SMILING BEHAVIORS OF EXPERT WITNESSES

by

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ABSTRACT

The current study was based on literature regarding socialized gender role norms and its application to a courtroom context. This project investigated the influence of expert witness smiling behaviors in men and women on ratings of perceived credibility by mock jurors. Potential interactions with participant endorsement of gender role norm stereotypes were examined. The current study also explored other variables that provided supplemental findings to hypothesized results. College students served as mock jurors for this project.

Results supported previous research in which male expert witnesses were perceived by mock jurors as more likeable than female experts. Additionally, the current study replicated previous findings in which expert witness smiling behaviors led to increased ratings of likeability. However, smiling behaviors were not linked to attractiveness ratings of the expert witnesses. The results did not support hypothesized expectations in which endorsement of gender role norm stereotypes would interact with expert sex or smiling behaviors on ratings of credibility. However, participant endorsement of such stereotypes did contribute significantly to differences in ratings of the Witness Credibility Scale (WCS) subscales and total. Overall, participants with high endorsement of gender role norm stereotypes tended to rate the expert witness as lower in likeability, trustworthiness, knowledge, confidence, and credibility. The findings provide some evidence regarding the influences of expert witness sex and smiling, as well as juror stereotype biases, which may potentially affect expert witness credibility and testimony efficacy.

LIST OF ABBREVIATIONS AND SYMBOLS

ANOVA   Analysis of Variance

B   Computed value of the unstandardized regression coefficient

M   Mean (arithmetic average)

MANOVA   Multivariate Analysis of Variance

MANCOVA Multivariate Analysis of Covariance

p   Probability

p.   Page number

r   Measure of Pearson Correlation

SD   Standard deviation

<   Less than

>   Greater than

=   Equal to

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1. Introduction

Forensic psychologists face many demands and pressures when assuming the role of expert witness. Expert witnesses should consider the evidentiary standards by courts, ethical standards by associations and licensing agencies, liability concerns, and economic issues imposed by their employing attorneys (Shuman & Greenburg, 2003). On top of these demands, forensic psychologists should focus primarily on the role for which they are initially employed. The role of expert witness demands that forensic psychologists provide effective and objective testimony in their field of expertise in order to assist the triers of fact (Shuman & Greenburg, 2003).

All of these demands may exert pressure and negative emotions on forensic psychologists testifying as expert witnesses in trial. As part of the expert witness role, forensic psychologists are scrutinized in the courtroom and judged by their testimony. At times expert witnesses are called to testify on cases from past months or years, and recalling detailed information for a particular case may be especially difficult when working on numerous cases. Demands to perform well during testimony may even increase negative feelings like nervousness or anxiety. In order to minimize negative feelings while adhering to the role of expert witness, forensic psychologists should highlight credibility as crucial in achieving goals of effectiveness, objectivity, and persuasiveness.

Forensic psychologists are hired as expert witnesses to testify and educate the courtroom about psychological issues of expertise. Credibility helps to ensure that forensic psychologists preserve the effectiveness and persuasiveness of expert witness testimony (Brodsky, Griffin, &

Cramer, 2010). Credibility also helps to ensure that jurors will attend to the expert witness testimony (Melton, Petrila, Poythress, & Slobogin, 2007). Consequently, expert witness credibility may also serve as an important basis for juror decision-making in trial outcomes (Brodsky et al., 2010), such as verdict and sentencing decisions. Expert witness credibility does not only affect the effectiveness and persuasiveness of testimony, but also the legitimacy of attorney arguments and defendant rights to a fair trial. It is important for expert witnesses to consider the efficacy of their role and testimony through credibility.

Expert witness credibility is an important aspect of testimony that has been examined previously in the literature. Research examining the efficacy of expert witness testimony may help forensic psychologists learn strategies or skills that help them maintain credibility. Brodsky and colleagues (2010) have developed a witness credibility model that addresses four domains that affect perceived expert witness credibility. Overall credibility is comprised of likeability, trustworthiness, confidence, and knowledge. These domains represent characteristics of the expert witness that are not solely derived from the content of testimony. It is important to understand that impressions about expert witnesses may be based on characteristics and behaviors in addition to testimony content.

Nonverbal Behaviors and Credibility

Based on the witness credibility model (Brodsky et al., 2010), perceived characteristics and qualities of the expert witness have influence on credibility in addition to the verbal content of testimony. Nonverbal characteristics and qualities play a role in increasing attention to source-mediated impressions, while decreasing attention to content-mediated impressions (Chaiken, 1980; Petty & Cacioppo, 1986). In other words, jurors may rely on nonverbal behaviors more than the verbal content of testimony when interpreting expert witness credibility

(LeVan, 1984). In order to preserve credibility to its fullest, the influence of nonverbal behaviors should be considered when examining expert witness testimony efficacy.

The Elaboration Likelihood Model of persuasion (Petty & Cacioppo, 1986) and the heuristic-systematic model of processing (Chaiken, 1980) provide frameworks that support the influence of nonverbal communication in expert witness credibility. When individuals are low in motivation and effort to understand detailed information, they tend to rely more on source-mediated cues and cognitive heuristics rather than the actual content of the message (Chaiken, 1980; Petty & Cacioppo, 1986). The emphasis on source-mediated cues and decrease in effortful processing may occur when testimony content is complex or hard to understand (Cooper, Bennett, & Sukel, 1996). The increasing avoidance of jury duty and general reluctance of potential jurors to serve (Sams, Neal, & Brodsky, 2013) may also relate to decreased motivation and effort by jurors. During expert witness testimony jurors may draw on their own personal attitudes and opinions, as well as the expert's characteristics and nonverbal behaviors, when making decisions that should be derived solely from the expert's testimony.

Nonverbal behaviors are important in most communication, and may relate directly to expert witnesses who are observed and judged by juries (LeVan, 1984; Remland, 1993). It has been suggested that expert witness nonverbal behaviors influence perceptions of credibility (LeVan, 1984), but the literature on nonverbal communication is sparse. Nonverbal behaviors like eye contact have been noted as important (Boccaccini, 2002), and previous research found that high eye contact resulted in higher credibility ratings than those in medium and low eye contact conditions (Neal & Brodsky, 2008). While expressing genuine emotion may help communicators, nonverbal displays of extreme affect were deemed ineffective (Boccaccini, 2002). Although factors like "facial pleasantness" have been considered important in

distinguishing a "winning" witness from a "losing" witness (Stockwell & Schrader, 1995; p. 101, 107), it appeared that this has not been experimentally studied. The current study focused on the influence of facial pleasantness through expert witness smiling behaviors.

Psychology of Smiling Behaviors

Smiling is a widespread nonverbal behavior used across sex, age, race, and culture. Individuals exert smiling behaviors according to display rules affected by social context, culture, roles, and status. Smiling behaviors are used frequently in different levels of intensity and may be used with different emotions (Ekman & Friesen, 1969). Smiling behaviors are often used to depict happiness and positive emotions, but they may also be used when feeling nervous, embarrassed, devious, or even polite (Ekman, Friesen, & Davidson, 1990). Because smiles often represent positivity, they may be used to as a positive signal to others even through negative or neutral emotions (Ekman, Friesen, & O'Sullivan, 1988). When smiles occur in the absence of positive emotion, they essentially seek to hide or mask the physical appearance of negative or neutral feelings (Ekman & Friesen, 1982). Not only are smiling behaviors governed by display rules, but they are also influenced heavily by emotions and feelings.

Physical Aspects of Smiles. While smiles are easy to recognize in everyday social situation, researchers find it difficult to classify smile types because their characteristics vary across different individuals, cultures, emotions, etc. (Lau, 1982). Regardless of specific smile types, all smiles are generated through muscle movements in the face. The emotional intensity of the smile often determines the extent to which facial muscle movements was used. An important marker of a smile is the upward pulling of the lip corners, which uses the zygomatic major muscle (Frank, 2002). This action has been deemed a necessary characteristic of any

smile, and has been used to basically define smiling in several research studies (Dodd, Russell, & Jenkins, 1999; Frank, 2002; LaFrance & Carmen, 1980).

Genuine Smiles. Above and beyond lip pulling, the "Duchenne,"smile, or genuinely positive smile, usually requires other facial muscle movements (Ekman, 1989, Chapter 6). One of the important markers of the Duchenne smile comes from the "crow's feet" at the corners of the eyes. With genuine positive emotion, the muscles surrounding the eyes tense up and the eyelids flatten to contribute to the crow's feet wrinkles. The crow's feet wrinkles are created by the outer pars lateralis section of the orbicularis oculi muscle, and these wrinkles may not be present with other types of smiles (Ekman, Roper, & Hager, 1980). While Duchenne (the researcher for who the smile is named) believed genuine smiles were too difficult to voluntarily activate (1862/1990), research has found that these wrinkles are not impossible to intentionally produce. Findings concluded that individuals could successfully and intentionally produce Duchenne smiles, although results were limited to photograph depictions (Gunnery, Hall, & Ruben, 2012) and videos of individuals responding to amusing materials (Krumhuber & Manstead, 2009; Krumhuber, Manstead, Cosker, Marshall, & Rosin, 2009). These findings appear to relate more to social contexts except the study by Krumhuber and colleagues (2009), which was in a simulated interview setting. While witnesses are encouraged to show genuine emotion (Boccaccini, 2002; Brodsky, 2004; Nagle, Brodsky, & Weeter, 2014), there are limited opportunities for expert witnesses to use Duchenne smiles during testimony.

Other Smiles. As previously mentioned, smiles may be used as a result of negative or neutral feelings like nervousness, embarrassment, or politeness. However, these smiles may vary in appearance by affective state, and may look different than Duchenne smiles. A recent study of morphological and dynamic characteristics of smiles examined differences based on different

characteristics, like the orbicularis oculi muscle, mouth opening, amplitude, and duration (Ambadar, Cohn, & Reed, 2009). Polite and embarrassed/nervous smiles used less of the orbicularis oculi muscle (of the crow's feet wrinkles in Duchenne smiles). Findings indicated that polite smiles used fewer mouth openings, smaller amplitude, and smaller duration than embarrassed/nervous smiles. The current study focused on the use of positive (Duchenne) or neutral (polite) smiles in expert witness testimony to avoid displays of negative emotion.

Smile Occurrence. In addition to the type of smiling behaviors used in communication, it is important to examine the occurrence of smiling behaviors. Smiling behaviors may occur during times in which the speaker is either communicating or listening. In a preliminary and exploratory thesis, Nagle (2012) categorized these smiling behaviors as occurring in speaking/expressive or listening/receptive states. An individual may use smiling behaviors when claiming the speaking role in a conversation. Smiling behaviors may also be used when an individual is in the listening role, receiving a message. In this case, smiling may be used by the individual as a listener cue to display attentiveness to the speaker (Harrigan, 1985). Although listener cues are often used in listening/receptive states (Harrigan, 1985), it is unclear as to how frequently smiling is used in this purpose. One study found that interviewees smiled approximately 12% of the time they were speaking in 20-25 minute interviews (McAdams, Jackson, & Kirshnit, 1984). It appears there is evidence that smiling behaviors may occur during both speaking/expressive and listening/receptive states in both social and more serious contexts.

