrick, 2004). Thus, the present study may lack some generalizability to real-world court proceedings in which there is an expert with an opposing opinion. Future research should consider varying the direction of the expert's opinion (e.g., competent vs. incompetent) and the modality of testimony by opposing experts (e.g., having one side testify remotely and the other side testify in-court). Lastly, participants were not told why the expert testified remotely. It is possible that, without a reasonable explanation, some participants may make assumptions; for example, that the expert testified remotely due to lack of investment in the case. This may be a more salient concern if one expert was able to present to court for testimony and the other was not.

Future research should not only aim to address the limitations of the present study, but it should also explore the impact of remote testimony on perceptions of different types of experts (e.g., forensic science experts) and in the context of other types of psycho-legal court proceedings (e.g., criminal responsibility, child custody hearings, personal injury cases, immigration hearings). Further, research should explore other perceptions or attitudes not considered in the present study, as well as participant- (e.g., experience with videoconferencing software specifically in the workplace, cultural background), defendant- (e.g., race/ethnicity, offense type), or expert-related (e.g., gender, posture) variables that may influence perceptions of forensic professionals who rely on remote testimony. For example, it is possible that an online sample held overall

positive attitudes toward the use of technology for accomplishing traditionally in-person tasks, such as work and court proceedings, and that these attitudes were more positive than the typical juror or judge. Future research would need to explore attitudes toward technology more directly.

Conclusions

This study is the first to empirically test whether remote testimony negatively impacts perceptions of forensic psychological expert witnesses compared to in-court testimony. Taken together, findings provide support for the continued use of remote telecommunications by expert witnesses, particularly at a time when the benefits of testifying remotely transcend costs-savings and increased access for underprivileged populations. The admissibility of virtual testimony also serves the greater public by reducing pre-existing wait times associated with forensic evaluations and court proceedings (e.g., competency evaluations; Thomas et al., 2009) as well as pandemic-related concerns for both local and more distant experts. However, we urge additional research on other factors (e.g., reasons for using remote testimony, audio-video quality, camera angle or backdrops, defendant characteristics) that may mediate technology-associated perceptions and whether perceptions of remote testimony or the experts who use it actually translate to decisions that differentially impact defendant trajectories within the legal system.

APPENDIX A – INFORMED CONSENT

The following information pertains to your participation in this study:

As indicated on the MTurk recruitment page, this study is for people who are United States citizens, speak fluent English, and do not have any felony charges. If you do not meet ALL of these qualifications, you will be disqualified from participation.

Purpose:

Thank you for your interest in this study! Our hope is to learn more about how potential jurors perceive expert testimony.

Description of Study:

You will be asked to watch courtroom testimony by an expert witness and answer several questions about your perceptions of the expert witness. You will also be asked basic demographic questions, such as your age and gender. None of these questions will ask you for personally identifying information. Your participation is expected to take approximately 10 minutes or less.

Benefits:

Upon completion of the study, you will receive monetary compensation as set by Amazon Mechanical Turk for a study of this length.

Risks:

There are no anticipated adverse effects of your participation beyond those associated with everyday life (e.g., fatigue).

Confidentiality:

No identifying information will be asked of you or connected to your responses on this survey.

Participant's Assurance:

This project has been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Chair of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to the Principal Investigator, Ashley Jones, M.S., at ac.jones@usm.edu.

By clicking "Take me to my survey!" you are consenting to participate in this study and asserting that you are 18 years of age or older, a current U.S. citizen, and have not been convicted of a felony. To exit now, please select "I changed my mind." Even if you decide to continue, you may exit at any time during the survey. However, if you elect to withdraw, you will not be compensated for time spent participating.

Screener Questions:

1. Which gender best describes you? While we understand these options may not fully capture the gender you identify with. You will have an opportunity to better describe your gender later.
 - a. Man
 - b. Woman
2. Are you over the age of 18?
 - a. No
 - b. Yes
3. Are you a United States citizen?
 - a. No
 - b. Yes
4. Are you fluent in English?
 - a. No
 - b. Yes
5. Have you been convicted of any felony charges?
 - a. No
 - b. Yes

APPENDIX B TRIAL SCRIPT

The following document is formatted as a script; bracketed information is not spoken lines but stage directions.

Defense Attorney: Your Honor, I have reviewed Dr. Rice's evaluation. I have spoken with my client before today's hearing and, at this point, I do have to disagree with the conclusion. I think the Court will see that Mr. Wood is not able to proceed.