Likeability and Trustworthiness. Likeability and trustworthiness, two of the four domains of the witness credibility model, have been associated with smiling behaviors. Smiling behaviors contribute to a halo effect, which leads to positive evaluations and overall ratings of goodness (Lau, 1982). Smiling individuals have been rated as more "trustworthy, good, honest,

genuine, obedient, blameless, sincere, and admirable" (p. 213, LaFrance & Hecht, 1995).

Preliminary and exploratory research of actual witnesses found a significant positive association

between smiling and likeability (Nagle et al., 2014). In a previous Witness Lab research study,

moderate levels of smiling behaviors were used to define likeability, along with other criteria

(Brodsky, Neal, Cramer, & Ziemke, 2009). Likeability was found to be positively correlated

with trustworthiness (Brodsky et al., 2009), and the two domains have been used to relate

conceptually to warmth and overall positivity (Neal, Guadagno, Eno, & Brodsky, 2012).

Not only do smiling behaviors affect personal impressions of an individual, but they also

affect verbal statements accompanying the smiles. Positive nonverbal expressions like smiling

behaviors can influence evaluations of negative verbal messages. A study recently examined the

interaction between short-onset smiling, long-onset smiling, and neutral expressions with

negative and neutral verbal statement (Krumhuber & Manstead, 2009). While there were no

significant differences between short-onset and long-onset smiling, there were significant

findings regarding the interaction between expression and verbal statement. The presence of

smiling behaviors increased message positivity in both negative and neutral statements.

However, neutral expressions elicited greater perceptions of authenticity for the speaker. These

findings may relate to the influence of smiling behaviors on ratings of expert witnesses testifying

in trials.

Attractiveness. The association between smiling and attractiveness has been well-

established in the literature. Compared to non-smiling or neutral expressions, smiling has been

linked to greater ratings of attractiveness and positivity (Lau, 1982; Reis et al., 1990).

Attractiveness has been found to have a compelling influence in the courtroom. Attractive

defendants receive fewer convictions, less responsibility (Efran, 1974), less punishment

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(McFatter, 1978), and higher ratings of perceived happiness, likeability, and trustworthiness (Darby & Jeffers, 1988). The biasing effect of attractiveness seen in defendants may also be seen in expert witnesses testifying in court, in which attractive expert witnesses receive higher ratings of credibility. Smiling behaviors may increase ratings of expert witness attractiveness and subsequently increase ratings of credibility.

Sex Difference in Smiling

When investigating smiling behaviors during expert witness testimony, it is important to consider the variable of expert witness sex. Throughout early developmental years, men and women are socially trained to be different in areas of interpersonal style and orientation (Brody, 1985). Women are taught to be more emotionally expressive and socially agreeable, while men learn to inhibit emotional expression and master neutrality (Brody, 1985). Women are expected to smile more than men, and they are observed to smile more than men (Briton & Hall, 1995). The expectation for women to smile may impact how others interpret their behavior. Women may be perceived as unfriendly or unkind when they do not smile. However, opinions about the characteristics and emotions of men are largely unaffected by smiling behaviors (Guerrero, Jones, & Boburka, 2006). Consistent sex role socialization in young girls and boys perpetuates the sex difference in smiling, resulting in disadvantages for both men and women.

The social expectation for women to exude happiness and warmth with smiles has caused smiling to become classified as a feminine behavior (LaFrance & Carmen, 1980; Reis, et al., 1990). Women who do not smile are at a disadvantage because they will be perceived negatively for being incongruent with feminine standards. However, this also puts men who do smile at a disadvantage. Men who smile may be perceived as accepting feminine behaviors, demonstrating incongruency with masculine standards of neutrality (LaFrance & Carmen, 1980; Reis et al.,

1990). More recent research on social issues, such as one by Kawakami and colleagues (2000), continue to use smiling as feminine behaviors and markers of characteristics like warmth. The classification of smiling as a feminine behavior is informed by sex role socialization, but may also be a product of sex incongruities in status. The theory of status states that individuals who hold inferior and subordinate status feel the need to please others (Henley, 1977), which may be accomplished by increasing smiling behaviors.

One meta-analysis found contradictory evidence for the link between female smiling behaviors and inferior status (Hall, Coats, & LeBeau, 2006), which suggests that women do not increase smiling behaviors to compensate for being in a lower status. Despite the inconsistency of findings regarding sex, smiling, and status theory, it appears that women do exhibit more smiling behaviors than men in equivalent roles. Diekman & Eagly (2000) suggest that social role theory underlies why gender stereotypes are facilitated by demands and functions of typical family and occupational roles. They also note that women and men have become more similar in roles, and that women are participating more in the paid labor force. However, in similar social positions or roles, women still show more expressive behavior than men and more smiling behaviors at times (LaFrance, Hecht, & Paluck, 2003). Additionally, preliminary and exploratory research found that female witnesses exhibited more smiling behaviors than male witnesses during testimony in actual trials (Nagle et al., 2014). While roles may be converging, it appears that the sex difference in smiling has been maintained and may therefore have implications on expert witness smiling behaviors during testimony.

Smiling Behaviors in the Courtroom

The context of the courtroom and role of expert witness both sustain a degree of seriousness that may not warrant many opportunities for smiling. While infrequent, expert

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witness smiling behaviors have been observed in the courtroom (Brodsky, 2004; Nagle et al., 2014). Expert witnesses such as Dr. Judith Becker and Alyce LaViolette were observed smiling in their testimonies during the trials of Jeffrey Dahmer and Jodi Arias, respectively. Dr. Judith Becker's role and testimony were portrayed in the news media, without any negativity associated with her smiles. However, Alyce LaViolette was questioned by a juror about her smiles toward Jodi, resulting in skepticism of her in the news media (Grace, 2013). Dr. Janice Harper noted on the *Psychology Today* blog the extreme bullying of Alyce LaViolette through social media with threats of physical harm and death, and urged the public to stop the aggression (Harper, 2013). Alyce LaViolette not only suffered personal anxiety and psychological harm, but her professional position was damaged. While participating in expert witness testimony resulted in typical professional livelihood for Dr. Judith Becker, it caused personal and professional harm for Alyce LaViolette. It may be that Dr. Judith Becker's smiles were perceived as exuding warmth and friendliness as a product of her personality characteristics. Alyce LaViolette lost some credibility because of the perception that she expressed warmth and friendliness toward the defendant.

While many other factors contributed to the credibility of these expert witnesses, the attention (or lack thereof) on smiling behaviors is interesting to consider for the current study. Both expert witnesses exhibited smiling behaviors while testifying in trials with serious content and charges. These examples signify that smiling behaviors may occur in testimony, regardless of the serious context it accompanies. However, these examples also provide information about how the perception of smiles relates to expert witness credibility. A goal of the current study is to investigate expert witness warmth and friendliness in an objective manner with smiling behaviors, while avoiding insincerity as much as possible through mild or minimal smiles.

Another aspect of the current study is to examine the impact of smile frequency on perceptions of expert witness credibility. As previously mentioned, expert witness smiling behaviors have been observed in court – but they have been infrequent. The current study will investigate whether or not there are differences in credibility ratings with low and moderate smiling rates. It may be that a higher rate of smiling will lead to greater credibility. Such findings would indicate the importance of increased positive nonverbal behaviors in expert witness testimony efficacy. However, if there are no significant differences between the smiling rates, expert witnesses may only need a few smiles to boost credibility. Findings in either direction will be informative for expert witnesses seeking to maintain or increase credibility on the stand.

Sex, Smiling, and Credibility. Because smiling is considered to be a typically feminine behavior (LaFrance & Carmen, 1980), it may be that male expert witnesses who smile will be considered less masculine and credible than men who do not smile. On the other hand, female expert witnesses who do not smile may also be penalized for incongruency with typical sex behaviors. Findings suggest that male expert witnesses must be regarded as competent and assertive to maintain credibility, but that female expert witnesses may use warmth or competence to maintain credibility (Neal et al, 2012). Female expert witnesses who smile may be at an advantage, and may be able to increase ratings of likeability and overall credibility. These findings are supplemented by research on female leaders, who are effective as warm leaders even when they appear more "mindless" (Kawakami, White, & Langer, 2000; p. 61). However, it is still unclear as to which strategy is most effective for expert witnesses to utilize. It may be that individual juror characteristics moderate the relationship between expert witness smiling behaviors and perceived credibility.

The advantages and disadvantages of smiling behaviors for women and men, respectively, are based on the sex difference in smiling and sex-role socialization. It may be that individual characteristics come into play when jurors assign ratings of expert witness credibility. Individual jurors may reflect societal beliefs and expectations about smiling behaviors in men and women. Endorsement or rejection of traditional sex roles stereotypes may influence how they perceive smiling in male and female expert witnesses. Such beliefs and attitudes that affect how jurors approach testimony and evidence may be considered biases (Lecci & Myers, 2008). Specifically, biases regarding sex role norms may impact juror perceptions of male and female expert witnesses who smile. Examining potential biases influencing juror decision-making may contribute to strategies of expert witness testimony efficacy.

The Current Study

The current study used the Witness Credibility Scale (WCS; Brodsky, et al., 2010), which was used to support the witness credibility model. Past research has shown that smiling behaviors have been found to increase perceptions of intelligence and warmth in individuals when compared to those without smiling behaviors (Lau, 1982). One study using the WCS found that expert witnesses high in likeability and knowledge received the highest ratings of credibility (Neal et al., 2012). It is expected that expert witness smiling behaviors may increase ratings of intelligence and warmth during expert witness testimony. As previously mentioned, smiling behaviors have been observed in expert witnesses (Brodsky, 2004; Nagle et al., 2014). However, more research is needed to learn about the impact of expert witness smiling on ratings of credibility.

Although smiling behaviors have been considered with defendants and other witnesses, no studies have specifically examined smiling behaviors in expert witnesses. The study

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materials (i.e., case summary, testimony script, etc.) reflected a case that would require forensic expert witness testimony. The materials were taken from a previous study (Ziemke, 2011), which was based on an actual case in which a defendant was found not guilty by reason of insanity (NGRI) of 2nd degree assault. The case summary that was used by the current study was not included in Ziemke's (2011) main findings. In pilot investigations, it was rated as less serious and less violent than needed for the study aims; therefore, there were no results associated with this case summary that may be reported. The current study chose to use this summary because more serious or violent case summaries may potentially introduce noise or contamination in results. The less serious case summary was used to prevent mock jurors from making biased decisions about expert witness credibility or trial outcome, which may occur with serious or violent case details.

The current study sought to contribute to research examining nonverbal communication in the courtroom by assessing the impact of expert witness sex, expert witness attractiveness, smiling behaviors, and perceived credibility. The current study hoped to contribute to findings on expert witness sex and smiling behaviors, as well as the impact of these variables on ratings of credibility. Because witness smiling behaviors had been positively correlated with ratings of likeability of the WCS in preliminary research (Nagle et al., 2014), it was important to build upon these findings with a larger sample in an experimental study.

Study Aims. The current study sought to investigate the study variables as shown in Table 1. An examination of expert witness smiling behaviors and credibility ratings may help to inform researchers, forensic psychologists, attorneys, and others as to the importance of nonverbal behaviors in the courtroom. Smiling behaviors may be a nonverbal behavior that enhances expert witness credibility and consequently the efficacy of testimony. Ensuring

credibility and efficacious testimony helps expert witnesses to maintain the integrity of their role, as well as the integrity of the justice system. Examining the specific differences in credibility ratings by expert witness sex should provide information about the impact of sex differences in the role of expert witness. As more women enter the role of expert witness, it is important to understand if sex-typed nonverbal behaviors like smiling have any positive or negative impact on credibility and testimony efficacy. The current study sought to contribute to the literature on nonverbal behaviors in the courtroom, expert witness credibility and testimony efficacy, and considerations for men and women testifying in trial.

Table 1: Primary Study Variables

Independent Variable 1	Expert witness sex: *Male expert vs. female expert*
Independent Variable 2	Smiling behaviors: *No smiling vs. low smiling vs. moderate smiling*
Independent Variable 3	Expert witness actor: *Actor pair 1 vs. actor pair 2*
Dependent Measure 1	Witness Credibility Scale: *Likeability, trustworthiness, confidence, knowledge, overall credibility*
Dependent Measure 2	Juror Verdict Decisions: *Dichotomous verdict rating, continuous guilt rating and punishment rating*
Moderator Measure 1	Male Role Norms Inventory-Revised *Endorsement of traditional male role norms*

Proposed hypotheses were as follows:

Hypothesis 1: A main effect of expert witness sex on ratings of expert witness likeability, trustworthiness, confidence, knowledge, and overall credibility was expected in the non-smiling condition. In the absence of smiling behaviors, male witnesses may be given significantly higher ratings than female witnesses on these factors. Men are expected to have an advantage over women in terms of perceived credibility based on status theory (Henley, 1977). Additionally, previous research has identified a tendency for mock jurors to assign higher ratings of credibility aspects to male over female witnesses (Neal et al., 2012; Nagle et al., 2014),

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especially during complex testimony (Schuller, Terry, & McKimmie, 2005) and cross-examination (Larson & Brodsky, 2010).

Hypothesis 2a: A main effect of expert witness smiling behaviors on ratings of expert witness likeability, trustworthiness, and credibility was expected. Witnesses in the smiling conditions may receive higher ratings on these factors than witnesses in the no smiling conditions. Witnesses of moderate smiling levels may receive higher ratings on these factors than witnesses of low smiling levels. It was expected that the increasing presence of smiling behaviors would contribute to higher ratings of credibility rather than an absence of smiling behaviors because smiling is positively associated with likeability (Nagle & Brodsky, 2012).

Hypothesis 2b: Additionally, there may be an interaction of expert witness smiling behaviors and expert witness sex in these conditions. Female witnesses may receive higher ratings of likeability and trustworthiness than male witnesses in the low and moderate smiling conditions. Because smiling may be seen as a feminine behavior more appropriately exhibited by women, it was expected that these interactions would occur in these domains of witness credibility.

Hypothesis 3: A main effect of smiling behaviors on ratings of perceived expert witness attractiveness was expected. Witnesses in the smiling conditions may receive higher ratings of attractiveness than those in the no smiling condition, but witnesses in the moderate smiling conditions may receive the highest ratings. Based on the positive association between smiling and attractiveness (Lau, 1982; Reis et al., 1990), it was expected that the presence of smiling behaviors would contribute to higher ratings of attractiveness.

Hypothesis 4: A significant interaction of smiling behaviors and mock juror endorsement of male role stereotypes on ratings of expert witness credibility was expected. Endorsement of

male role stereotypes was indicated by higher scores on the Male Role Norms Inventory-Revised total scale. Mock jurors who endorse male role stereotypes may assign lower ratings of credibility to male witnesses than female witnesses in the smiling condition. Mock jurors who believe men should act in a traditional manner may be likely to discount male witnesses who exhibit a traditionally feminine behavior like smiling.

Exploratory Research Considerations were as follows:

Trial Outcome. The current study explored significant correlations between expert witness credibility ratings and dichotomous verdict decisions, continuous guilt ratings, and continuous punishment ratings. It was expected that expert witness credibility would be negatively correlated with verdict, guilt, and punishment; higher ratings of credibility would be associated with more verdicts rendering a "not guilty" decision, lower ratings of guilt, and more leniency regarding sentencing and punishment. These findings would indicate that witness believability may be connected to trial outcomes in a significant way, although existing literature is mixed and inconsistent in this area.

Participant Demographics and Characteristics. Participant demographics, such as sex, age, race, education level, occupation, juror eligibility, religious affiliation, or political affiliation may correlate with the study variables. The association between participant demographics and WCS subscales and overall score, verdict decisions, guilt ratings, punishment ratings, attractiveness ratings, and the MRNI-R score was explored.

Expert Witness Actor Pair. The use of expert witness actors will be further discussed in the method section. Variability of expert witness actor may correlate with the study variables. The association between expert witness actor and WCS subscales and overall score, verdict decisions, guilt ratings, punishment ratings, and attractiveness ratings was explored.

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Qualitative Thoughts on Witness Testimony. An open-ended measure was included to capture participant thoughts during expert witness testimony. These qualitative thoughts were explored in a quantitative analysis. It was expected that participants would record thoughts about expert witness characteristics (i.e., peripheral cues) in addition to thoughts about the testimony content (i.e., central cues). These findings would lend support to information-processing models that support the influence of source-mediated cues as well as content during persuasive messages.

2. Method

Design

The study employed a 2 x 2 x 3 between-subjects factorial design. Therefore, a total of 12 conditions were used for the study. The independent variables were expert witness sex (male vs. female), expert witness actor pair (pair 1 vs. pair 2), and expert witness smiling behaviors (no smiling vs. low smiling vs. moderate smiling). Stimulus sampling refers to multiple levels of a stimulus condition in research used to uphold external validity (Wells & Windschitl, 1999), and may lead to increased Type I errors (Wickens & Keppel, 1983). The absence of stimulus sampling is particularly problematic when people are used as stimuli, as one individual is not completely representative of the group studied (Wells & Windschitl, 1999). Increasing the number of stimuli also helps to increase generalizability of results, increase power, and to explore stimulus effects (Richter & Seay, 1987).

Two pairs of male and female actors in stimulus materials were incorporated into the design to follow these recommendations. Although broad stimulus sampling may require more than two stimuli, there were barriers preventing a highly accurate definition of the stimulus population. In addition to barriers of money, time, and effort, it was extremely challenging to define the stimulus population and develop a completely standardized and random sampling strategy (Wells & Windschitl, 1999). Therefore, only two levels were used for the purposes of this study. The study design accounted for the variability in stimulus materials (as portrayed by different actors) as a random-effects factor, while expert witness sex and smiling behaviors were included as fixed-effects factors.

The dependent measures included the Witness Credibility Scale and mock juror decision scale. The MRNI-R was used as the moderating measure. The dependent variables were witness credibility ratings, including likeability, trustworthiness, knowledge, confidence, and overall credibility. Mock juror decisions, including verdict, guilt, and punishment, were used as dependent variables for exploratory analyses. Individual characteristics identified by the MRNI-R measure were examined for potential moderating effects on credibility judgments. Additionally, narrative and personal comments from participants were explored qualitatively to supplement quantitative results.

Pilot Investigations

The current study first received approval from the Institutional Review Board before pilot investigations and data collection were initiated. Initially the study materials were piloted with the Witness Lab researchers to ensure the two expert witness actor pairs were adequately matched (see "Actor Matching Variables" form in Appendix O) on perceived age, accent, likeability, trustworthiness, confidence, body language, speech volume, speech tempo, and attractiveness. After data was collected from five researchers of the lab, analyses resulted in adequate to good reliability with Cronbach's alphas ranging from .82 to .95. Following the matching of actor pairs based on these variables, the current study proceeded with the completion of study materials (i.e., expert witness testimony videos) and subsequent pilot investigation.

The next pilot investigation was conducted to highlight any significant problems occurring with the manipulations of the independent variables, which required that expert witness smiling behaviors were successfully differentiated among conditions. The pilot investigation also included a section for open-ended comments on methodology, areas of

improvement, etc (see Appendix C). Feedback was used to ensure the materials possessed

clarity for participant understanding and that procedures were easily comprehended. The

presence of significant problems with the portrayal of variables or conditions would indicate a

need to alter the materials to satisfy the aforementioned standards. The purpose of the pilot

investigation was to ensure initial successful manipulation of study conditions and to gather

feedback on any potential changes that would improve participant understanding and usability.

Based on Hertzog's (2008) article on pilot study sample size determinations, an estimate

of internal consistency was conducted after the first 25% of the desired sample (90 participants)

was collected using the Psychology Subject Pool. Hertzog recommended that "for samples of

25-40 per group, observed alpha should probably be at least .75 in order to have confidence…

(Hertzog, 2008, p. 185). Using the reliability analysis was crucial to determine whether

participants correctly perceived the expert smiling behavior manipulation (no smiling, low

smiling, and moderate smiling). This information was collected in the post-experiment

questionnaire with the question, "Did you notice any smiling behaviors by the expert witness?"

The multiple-choice answers corresponded with the three expert smiling conditions. The results

of the pilot investigation demonstrated adequate reliability of the three conditions with a

Cronbach's alpha of .753.

Analysis of the first 10% of qualitative feedback (n=36) demonstrated mostly positive

comments from participants who noted they enjoyed the study (n=21). Several participants

(n=5) provided feedback wondering about the basis for asking questions about males and

sexuality (in reference to the MRNI-R), and a few participants suggested asking questions about

women. The current study had considered including a measure on femininity ideology, but it

seemed that the inclusion of this scale would mostly increase participant burden without much

incremental evidence above and beyond the MRNI-R. This matter was discussed with researchers from the Witness Lab, who supported the use of the MRNI-R without any alterations or additions. Other participants (n=4) suggested shortening the 12-minute video in order to promote attention; however, the current study decided not to alter the video length because its script had been utilized previously in Ziemke's (2011) dissertation with no serious issues. Additionally, the testimony video is considerably shorter than actual expert witness testimony and decreasing its length would impact the study's external validity. The remaining comments from participants (n=6) appeared to be of a more objective nature, such as "It might be beneficial to be able to go back and look at the case summary during the survey." Because there were no significant problems with portrayal of expert smiling behaviors, data collection resumed without any alteration of expert witness script or filming and data collected from this pilot investigation was included in final analyses.

Participants

Participants included students from a large, Southeastern university in the United States. Participants were recruited from the university's online Psychology Subject Pool, which allows students to volunteer for a research session in exchange for a partial course credit. The research website summarized the study (see Appendix A) and directed participants to access this study online using Qualtrics. Qualtrics is an online research tool that helps users create sophisticated online surveys with randomization, video/audio stimulus materials, and other features. Qualtrics was chosen for its simplistic and intuitive survey design tools, ease of accessibility for participants, and automatic data entry into an electronic database. Qualtrics is also a program that the university supports and funds for student and faculty research projects. Participants were randomly assigned to one of twelve conditions, so that each mock juror only saw one expert

witness (by sex and actor) and one of the smiling conditions. After participating in one study condition, the participants were denied registration for other study conditions.