Judge: For the record, the Court will find that Dr. Lillian Rice is a licensed Psychologist and I will allow her to give opinions within that profession. Dr. Rice, if you'll please come forward. [The Judge raises his right hand to demonstrate what he wishes Dr. Rice to do to take the oath.] Please raise your right hand. Do you solemnly swear and affirm under penalty of perjury that the testimony you're about to give is the truth, the whole truth and nothing but the truth?

Psychologist: I do.

Prosecutor: Dr. Rice, you have before you what's been marked as State's Exhibit 1, a forensic competency evaluation dated October 20, 2019. Is that the forensic evaluation that you completed?

Psychologist: Yes, it is.

Prosecutor: Before you prepared the evaluation, did you review any collateral sources?

Psychologist: Yes, I reviewed all the police reports and investigative reports related to this incident.

Prosecutor: Were there any other collateral sources of information?

Psychologist: Yes, I also talked to Mr. Wood' father, Mr. Roger Wood, over the phone.

Prosecutor: You did come up with a mental health diagnosis for Mr. Wood, didn't you?

Psychologist: Yes, I did.

Prosecutor: Now is that Psychotic Disorder Not Otherwise Specified?

Psychologist: Yes, sir.

Prosecutor: Is it possible for a person suffering from Psychotic Disorder Not Otherwise Specified nevertheless to be capable of assisting rationally in their defense and also able to understand the proceedings?

Psychologist: Yes, sir.

Prosecutor: As a matter of fact, it's your opinion expressed in this evaluation that Mr. Wood, himself, is capable of assisting counsel and capable of understanding the proceedings?

Psychologist: That's correct.

Prosecutor: Did you say anything to Mr. Wood at the beginning of the 70-minute interview?

Psychologist: Yes, I told him that this interview was being done in response to a Court order; that the report would be sent to the Judge, with copies to the District Attorney's Office, as well as the Defense Attorney; and that nothing he said in the interview is confidential and anything could be brought out in Court.

Prosecutor: Did it appear to you that he understood what you were telling him?

Psychologist: Yes, I asked him specific questions about it and he was able to respond.

Prosecutor: Was he able to restate the information that you gave him?

Psychologist: Yes, sir.

Prosecutor: Did he indicate whether he was willing to continue with the interview?

Psychologist: Yes, he said he was.

Prosecutor: Is there any significance to the fact that he was able to restate the information and then give you a response about whether he wanted to proceed?

Psychologist: It showed me that he was able to attend to what I was saying; he was able to take in that information, and then repeat it in a very logical fashion.

Prosecutor: Did Mr. Wood tell you anything about whether he had used marijuana?

Psychologist: Yes, he did – he said he used it sporadically.

Prosecutor: Did he state anything about consuming alcohol when you talked to him?

Psychologist: He had some use; it wasn't extensive.

Prosecutor: Is there anything about his ability to recall past information that entered into forming your opinion?

Psychologist: No, I thought he was a fairly good historian. Much of what he told me matched up with what his father told me about his history.

Prosecutor: Did that have any effect on your opinion about his ability to work with counsel?

Psychologist: No, I thought he should have a good ability to work with counsel – he was able to respond to my questions pretty easily, provide information.

Prosecutor: Did he tell you anything about whether he would be willing to take medication for his issues?

Psychologist: We didn't get extensively into that – he did not seem to be interested in medication. He very much believes in natural remedies and did not want to take any artificial medications.

Prosecutor: Did he tell you anything about medications being bad for his body?

Psychologist: Yes.

Prosecutor: Did his ability to assess whether or not to take medication have any impact on your opinion about his ability to work with counsel?

Psychologist: No.

Prosecutor: What is it that led to your opinion that Mr. Wood has the capacity to understand the nature of the criminal charges against him?

Psychologist: I was able to ask Mr. Wood about what the charges were. He was able to state them correctly. He was able to tell me what he thought the police alleged that he did. He was able to tell me what the consequences of those charges could potentially be. He was able to tell me different defense strategies that he might pursue with his attorney. He was able to talk to me very logically, seemed to be able to weigh the pros and cons of different strategies.

Prosecutor: And did you include your opinion about his ability to assist counsel?

Psychologist: Yes, sir. Just as Mr. Wood was able to talk to me, I assumed he could also talk to his attorney. The fact that we didn't have any difficulties communicating I thought the same could occur with his attorney.

Prosecutor: Thank you. I have nothing further.

Defense Attorney: I'm going to ask you a few questions. So, Dr. Rice, how long ago did you speak with my client?