Sample size was determined using recommended G*Power analyses testing (Faul, Erdfelder, Lang, & Buchner, 2007) for a 3-factor design with a medium effect size of 0.25, error probability of 0.05, and power of 0.80. To test for a three factor design of expert witness sex, smiling behaviors and actor, a total sample of 158 (or about 13 participants) is needed. However, an increase in sample size may help to increase power, an important aspect of research findings that was recently discussed by Marszalek and colleagues (2011). While they accepted that experimental settings warrant smaller sample sizes because of increased control, they recommended that more complex designs should use larger samples. Additionally, similar research from the Witness Lab utilized larger sample sizes. Ziemke's (2011) study, which used a similar factorial design and varied expert witness actor, had about 44 participants per condition. The current study sought to obtain a minimum of 30 participants per condition for a total of at least360 participants.

The current study had 453 survey responses; however, 61 responses were incomplete and six participants identified technical issues that interfered with their involvement. Based on comparisons between the number of participant sign-ups from the Psychology Subject Pool and survey responses, it may be inferred that all but four participants had technical issues that prompted them to re-start the survey. The primary investigator was sent an electronic message about three participants who cancelled their enrollment in the study, possibly because they had not completed the study before the deadline. The other participant did not complete the study but was not penalized for withdrawal from the study. No follow-up was attempted with these participants.

The study collected a total of 386 undergraduate students whose ages ranged from 18 to 33 years old. The mean age of participants was 19 years, with 81.9% of participants reporting their ages as 18 or 19 years. The sample mostly included freshmen students (70.2%) but also included sophomores (21.2%), juniors (6.5%), and seniors (2.1%). Their areas of study varied across over 30 majors, with the highest percentages being in nursing (9.4%), biology (9.3%), and psychology (6.4%). There were 270 female participants (69.9%) and 116 male participants (30.1%). Most of the sample identified as Caucasian (83.7%), while the remainder identified as African-American (10.1%), Biracial (1.8%), Hispanic (1.6%), Asian/Pacific Islander (1.3%), other (1%), and Native American (.5%). Although a little under half of participants reported being raised in Alabama (46.4%), over half reported being from over 30 other states and three different countries.

Materials

  Participant Information Sheet. The participant information sheet for the college sample (see Appendix D) included pertinent information prior to participation in the research session. It included information regarding the study purposes, procedures, benefits/risks, confidentiality, withdrawal, and alternative options. It also addressed potential questions and concerns, and provided contact information for the primary study investigator, the faculty advisor and licensed clinical psychologist, and university research compliance officer.

  Instructional Manipulation Check. The instructional manipulation check (IMC; see Appendix F) was adapted from Oppenheimer and colleagues (2009) to help to detect participants who neglect instructions and effortful responding. The IMC has been shown to decrease noise, increase experimental power, and enhance the reliability and validity of participant responses. The IMC helped prompt participants to read instructions more carefully, even after failing to

read instructions in the IMC. Because the current study was administrated online, the IMC was

seen as an adequate method of ensuring more effective and effortful participant responses. As in

the 2009 study by Oppenheimer et al., the IMC was presented at the beginning of the study, and

participants were not be allowed to continue in the experiment until successfully passing the

IMC.

  Case Summary. The case summary (see Appendix G) described a criminal case

scenario in which the defendant was in an altercation with another individual and charged with

2nd degree assault. A Class C felony was used to reduce potential noise that may be associated

with details of a more serious or violent crime. Only one case summary was used for all 12

conditions. The case summary included instructions from the judge regarding participant duties

as mock jurors, and included case information such as the charges against the defendant, the

defendant's plea of NGRI, and the facts presented to the court. There was a description of the

defendant's history of mental illness, the victim's injuries, and circumstances surrounding the

assault. The case summary was based on a real case scenario that resulted in an NGRI outcome

(Ziemke, 2011). This case summary was chosen because it has been piloted and used with a

previous research study considering expert witness credibility (Ziemke, 2011).

  Testimony Script. The expert witness testimony script (see Appendix H) corresponded

directly to case summary materials used by Ziemke (2011). The testimony script included

direct- and cross-examination of a forensic neuropsychological expert witness who was called by

the defense to testify about the defendant's evaluation. The testimony script was chosen because

it has been used with a previous research study considering expert witness credibility.

Additionally, all scripts used in Ziemke's (2011) study were reviewed by qualified practicing

professionals in the forensic field (i.e., two licensed clinical psychologists with experience in

forensic psychology and courtroom testimony) to ensure a high level of external validity. The testimony script was written in stage play format to facilitate the actors' understanding and direction of the script. Only one testimony script was used for all 12 conditions.

To increase authenticity of the testimony script, the script was modified with realistic and common speech patterns that might occur in actual, unscripted testimony. In "Pauses and the Temporal Structure of Speech" (Zellner, 1994), it was suggested that natural-sounding speech may include audible speech events and temporal phenomena like pauses, timing, and syllable prolongations. It was also reported that the more complex the communicative task, the more pauses are used as a result of the speaker's cognitive activities at work. The role of expert witness can be extremely demanding, especially when immediately responding to questions requiring detailed information from past evaluations, records, etc. During testimony, pauses may reflect times when the attorney or expert is thinking about how to ask or respond to questions, respectively.

The testimony script included interruptions in the script with silent pauses, filled pauses (Clark & Tree, 2002), and casual errors in speech. Filled pauses, such as "uh" or "um," are used often in spontaneous speech when "searching for a word," "deciding what to say next," or "want[ing] to keep the floor" (Clark & Tree, 2002, p. 73). Because the attorneys were not shown in the testimony video, they were only scripted to use occasional filled pauses before asking questions as well as occasional, casual errors in speech. The expert witness actors were scripted to use silent pauses, filled pauses, and casual errors in speech. These interruptions were placed in the testimony script, and actors were guided and directed on how to portray them. The interruptions were generated for the testimony script based on observations from real expert witness testimony videos.

The testimony script also indicated when smiling behaviors occurred in the low smiling and moderate smiling conditions. The expert witness had a total of 35 statements in the testimony script. The smiling conditions included smiling behaviors throughout the testimony dialogue. The low smiling condition included smiling behaviors in approximately 10%, or 3, of the expert's statements. The moderate smiling condition included smiling behaviors in approximately 35%, or 12, of the expert's statements. The smiling behaviors were divided evenly among three divisions in testimony: qualification questions, direct examination, and cross-examination. The low smiling condition had one smiling behavior per division while the moderate smiling condition had three per division. For example, during the qualification questions the testimony script would call for the use of a mild smile when the defense attorney says, "Thank you, Dr. Smith."

Times at which smiling behaviors should occur were indicated in the testimony script as well. Smiling behaviors occurred during both speaking/expressive and listening/receptive states. Because expert witness testimony is in a more serious, courtroom context like that of an interview (as previously mentioned), only about 12% of smiling behaviors occurred during speaking/expressive states. Smiles occurred during speaking/expressive states once in the low smiling condition and twice in the moderate smiling condition. The remaining smiles occurred during listening/receptive states either before or after the expert's statements. The occurrence of smiles in the moderate smiling condition was highlighted in yellow, and the occurrence of smiles in the low smiling condition was indicated by red text. The smiles in the low smiling condition were selected from those in the moderate smiling condition.

Demographics Questionnaire. The demographics questionnaire for the college sample (see Appendix I) collected participant information regarding age, sex, race, education level,

political affiliation, religiousness, and questions of jury eligibility (i.e., if they are registered to vote, if they are a U.S. citizen, if they have been convicted of a felony). These data were used for descriptive purposes when defining participant characteristics.

Measures

Thought-Listing Measure. Immediately after watching the expert witness testimony video, participants completed the thought-listing measure (see Appendix K). The measure requires a retrospective list of up to 5 thoughts that occurred while watching the video clip. This information provided an assessment of attitudes toward the expert witness, as well as quality of thoughts during the mock trial.

Witness Credibility Scale (WCS). The Witness Credibility Scale (see Appendix L) is a measure developed by Brodsky and colleagues (2010) to assess the effectiveness and believability of expert witnesses. The four subscales of Likeability, Trustworthiness, Confidence, and Knowledge each contain five items for a total of twenty items. They are formatted in a 10-point Likert scale of personality characteristics with paired adjectives and antonyms (e.g., *untruthful* and *truthful* and *unreliable* and *reliable*). Participants rated the expert witness on the four subscales of credibility as well as overall credibility. The WCS has been found to be an overall reliable scale, with Cronbach alphas ranging from .86 to .95 (Brodsky et al., 2010). The current study found the WCS to be highly reliable in this sample, with Cronbach alphas ranging from .92 to .97.

Mock Juror Decisions. Mock juror decisions were collected using a dichotomous verdict measure and continuous items assessing defendant guilt and punishment (see Appendix M). Although not a major focus of the study goals, these decisions allowed the participants to assume their purpose was to act as a juror in this trial. Mock juror decisions were analyzed to

see if there is any correlation between IVs, ratings of expert witness credibility, and trial outcome.

      Male Role Norms Inventory-Revised (MRNI-R). The Male Role Norms Inventory-Revised (see Appendix N) is a measure developed by Levant and colleagues (2007) to assess endorsement of typical sex role stereotypes and attitudes, specifically regarding masculinity and men's roles. The MRNI-R assesses the degree to which individuals believe in sex-based power structures that privilege men. The measure includes 53 items that assess participant agreement to statements (e.g., *When the going gets tough, men should get tough*) on a 7-point Likert-type scale. Participants complete items to rate themselves on the seven subscales as well as the MRNI-R total scale. The total scale is calculated as the average of all 53 items. Higher scores indicate greater endorsement of traditional masculine ideology and power. The MRNI-R has been found to be a reliable revision of the original MRNI, with Cronbach's alphas ranging from .78 to .96 in sample including both men and women (Levant et al., 2007). The current study found the total MRNI-R measure to be highly reliable in this sample, with a Cronbach's alpha of .97.

Expert Witness Testimony Video Clips

      Expert witness testimony video clips were recorded in the Witness Research Lab. To enhance external validity, the actors were dressed in professional attire and set in a realistic witness stand in order to provide a more authentic courtroom context. The Witness Research Lab has sophisticated recording equipment and special lighting that contributed to the reality of the testimony videos.

      The final 2 pairs of actors were given the testimony script to review, and were directed on how to portray smiling behaviors in the low smiling and moderate smiling conditions (see

Appendix P). The portrayal of smiling behaviors was discussed with all actors in depth, and they were directed to actual testimony videos and simulated videos to see specific examples of desired behaviors. The investigator recorded several video examples of low smiling, moderate smiling, and no smiling conditions for the actors.

Interruptions, Pauses, and Errors. As previously mentioned, the script was modified with realistic and common speech patterns that might occur in actual testimony. Any interruptions or errors indicated in the testimony script were portrayed by the actors to a comparable degree. Some of these interruptions may correspond with the smiling behaviors, and the actors were directed accordingly. It was important to preserve as much authenticity as possible in order to enhance the external validity of the expert witness testimony videos.

Low and Moderate Smiling Conditions. The actors were instructed to portray friendliness and warmth when smiling. Actors were directed to use mild and polite smiles with the corners of the mouth turned up. They were told to avoid overstated or exaggerated smiles in order to maintain sincerity. Actors were instructed to nod slightly during the testimony when portraying smiling behaviors. This allowed for standardized nodding across conditions. Actors were instructed to avoid exhibiting nervous or anxious smiles in order to keep smiling type constant throughout the conditions. This helped to reduce noise associated with different and emotional types of smiles.

No Smiling Condition. The other variable condition included no smiling behaviors at all. The actors were directed not to portray any smiling behaviors throughout the testimony dialogue. Actors were reminded to avoid pursing their lips or doing other motions with their mouths that might turn the corners of their mouths up. They were instructed to avoid coldness or callousness, and to maintain a polite and professional disposition. To portray minimal warmth or

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politeness, actors were instructed to nod slightly during the testimony when polite smiling

behaviors would occur.

Explicit directions were given to actors so they may differentiate clearly between the

performances required in the low smiling, moderate smiling, and no smiling conditions. The

actors received feedback until the scripts are performed adequately and equivalently. The videos

were recorded and edited until there appeared to be no significant deviations from the

standardized script. There were 12 total video clips developed to portray the male and female

expert witnesses in the 12 study conditions.

Data Collection

Participants were instructed to read over the information sheet. They then completed the

instructional manipulation check. Participants were provided with a case summary prior to

viewing the expert witness testimony video. When the video clip was finished, participants were

directed to complete the following materials and measures: the thought-listing measure, WCS,

MRNI-R, mock juror decision sheet, demographics questionnaire, and case manipulation check.

Materials and measures took approximately 12-15 minutes to complete; this time was verified by

several individuals who completed the study materials. The case manipulation check (see

Appendix Q) was used to ensure successful portrayal of the independent variables in the study

materials. It also ensured that participants were attentive to and accurate about the study

variables. Items addressed the side that called the expert to testify, the sex of the expert, the

expert's name, the expert's place of profession, the expert's opinion, and the presence or absence

of smiling. Ratings of expert witness attractiveness were explored to check for successful

matching of the expert witness in each condition, as well as to satisfy hypothesis testing

regarding the link between smiling behaviors and perceived attractiveness.

Debriefing. At the completion of the research session, participants were provided with additional information pertaining to the study purposes (see Appendix R). They were informed of the overall study goals, and were directed to contact the primary investigator, faculty advisor and clinical licensed psychologist, or the university's research compliance officer with further questions or concerns. They were also directed to indicate if they wish to obtain results when the study is complete.

Protection of Human Participants

There were minimal foreseeable risks to students who chose to participate in this study. All participant information was completely de-identified to maintain confidentiality. Any information linking participants to this study was destroyed. The content of the study materials was not overly sensitive or harmful, which was ensured in the pilot investigation. Participants were introduced to the research session with the option and right to withdrawal without penalty. Participants were debriefed about the research purposes and goals, and were given the opportunity to immediately ask questions or address concerns. If questions or concerns arose after study completion, participants were directed to contact the primary investigator, faculty advisor and licensed clinical psychologist, or the university's research compliance officer.

3. Results

Prior to data analyses, the required assumptions for the statistical tests were examined for any violations. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. The current study had independent groups and an adequate sample size of 386, with approximately 30 to 35 participants per condition. All variables were also examined for homogeneity of variance using Levene's Test of Equality of Error Variances, in which nonsignificant values indicated equal variances. The Kolmogorov-Smirnov statistic was used to assess the normality of the distribution of scores. Variables with non-significant results were assumed to satisfy normality of distribution. Those with significant results were further inspected using the histograms and plots as well as skewness and kurtosis values. Due to negatively skewed distributions for the WCS subscales, these variables were applied with a box-cox transformation based on methods outlined by Osborne (2010). The box-cox transformation allowed the study data to use the optimal normalizing transformation for each variable (Osborne, 2010). After normality was established with these transformations, data analysis proceeded.

Transforming the data was necessary to adhere to parametric assumptions involved with statistical analyses. However, the nature of transformed data creates problematic issues when interpreting findings since the values are inherently changed. The current study employed analyses with the untouched database and the transformed database. Overall, there was overlap and consistency between findings with both databases (the same findings were found to be significant or non-significant in both datasets). Results were reported using the box-cox

transformations, and means and standard deviations were presented in their original values to promote understanding of the study findings.

Initial Pearson Correlations with Primary Variables

The independent, dependent, and exploratory variables were first analyzed using Pearson correlations. The first correlation analyses included the independent variables of actor sex and actor smiling, as well as the dependent variables of the WCS subscales and total, and the MRNI-R total. These correlation coefficients are presented in Table 2. Expert witness sex was negatively correlated with likeability ($r = -.12$, $p = .023$), and expert witness smiling was positively correlated with likeability ($r = .12$, $p = .015$) and confidence ($r = .14$, $p = .007$). Expert witness smiling approached a significant positive correlation with total credibility ($r = .10$, $p = .054$). It appears male experts tended to receive higher ratings of likeability. Regarding smiling behaviors, it seems an increase in smiling behaviors related to an increase in ratings of likeability and confidence. There were no significant correlations between actor pair and the dependent variables. MRNI-R scores were negatively correlated with likeability ($r = -.18$, $p < .001$), trustworthiness ($r = -.15$, $p = .002$), knowledge ($r = -.15$, $p = .004$), confidence ($r = -.12$, $p = .020$), and total credibility ($r = -.17$, $p = .001$). These findings suggest that lower participant endorsement of gender role stereotypes was associated with higher ratings of WCS subscales and total.

Examination of Primary Hypotheses

The first hypothesis was analyzed using multivariate analyses of covariance (MANCOVA) to examine the effects of expert witness sex on the WCS subscales and total while controlling for actor pair. Only data from the non-smiling condition was used, as proposed in hypothesis one. Expert witness sex overall was not found to have significant effects on WCS

Table 2: Pearson Correlation Coefficients of Primary Variables

		1	2	3	4	5	6	7	8	9
1	Expert Sex	----								
2	Expert Smiling	-.02	----							
3	Actor Pair	-.01	-.02	----						
4	Likeability	-.12*	.12*	-.06	----					
5	Trustworthiness	-.08	.05	-.11*	.69**	----				
6	Knowledge	-.05	.04	-.03	.70**	.83**	----			
7	Confidence	-.04	.14**	-.10*	.67**	.74**	.76**	----		
8	Total WCS	-.08	.10	-.09	.85**	.91**	.92**	.89**	----	
9	MRNI-R	.06	-.06	-.10*	-.18**	-.15**	-.15**	-.12*	-.17**	----

Note: * $p \le .05$; ** $p \le .001$

ratings, Wilk's Lambda = .93, $F(1, 132) = 2.37$, $p = .056$, partial eta^2 = .07. Univariate analyses

of variance (ANOVA) revealed that only ratings of likeability were significantly affected by

expert sex, $F(1, 132) = 5.21$, $p = .024$, partial eta^2 = .04. Although this finding was significant,

the partial eta^2 value of .04 demonstrated expert witness sex had a low to moderate effect on

ratings of likeability. Means and standard deviations are presented in Table 3.

The main effects proposed by hypothesis two also used MANCOVA to examine the

effects of expert witness smiling behaviors on the WCS subscales and total while controlling for

expert witness sex and actor pair. Expert witness smiling behaviors were found to have

significant effects on the WCS ratings, Wilk's Lambda = .96, $F(2, 381) = 2.06$, $p = .026$, partial

eta^2 = .03. Subsequent univariate ANOVAs revealed that two of the WCS subscales were

significantly influenced by expert witness smiling behaviors. Expert smiling behaviors

significantly affected ratings of likeability ($F(2, 381) = 3.83$, $p = .022$, partial eta^2 = .03), ratings

of confidence ($F(2, 381) = 3.84$, $p = .022$, partial eta^2 = .02), and ratings of total credibility (F

$(2, 381) = 3.09$, $p = .047$, partial eta^2 = .02). The partial eta^2 values of .02and .03 indicated small

effects of smiling behaviors on ratings of likeability, confidence, and credibility. Means and

standard deviations are presented in Table 4.

MANCOVA was used to examine the interactions proposed by hypothesis two, exploring

the effects of expert witness sex and smiling behaviors on the WCS subscales and total while

controlling for actor pair. An interaction term was created to account for expert witness smiling

and sex with six different levels (i.e., non-smiling male, low smiling male, moderate smiling

male, non-smiling female, low smiling female, moderate smiling female). The overall effect of

expert witness sex and smiling behaviors on the WCS ratings was significant, Wilk's Lambda =

.90, $F(5, 379) = 1.70$, $p = .017$, partial eta^2 = .02. Expert sex and smiling behaviors significantly

Table 3: Means and Standard Deviations for Hypothesis One

Expert Sex	Likeability	Trustworthiness	Knowledge	Confidence	Total WCS
Male	39.67±7.31	42.32±9.03	43.52±42.68	38.41±8.66	163.91±28.91
Female	36.81±7.72	40.28±9.19	42.68±7.58	38.74±10.14	158.51±30.89

Note: WCS subscales have a minimum of 5 and a maximum of 50, while total credibility scores have a minimum of 20 and a maximum of 200

Table 4: Means and Standard Deviations for Main Effects of Hypothesis Two

Expert Smiling	Likeability	Trustworthiness	Knowledge	Confidence	Total WCS
None	38.21±7.63	41.27±9.14	43.09±7.63	38.58±9.41	161.15±29.95
Low	38.29±8.44	41.37±8.30	42.82±7.98	39.42±8.94	161.90±29.91
Moderate	39.05±8.21	42.22±8.34	43.83±7.37	41.56±8.05	168.33±29.17

Note: WCS subscales have a minimum of 5 and a maximum of 50, while total credibility scores have a minimum of 20 and a maximum of 200

affected ratings of likeability (F (5, 379) = 3.36, p = .004, partial eta^2 = .04). The interaction

effects of expert sex and smiling on ratings of confidence were nearly significant (F (5, 379) =

2.19, p = .055, partial eta^2 = .03). Again, effect sizes were small for these findings. There were

significant differences between ratings of likeability for male and female experts who did not

smile (p = .037), with non-smiling men receiving higher ratings than non-smiling women. Male

experts with moderate smiling received significantly higher likeability ratings than female

experts who portrayed no smiling (p = .001) and low smiling (p = .008). Female experts with

moderate smiling received significantly higher likeability ratings than female experts with low

smiling (p = .019) and no smiling (p = .003). Means and standard deviations are presented in

Table 5.

Hypothesis 3 used univariate ANOVA to examine the effects of expert witness smiling

behaviors on ratings of expert witness attractiveness while controlling for expert witness sex and

actor pair. Expert witness smiling behaviors did not have a significant effect on ratings of

attractiveness, F (2, 381) = .30, p = .738, partial eta^2 = .002. Means and standard deviations are

presented in Table 6.

Hypothesis four was tested using five separate linear regression analyses to examine the

effects of expert witness smiling, expert witness sex, and participant endorsement of gender role

norm stereotypes (as measured by MRNI-R scores) on ratings of WCS subscales and total.