Psychologist: Ten days ago.

Defense Attorney: At that time you had scanned other information upon which to rely, is that correct?

Psychologist: Correct.

Defense Attorney: Is it true that the jail psychiatric services had not yet spoken with Mr. Wood?

Psychologist: That's correct.

Defense Attorney: And, in terms of information from the community, I think you mentioned that you had very little information?

Psychologist: I talked with his father, and then I had a little bit of information from the Community Health Center.

Defense Attorney: So based on the information that you had, based on your interview with him, you did not see signs that this gentleman would not be able to proceed with trial?

Psychologist: Correct. I did see some signs of hyper-religious thoughts, but they did not seem to interfere with his ability to work with you or to understand the Court processes.

Defense Attorney: And, Doctor, if knowing what you do about hyper-religious thoughts –

Psychologist: Mm hmm.

Defense Attorney: – and the possibility of emerging mental illnesses in young people, is it possible that he might present differently today than he did that day?

Psychologist: It is always possible.

Defense Attorney: And did you hear Mr. Wood's earlier response to the judge's inquiry of his ability to focus? If I may quote Mr. Wood: "I can't place anybody above my Lord. He talks to me – even now. And I am listening – always. He's above all."

Psychologist: I did hear what was said.

Defense Attorney: Your Honor, my client has authorized me today to tell the Court my opinion about whether he is able to proceed and to elucidate for the Court my feeling that he is not. He is doing the best he can today—but I think we all see that his presentation is different from what the witness observed. I have no further questions, Your Honor.

Prosecutor: Dr. Rice, were you able to determine whether – given what you saw here – your opinion, as expressed in your evaluation of Mr. Wood, has changed?

Psychologist: Slightly. I still think that Mr. Wood understands the role of the participants and the Court. I do think he understands the adversarial nature of the proceeding. I do think he's able to communicate with his attorney. What I saw differently is that – a little bit more religious thought – I think possibly some of the stressors of the courtroom and sitting this long brings out that religiosity a little bit more. It also seems that the internal stimuli he sometimes experiences—the hallucinations he sometimes hears—may be more prominent also, probably because of stress too.

Prosecutor: Has your opinion about his ability to proceed changed?

Psychologist: Ultimately that's the decision of the Court. I'm just telling you what skills I think he has or does not have.

Prosecutor: Has your opinion about his ability to work with his attorney changed as a result of what you've seen?

Psychologist: I think he, I still think he can work with his attorney; however, I think long periods of time would not be the optimal way for him to work with his attorney. I think his attorney would have to work with him in building the defense in short sessions because longer sessions become stressful for Mr. Wood.

Prosecutor: Thank you. Nothing further, Your Honor.

Judge: Dr. Rice—thank you for your testimony here today. You are excused.

Psychologist: Thank you, Your Honor. [Dr. Rice leaves the witness box].

APPENDIX C MEASURES

Witness Credibility Scale (WCS; Brodsky, Griffin & Cramer, 2010)

Please rate the witness on the following qualities to the best of your ability.

1. Unfriendly (1) to friendly (10)
2. Disrespectful (1) to respectful (10)
3. Unkind (1) to kind (10)
4. Ill-mannered (1) to well-mannered (10)
5. Unpleasant (1) to pleasant (10)
6. Untrustworthy (1) to trustworthy (10)
7. Untruthful (1) to truthful (10)
8. Dishonest (1) to honest (10)
9. Unreliable (1) to reliable (10)
10. Not confident (1) to confident (10)
11. Not self-assured (1) to self-assured (10)
12. Uninformed (1) to informed (10)
13. Illogical (1) to logical (10)
14. Uneducated (1) to educated (10)
15. Unwise (1) to wise (10)
16. Unscientific (1) to scientific (10)

Observer Witness Efficacy Scale (OWES; Cramer et al., 2013)

Please rate the degree to which you feel the witness did the following things when called to testify on the witness stand on a scale from 1 = Not well to 5 = Very well.

1. Remain calm under cross-examination
2. Control her emotions when questioned by an aggressive attorney
3. Maintain a stable tone of voice when speaking
4. Avoid fidgeting*
5. Maintain a good posture throughout the testimony*
6. Be comfortable on the witness stand
7. Remain poised when being questioned by an attorney
8. Maintain eye contact with the jury*
9. Hold eye contact with an attorney*
10. Hide nervousness
11. Convey confidence in her ability
12. Organize her thoughts
13. Comfortably admit when she was uncertain of an answer
14. Sit up*
15. Lean slightly forward when answering some questions*
16. Provide more than “yes/no” answers
17. Act natural
18. Be themselves when testifying.

* Indicates items will have a “not observed” option in the telephone modality condition, as the expert will be not be visible in this condition.

Social Presence Scale (SPS; Perse et al., 1992)

Please rate the witness on the following qualities to the best of your ability.

1. Sociable (1) to unsociable (5)
2. Warm (1) to cold (5)
3. Personal (1) to impersonal (5)
4. Sensitive (1) to insensitive (5)

Researcher-Derived Items

Evidence Weight

If you were a juror in this case, how much weight do you think you would place on Dr. Rice's testimony when deriving your verdict, from 0 = no weight ("I would not consider this testimony in making an opinion) to a 10 = a lot of weight ("this data would heavily influence my opinion")?

Validity Checks

1. Was technology used by the expert witness to deliver their testimony?
 - a. No
 - b. Yes
2. Please select the number 2.
 - a. 1
 - b. 2
 - c. 3
 - d. 4

Demographics Form

1. What is your age?
2. What is your identified gender?
 - a. Man
 - b. Woman
 - c. Transgender
 - d. Gender non-conforming
 - e. Other: _____
 - f. No answer
3. What is your ethnicity?
 - a. African-American
 - b. Asian/Pacific Islander
 - c. Caucasian
 - d. Native American
 - e. Multiracial
 - f. Other
4. Are you Latino/Hispanic?
 - a. No
 - b. Yes
5. What is your highest level of education obtained?
 - a. Some high school
 - b. High school diploma/GED
 - c. Some college
 - d. Associate's degree

- e. Bachelor's degree
- f. Technical degree/certification
- g. Master's degree
- h. Doctoral degree

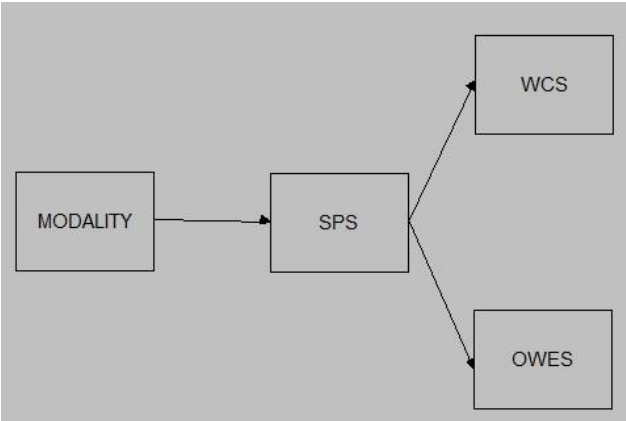
6. Have you ever served on a jury?

- a. No
- b. Yes

7. Generally speaking, how would you describe your political orientation?

- 1. Very conservative/right-wing
- 2. Somewhat conservative/right-leaning
- 3. Neutral
- 4. Somewhat liberal/left-leaning
- 5. Very liberal/left-wing

APPENDIX D MEDIATION MODEL



APPENDIX E –IRB Approval Letter

From: irb@usm.edu
Sent: Monday, May 18, 2020 1:42 PM
To: Ashley Jones; Ashley Batastini; Sue Fayard; Michael Howell; Michaela Donohue
Subject: IRB-20-265 - Initial: Sacco Committee Letter - Exempt

Follow Up Flag: Follow up
Flag Status: Completed

Office of
Research Integrity



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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.
- **FACE-TO-FACE DATA COLLECTION WILL NOT COMMENCE UNTIL USM'S IRB MODIFIES THE DIRECTIVE TO HALT NON-ESSENTIAL (NO DIRECT BENEFIT TO PARTICIPANTS) RESEARCH.**