Linear regression was used based on the continuous nature of the independent variable measured

by the MRNI-R. An interaction term was created using the variables of expert witness smiling

and MRNI-R scores. The variable of actor pair was entered into the first block of each

regression analysis as covariates to control for its effect in analyses. The second block of each

Table 5: Means and Standard Deviations for Interactions of Hypothesis Two

Expert Smiling & Sex		Likeability	Trustworthiness	Knowledge	Confidence	Total WCS
None	Male	39.67±7.31	42.32±9.03	43.52±7.71	38.41±8.66	163.91±28.91
	Female	36.81±7.72	40.28±9.19	42.68±7.58	38.74±10.14	158.51±30.89
Low	Male	39.40±7.71	42.37±7.02	43.40±7.62	40.79±7.97	165.95±26.81
	Female	37.16±9.04	40.35±9.36	42.24±8.34	38.03±9.70	157.79±32.47
Mod.	Male	40.94±8.31	42.25±9.07	43.94±7.82	41.41±8.27	168.53±30.73
	Female	40.48±8.54	42.19±7.59	43.71±6.95	41.73±7.87	168.11±27.71

Note: WCS subscales have a minimum of 5 and a maximum of 50, while total credibility scores have a minimum of 20 and a maximum of 200

Table 6: Means and Standard Deviations for Smiling Behaviors and Attractiveness Ratings

	Attractiveness Ratings
No Smiling	3.96 ± 2.11
Low Smiling	3.83 ± 2.31
Moderate Smiling	4.02 ± 2.16

Note: Attractiveness was rated on a Likert-type scale from 1 to 10

analysis used the stepwise method and included the independent variables of expert witness smiling and sex and gender role stereotypes to examine main effects, as well as the computed interaction term to examine the significance of the interaction term. There was independence of residuals as assessed by Durbin-Watson statistics between 1.83 and 2.01, indicating no correlation between residuals. Assumptions of homoscedasticity and equal variances were ensured, as well as no multicollinearity as determined by Tolerance values above .1and VIF lower than 10 (all Tolerance values were .71 or higher and all VIF values were 1.4 or lower).

The first linear regression examined the interaction effects of expert sex, expert smiling, and participant MRNI-R scores on ratings of likeability while controlling for actor pair. Of note, the interaction term was excluded due to nonsignificance. The final best-fitting model for ratings of likeability included predictors of MRNI-R, expert smiling, and expert sex, F (4, 381) = 7.11, p < .001, adj. R^2 = .06. The variables contributed a total of 6.9% of variance in the model regarding ratings of likeability. Regression coefficients revealed that male experts (β = -.10, p = .049), increased expert smiling behaviors (β = .14, p = .006), and lower endorsement of gender role stereotypes (β = -.18, p < .001) predicted higher likeability ratings. See Table 7 for details on the final model.

The second linear regression examined the interaction effects of expert sex, expert smiling, and participant MRNI-R scores on ratings of trustworthiness while controlling for actor pair. Of note, the interaction term and the independent variables of expert sex and expert smiling were excluded due to nonsignificance. The final best-fitting model for ratings of trustworthiness included only the predictor of MRNI-R, F (2, 383) = 9.44, p = .002, adj. R^2 = .02. Participant scores on the MRNI-R contributed a total of 2.4% of variance in the model regarding ratings of trustworthiness. It was revealed that lower endorsement of gender role stereotypes (β = -.16,

Table 7: Expert Sex, Expert Smiling, and MRNI-R Scores Predicting Ratings of Likeability

Variable	β	*t*	*p*
Actor pair	.08	1.53	.127
MRNI-R scores	-.18	-3.63	<.001
Expert smiling	.14	2.77	.006
Expert sex	-.10	-1.97	.049

$p < .002$) predicted higher trustworthiness ratings. See Table 8 for details on the final model.

The third linear regression examined the interaction effects of expert sex, expert smiling, and participant MRNI-R scores on ratings of knowledge while controlling for actor pair. Of note, the interaction term and the independent variables of expert sex and expert smiling were excluded due to nonsignificance. The final best-fitting model for ratings of knowledge included only the predictor of MRNI-R, $F (2, 383) = 5.29$, $p = .005$, adj. $R^2 = .03$. Participant scores on the MRNI-R contributed a total of 2.7% of variance in the model regarding ratings of trustworthiness. It was revealed that lower endorsement of gender role stereotypes ($\beta = -.16$, p < .002) predicted higher knowledge ratings. See Table 9 for details on the final model.

The fourth linear regression examined the interaction effects of expert sex, expert smiling, and participant MRNI-R scores on ratings of confidence while controlling for actor pair. Of note, the interaction term and the independent variable of expert sex were excluded due to nonsignificance. The final best-fitting model for ratings of confidence included predictors of MRNI-R and expert smiling, $F (3, 382) = 5.72$, $p = .001$, adj. $R^2 = .04$. The variables contributed a total of 4.3% of variance in the model regarding ratings of confidence. Regression coefficients revealed that increased expert smiling behaviors ($\beta = .13$, p = .013) and lower endorsement of gender role stereotypes ($\beta = -.13$, p = .009) predicted higher confidence ratings. See Table 10 for details on the final model.

The fifth linear regression examined the interaction effects of expert sex, expert smiling, and participant MRNI-R scores on ratings of total credibility while controlling for actor pair. Of note, the interaction term and the independent variable of expert sex were excluded due to nonsignificance. The final best-fitting model for ratings of total credibility included predictors of MRNI-R and expert smiling, $F (3, 382) = 7.62$, $p < .001$, adj. $R^2 = .05$. The variables contributed

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Table 8: MRNI-R Scores Predicting Ratings of Trustworthiness

Variable	β	*t*	*p*
Actor pair	.13	2.51	.012
MRNI-R scores	-.16	-3.07	.002

Table 9: MRNI-R Scores Predicting Ratings of Knowledge

Variable	β	*t*	*p*
Actor pair	.07	1.44	.152
MRNI-R scores	-.16	-3.05	.002

Table 10: Expert Smiling and MRNI-R Scores Predicting Ratings of Confidence

Variable	β	*t*	*p*
Actor pair	.10	2.02	.044
MRNI-R scores	-.13	-2.62	.009
Expert smiling	.13	2.51	.013

Table 11: Expert Smiling and MRNI-R Scores Predicting Ratings of Total Credibility

Variable	β	*t*	*p*
Actor pair	.11	2.23	.026
MRNI-R scores	-.19	-3.73	<.001
Expert smiling	.11	2.11	.036

a total of 5.6% of variance in the model regarding ratings of total credibility. Regression

coefficients revealed that increased expert smiling behaviors ($\beta = .11$, p = .036) and lower

endorsement of gender role stereotypes ($\beta = -.19$, p < .001) predicted higher credibility ratings.

See Table 11 for details on the final model.

Exploratory Hypotheses

Trial Outcome

Pearson correlation analyses examined the exploratory variables of verdict, guilt,

punishment. Verdict was negatively correlated with guilt ($r = -.72$, $p < .001$) and punishment (r

$= -.30$, $p < .001$), in which guilty verdicts were associated with higher ratings of guilt and

punishment of the defendant. Guilt and punishment were positively correlated ($r = .44$, $p <$

$.001$), suggesting that higher guilt ratings were associated with higher punishment ratings for the

defendant. As expected, the exploratory variables measuring trial outcome were significantly

correlated to one another so that NGFI verdicts corresponded with lower ratings of guilt and

punishment; however, the coefficients were expected to be higher given the interrelated

contextual nature of the variables.

Pearson correlation analyses examined verdict and the dependent variables of WCS and

MRNI-R. Verdict was positively correlated with likeability ($r = .24$, $p < .001$), trustworthiness (r

$= .24$, $p < .001$), knowledge ($r = .25$, $p < .001$), confidence ($r = .19$, $p < .001$), and total

credibility ($r = .26$, $p < .001$). Verdict was negatively correlated with MRNI-R total ($r = -.13$, p

$= .008$). Verdicts of NGRI were associated with higher ratings on the WCS subscales and total

but lower ratings on the MRNI-R.

Pearson correlation analyses examined guilt and the dependent variables of WCS and

MRNI-R. Guilt was negatively correlated with likeability ($r = -.23$, $p < .001$), trustworthiness

(r = -.26, p < .001), knowledge (r = -.26, p < .001), confidence (r = -.21, p < .001), and total

credibility (r = -.27, p < .001). Guilt was positively correlated with MRNI-R total (r = .17, p =

.001). Higher ratings of guilt for the defendant were associated with lower ratings on the WCS

subscales and total but higher ratings on the MRNI-R.

 Pearson correlation analyses examined punishment and the dependent variables of WCS

and MRNI-R. Punishment was negatively correlated with likeability (r = -.24, p < .001),

trustworthiness (r = -.30, p < .001), knowledge (r = -.30, p < .001), confidence (r = -.21, p <

.001), and total credibility (r = -.30 p < .001). Punishment was positively correlated with MRNI-

R total (r = .21, p < .001). Higher ratings of punishment for the defendant were associated with

lower ratings on the WCS subscales and total but higher ratings on the MRNI-R. Correlation

coefficients for trial outcome and the WCS and MRNI-R are presented in Table 12.

Participant Characteristics

 Pearson correlation analyses examined the exploratory variables of participant

characteristics such as sex, voter registration, religiousness, and political orientation along with

WCS and MRNI-R scores. Participant sex was positively correlated with voter registration (r =

.20, p < .001) and religiousness (r = .19, p < .001). Participant sex was also negatively correlated

with trustworthiness (r = -.12, p = .021), knowledge (r = -.10, p = .044), total credibility (r = -

.12, p = .023), and MRNI-R scores (r = -.26, p < .001). Male participants were less likely to be

registered to vote or endorse religiousness, but more likely to assign higher ratings of

trustworthiness, knowledge, and total credibility to expert witnesses. Participants endorsing

gender role norm stereotypes were more likely to be male, religious, and conservative, and less

likely to be registered to vote. Correlation coefficients for participant characteristics and the

WCS and MRNI-R are presented in Table13.

Table 12: Pearson Correlation Coefficients for Trial Outcome, WCS, and MRNI-R

		1	2	3
1	Verdict	----		
2	Guilt	-.72**	----	
3	Punishment	-.30**	-.44**	----
4	Likeability	.24**	-.23**	-.24**
5	Trustworthiness	.24**	-.23**	-.24**
6	Knowledge	.25**	-.26**	-.30**
7	Confidence	.19**	-.21**	-.21**
8	Total WCS	.26**	-.27**	-.29**
9	MRNI-R	-.13**	.17**	.22**

Note: * $p \leq .05$; ** $p \leq .001$

Table 13: Pearson Correlation Coefficients for Participant Characteristics, WCS, and MRNI-R

		1	2	3	4
1	Sex	----			
2	Voter Reg.	.20**	----		
3	Religiosity	.19**	-.02	----	
4	Political Orien.	.03	.12*	-.41**	----
5	Likeability	-.09	-.03	-.02	.10
6	Trustworthiness	-.12*	.05	-.04	.07
7	Knowledge	-.10*	.00	.-.04	.05
8	Confidence	-.10	.04	-.05	.08
9	Total WCS	-.12*	.01	-.04	.08
10	MRNI-R	-.26**	-.06	.31**	-.41**

Note: * $p \leq .05$; ** $p \leq .001$

Pearson correlation analyses examined the aforementioned exploratory variables along with the trial outcome variables of verdict, guilt, and punishment. Participants' political orientation was negatively correlated with religiousness ($r = -.41$, $p < .001$) and MRNI-R scores ($r = -.41$, $p < .001$). The data suggest that more conservative participants tend to endorse more religiosity and more gender role norm stereotypes than more liberal participants. Participants' religiousness was positively correlated with MRNI-R scores ($r = .31$, $p < .001$), which suggested that more religious participants tended to endorse more gender role norm stereotypes. Political orientation was positively associated with verdict ($r = .14$, $p = .005$) and negatively associated with guilt ($r = -.17$, $p = .001$) and punishment ($r = -.16$, $p = .002$). Political conservativeness was associated with more guilty verdicts and higher ratings of guilt and punishment for the defendant. Correlation coefficients for participant characteristics and trial outcome are presented in Table 14.

Expert Witness Actor Pair

Pearson correlation analyses examined actor pair and the WCS. Actor pair one consisted of actors one and four, while actor pair two consisted of actors two and three. Actor pair was positively correlated with trustworthiness ($r = .11$, $p = .033$) and confidence ($r = .10$, $p = .049$). The second actor pair related to higher scores of trustworthiness and confidence, as well as gender role norm stereotypes. MANOVA was used to examine differences between actor pairs on ratings of the WCS. Findings confirmed initial correlations and there were significant differences between ratings of trustworthiness ($F (1, 384) = 4.60$, $p = .033$) and confidence ($F (1, 384) = 3.90$, $p = .049$). Actor pair two appeared to have lower ratings on these subscales than actor pair one. Means and standard deviations are presented in Table 15.

Table 14: Pearson Correlation Coefficients for Participant Characteristics and Trial Outcome

		1	2	3	4
1	Sex	----			
2	Voter Reg.	----	----		
3	Religiousness	----	----	----	
4	Political Orien.	----	----	----	----
5	Verdict	-.04	.04	-.06	.14**
6	Guilt	.06	-.00	.09	-.17**
7	Punishment	.05	-.09	.06	-.16**

Note: $* p \le .05$; $** p \le .001$

Table 15: Means and Standard Deviations of Actor Pair and WCS

Actor Pair	Likeability	Trustworthiness	Knowledge	Confidence	Total WCS
One	39.51±8.16	42.56±8.19	43.51±7.76	40.73±8.26	166.32±29.10
Two	38.61±8.26	40.69±8.91	42.98±7.56	38.95±9.41	161.23±30.29

Note: WCS subscales have a minimum of 5 and a maximum of 50, while total credibility scores have a minimum of 20 and a maximum of 200

MANOVA was used to examine differences between individual actors on ratings of the WCS. There were significant differences based on actor for likeability (F (3, 382) = 4.86, p = .002), trustworthiness (F (3, 382) = 3.42, p = .017), confidence (F (3, 382) = 7.07, p < .001), and total credibility (F (3, 382) = 4.84, p = .003). There were no significant differences for knowledge (p = .142). Post hoc analyses revealed that actor two had significantly lower WCS ratings than actor one, three, and four on nearly all subscales. Actor two was not significantly lower than actor one on knowledge (p = .254) and confidence (p = .051), although the p-value for confidence was nearly significant. The findings suggested that actor two may have been responsible for significant differences found between actor pair. Means and standard deviations are presented in Table 16.

Based on significant differences found for actor pair, exploratory analyses were conducted to investigate whether actor pair moderated the effect of the independent variables on ratings of expert witness credibility. Results from analyses of the first three primary hypotheses indicated that actor pair significantly interacted with the independent variables to influence ratings of credibility. For hypothesis 1, actor pair was found to moderate the effect of expert sex on ratings of trustworthiness (F (2, 131) = 3.72, p = .027, partial eta^2 = .05), confidence (F (2, 131) = 8.54, p < .001, partial eta^2 = .1), and total credibility (F (2, 131) = 4.58, p = .12, partial eta^2 = .07). Means and standard deviations for the moderation in hypothesis 1 are presented in Table 17 and in Figures 1 and 2. Overall, the female actor from pair 2 tended to receive lowest ratings on the dependent measures.

For hypothesis 2a, actor pair was found to moderate the effect of expert smiling on ratings of confidence, (F (3, 379) = 8.54, p < .001, partial eta^2 = .002). For ratings of confidence, actor pair two had the lowest ratings in the non-smiling condition. The discrepancy in ratings

Table 16: Means and Standard Deviations of WCS Ratings by Actor

Actor	Likeability	Trustworthiness	Knowledge	Confidence	Total WCS
1	39.38±8.06	42.51±8.38	43.09±8.40	39.26±8.30	164.13±29.98
2	36.48±8.52	39.24±9.17	41.82±8.03	36.79±9.95	154.34±31.46
3	40.69±7.46	42.12±8.46	44.12±6.93	41.06±8.38	167.99±27.62
4	39.74±8.29	42.61±8.04	43.93±7.08	42.18±8.01	168.46±28.21

Table 17: Means and Standard Deviations for Moderation in Hypothesis 1

Actor Pair & Expert Sex		Likeability	Trustworthiness	Knowledge	Confidence	Total WCS
Pair 1	Male	40.23±7.73	43.35±9.38	43.94±7.71	38.41±8.78	166.42±31.76
	Female	38.21±8.29	43.09±7.32	42.68±7.58	44.50±6.86	169.03±25.90
Pair 2	Male	39.17±7.00	41.40±8.75	43.40±7.62	43.14±6.73	161.69±26.41
	Female	35.46±6.99	37.54±10.07	42.24±8.34	40.91±7.92	148.29±32.24

Note: WCS subscales have a minimum of 5 and a maximum of 50, while total credibility scores have a minimum of 20 and a maximum of 200

Figure 1: Moderation in Hypothesis 1 (WCS subscales)
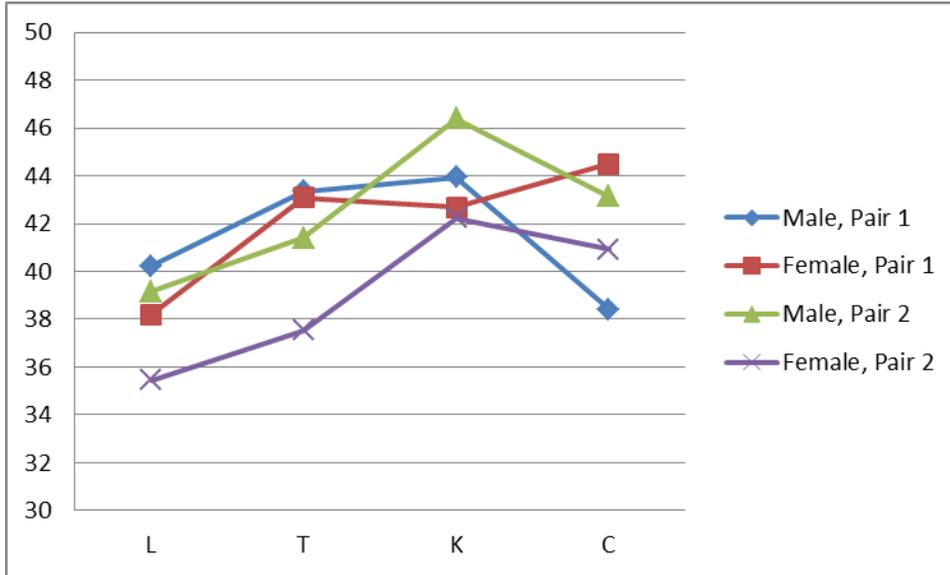
Note: Significant findings for Trustworthiness and Confidence

Figure 2: Moderation in Hypothesis 1 (WCS total)
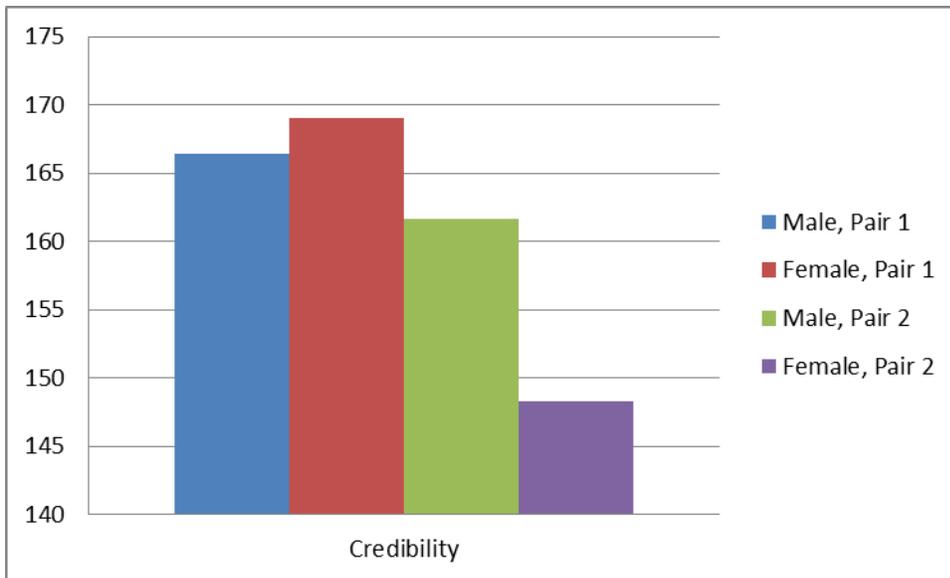
Note: Significant findings for overall credibility

was not substantial in the low smiling and moderate smiling conditions, however. Means and standard deviations for the moderation in hypothesis 2a are presented in Table 18 and Figure 3 (a figure is not included for credibility due to the nonsignificant result). For hypothesis 2b, actor pair was found to moderate the effect of expert sex and smiling on ratings of likeability (F (6, 374) = 4.31, $p < .001$, partial eta^2 = .07), confidence (F (6, 374) = 5.87, $p < .001$, partial eta^2 = .09), and total credibility (F (6, 374) = 3.73, $p = .001$, partial eta^2 = .06). For the sake of brevity, only the significant findings for likeability, confidence, and credibility are presented in Figures 4, 5, and 6. Overall, the female actor from pair 2 received lower ratings across the dependent measures, but the effect was less discrepant when in the moderate smiling condition.

For hypothesis 3, actor pair was found to moderate the effect of expert smiling on ratings of attractiveness, F (3, 380) = 3.18, $p = .024$, partial eta^2 = .02. Actor pair 2 received lower ratings of attractiveness in the non-smiling, low smiling, and moderate smiling conditions. Means and standard deviations for the moderation in hypothesis 3 are presented in Table 19.

Analysis of Qualitative Thoughts

Based on findings from the Elaboration Likelihood Model of persuasion (Petty & Cacioppo, 1986) and the heuristic-systematic model of processing (Chaiken, 1980), open-ended questions were included in a thought-listing measure immediately after testimony in order to investigate self-reported qualitative thoughts regarding the expert witness testimony. The purposes of the current study did not include these qualitative thoughts as primary variables of analyses; rather, they were included for exploration of participants' attention during a crucial portion of the study. For exploratory purposes, the thoughts were coded quantitatively into two categories representing categorical or peripheral thoughts.