PROTOCOL NUMBER: IRB-20-265

PROJECT TITLE: Credibility and Efficacy of Remote Expert Testimony

SCHOOL/PROGRAM: School of Psychology, Psychology

RESEARCHER(S): Ashley Jones, Ashley Batastini

IRB COMMITTEE ACTION: Exempt

CATEGORY: Exempt

Category 2.(f). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

APPENDIX F TABLES

Table A1. *Demographic Characteristics by Condition and Total Sample*

Respondent characteristic	<i>M (SD)</i>			
	In-Person <i>n</i>=97	Videoconfe r-encing (VC) <i>n</i>=90	Phone <i>n</i>=88	Total
Age	43.75 (11.21)	43.73 (12.82)	43.63 (12.26)	43.71 (12.04)
Years of education	15.13 (2.30)	15.17 (2.02)	14.94 (1.87)	15.10 (2.07)
Political orientation (1=Very liberal, 7=Very conservative)	2.88 (1.36)	2.42 (1.19)	2.58 (1.19)	2.63 (1.26)
Familiarity with telecommunications (1=Not at all familiar, 7=Very familiar)	3.72 (1.08)	3.87 (1.01)	3.85 (0.98)	3.81 (1.02)
Familiarity with social networking sites (1=Not at all familiar, 7=Very familiar)	4.35 (0.88)	4.51 (0.68)	4.44 (0.70)	4.43 (0.76)
Respondent characteristic	<i>N (%)</i>			
	In-Person	Videoconf erencing (VC)	Phone	Total
Gender				
Female	45 (46.4)	46 (51.1)	37 (42.0)	128 (46.5)
Male	52 (53.6)	43 (47.8)	47 (53.4)	142 (51.6)
Gender non-conforming	--	--	1 (1.1)	1 (0.4)
Prefer not to answer	--	--	1 (1.1)	1 (0.4)
Missing	--	1 (1.1)	2 (2.3)	3 (1.1)
Race/Ethnicity				
White/Caucasian	72 (74.2)	75 (83.3)	67 (76.1)	214 (77.8)
Black/African American	10 (10.3)	5 (5.6)	9 (10.2)	24 (8.7)
Asian American	12 (12.4)	7 (7.8)	5 (5.7)	24 (8.7)
Native American/Alaska Native	2 (2.1)	1 (1.1)	2 (2.3)	5 (1.8)
Multiracial	1 (1.1)	1 (1.1)	1 (1.1)	3 (1.1)
Other	--	--	2 (2.3)	2 (0.7)
Missing	--	1 (1.1)	2 (2.3)	3 (1.1)

Hispanic/Latinx

Table A2. (continued)

No	90 (92.8)	80 (88.9)	76 (86.4)	246 (89.5)
Yes	7 (7.2)	9 (10.0)	10 (11.4)	26 (9.5)
Missing	--	1 (1.1)	2 (2.3)	3 (1.1)
Type of Residency				
Urban	39 (40.2)	27 (30.0)	23 (26.1)	89 (32.4)
Suburban	35 (36.1)	43 (47.8)	49 (55.7)	127 (46.2)
Rural	22 (22.7)	19 (21.1)	14 (15.9)	55 (20.0)
Missing	1 (1.0)	1 (1.1)	2 (2.3)	4 (1.5)
Served on a Jury				
No	72 (74.2)	71 (78.9)	63 (71.6)	206 (74.9)
Yes	25 (25.8)	17 (18.9)	23 (26.1)	65 (23.6)
Missing	--	2 (2.2)	2 (2.3)	4 (1.5)
Experience with Mental Illness				
No	85 (87.6)	71 (78.9)	68 (77.3)	224 (81.5)
Yes	12 (12.4)	18 (20.0)	23 (26.1)	47 (17.1)
Missing	--	1 (1.1)	2 (2.3)	3 (1.4)
Decisions of Competency				
No	10 (10.31)	10 (11.11)	9 (10.23)	29 (10.55)
Yes	87 (89.69)	80 (88.89)	79 (89.77)	246 (89.45)

Table A3. *Skewness & Kurtosis Values for Dependent Variables*

Variable	Skewness (SE)	Kurtosis (SE)
WCS Scores	-2.59 (.15)	8.48 (.29)
OWES Scores	-1.27 (.15)	1.71 (.29)
SPS Scores	-0.23 (.15)	-0.78 (.29)
Weight Assigned	-1.03 (.15)	1.10 (.29)

Table A4. *Average Score Means (Standard Deviations) for Perceptions of Expert*

Witness by Condition and Overall Sample (N = 275)

Condition	WCS Score	OWES Score	SPS Score	Weight Assigned
In-Person (n = 97)	8.83 (1.39)	4.55 (0.46)	3.82 (0.79)	7.82 (1.61)
Videoconference (n = 90)	8.44 (1.85)	4.45 (0.49)	3.63 (0.77)	7.79 (1.67)
Telephone (n = 88)	8.61 (1.45)	4.54 (0.47)	3.77 (0.84)	7.67 (1.75)
Overall (Total Sample)	8.63 (1.58)	4.52 (0.47)	3.75 (0.80)	7.76 (1.67)

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