A total of 1,540 thoughts were collected from the 386 participants, who were given the

Table 18: Means and Standard Deviations for Moderation in Hypothesis 2a

| Actor Pair & Expert Sex		Likeability	Trustworthiness	Knowledge	Confidence	Total WCS
Pair 1	No	39.17±8.03	43.22±8.30	44.23±7.78	41.17±8.14	167.78±28.64
	Low	39.48±8.10	41.50±8.23	42.65±7.94	39.47±8.50	163.10±28.91
	Mod	39.89±8.47	42.94±8.05	43.62±7.59	41.52±8.13	167.97±29.95
Pair 2	No	37.31±7.19	39.47±9.56	42.03±7.38	36.17±9.92	154.99±30.02
	Low	37.11±8.66	41.24±8.42	43.00±8.07	39.38±9.42	160.73±31.05
	Mod	41.54±8.30	41.51±8.63	44.03±7.21	41.60±8.02	168.68±28.60

Note: WCS subscales have a minimum of 5 and a maximum of 50, while total credibility scores have a minimum of 20 and a maximum of 200

Figure 3: Moderation in Hypothesis 2a (WCS subscales)

Note: Significant findings for Confidence

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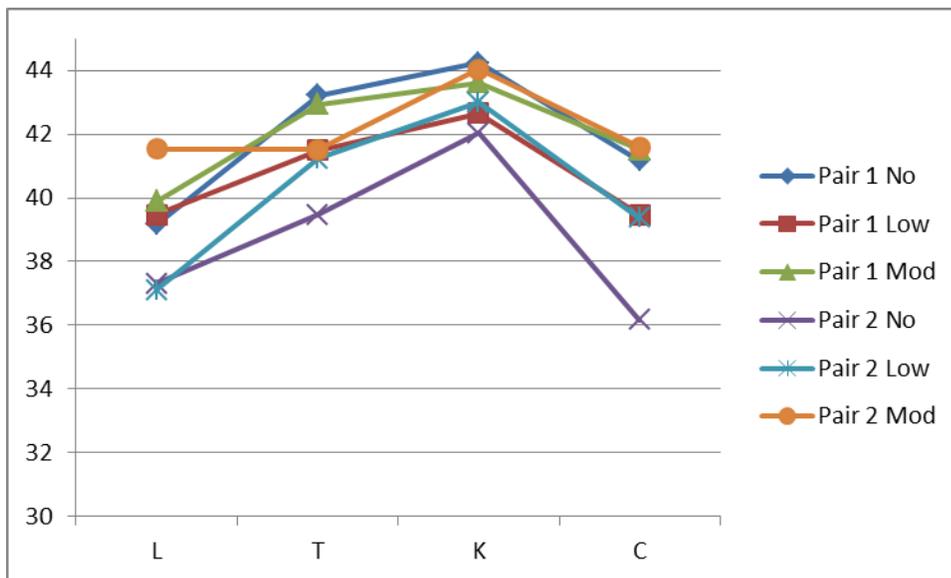
Figure 4: Moderation in Hypothesis 2b (Likeability)

Likeability

Legend: Male, Pair 1; Female, Pair 1; Male, Pair 2; Female, Pair 2
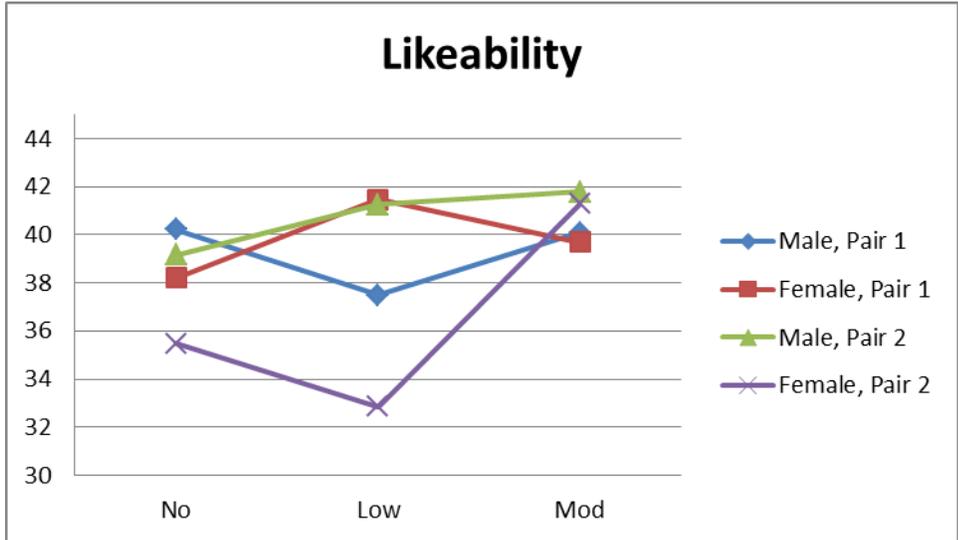
Note: Significant findings for Likeability

Figure 5: Moderation in Hypothesis 2b (Confidence)

Confidence

Legend: Male, Pair 1; Female, Pair 1; Male, Pair 2; Female, Pair 2
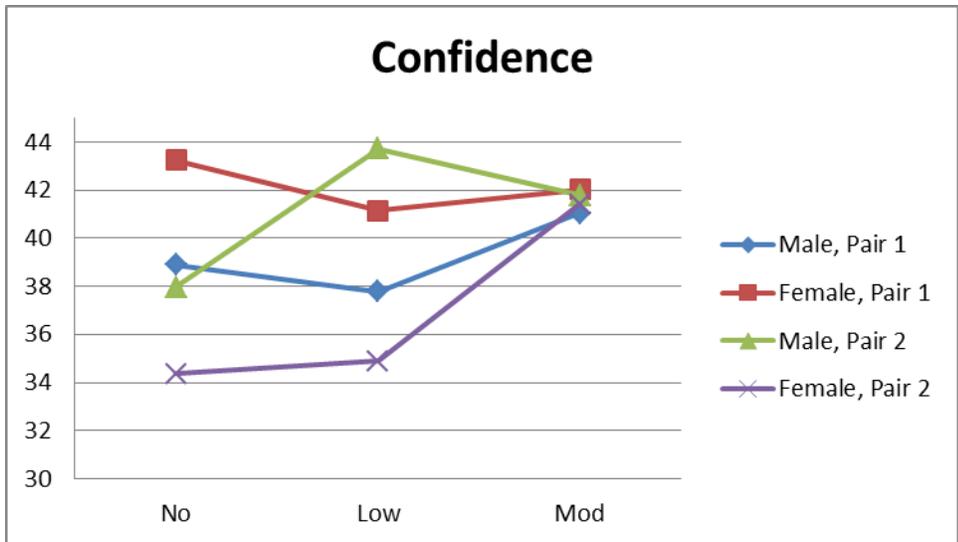
Note: Significant findings for Confidence

Figure 6: Moderation in Hypothesis 2b (Total Credibility)
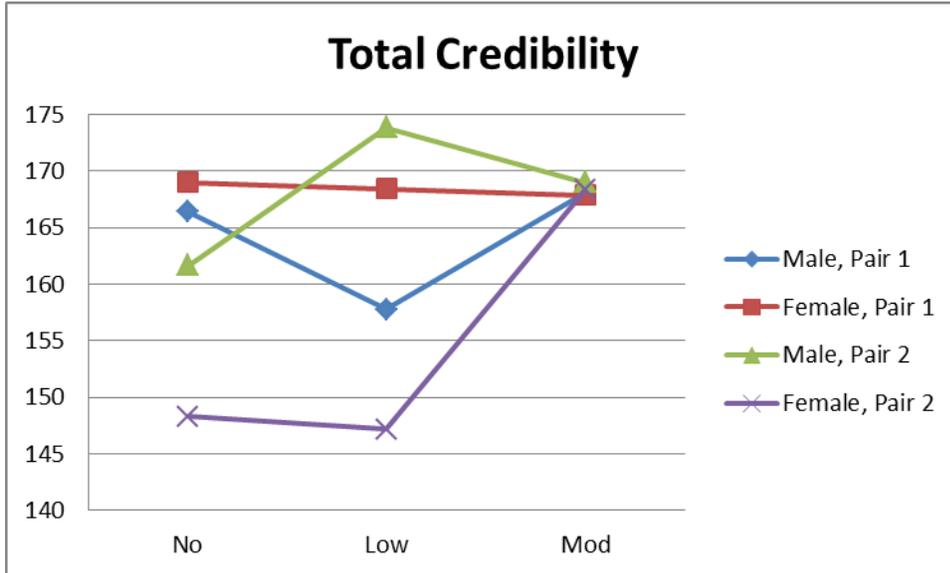
Total Credibility

Note: Significant findings for Total Credibility

Table 19: Means and Standard Deviations for Moderation in Hypothesis 3

		Attractiveness Ratings
Actor Pair 1	No Smiling	4.03 ± 2.14
	Low Smiling	4.40 ± 2.56
	Moderate Smiling	4.21 ± 2.16
Actor Pair 2	No Smiling	3.89 ± 2.09
	Low Smiling	3.27 ± 1.90
	Moderate Smiling	3.84 ± 2.15

Note: Attractiveness was rated on a Likert-type scale from 1 to 10

opportunity to provide up to five different thoughts following the expert witness testimony. Approximately 81.4% of the reported thoughts were coded as central thoughts, while 18.6% were coded as peripheral thoughts. Examples of central thoughts included, "[h]e was belligerent but never violent?" and "Wilder has had schizophrenia since he was 19." Additional examples of central thoughts are included in Table 20. Examples of peripheral thoughts included, "[t]he psychologist knows what he's talking about" and "I feel like I'm in an episode of law and order." Additional examples of peripheral thoughts are included in Table 21. Contrary to expectations, the findings revealed that participants reported a majority of central rather than peripheral thought processing in the current study. Interpretations of this finding and previous results are further discussed below along with potential implications and limitations.

Table 20: Random Selection of Central and Peripheral Thoughts

Central Thoughts
He assaulted a neighbor and pushed him over, causing the neighbor to hit his head.
Mr. Wilder was previously diagnosed with schizophrenia
Mr. Wilder wasn't ever violent before but was verbally hostile
Mr. Wilder does, according to a qualified psychologist, have paranoid schizophrenia
He did not understand what he was doing at the time of the crime
Mr Wilder's long history of mental illness seemed to support his case.
Dr. Smith gave Mr. wilder three different tests that all proved the Mr. Wilder was schizophrenia
He had been on meds since he was 18
Peripheral Thoughts
I thought the psychologist sounded plenty knowledgeable and qualified.
he had a lot of credentials
Psychologist seemed very calm and confident with her research
bad hair cut
She was not interesting
She seemed very on top of things and very quick to answer the questions
The doctor seemed unsure
dr. used lots of big psychology words

Note: Typos reflect comments that were copied verbatim.

4. Discussion

Expert Witness Sex

Based on previous research findings supporting the increased perceived credibility of male experts, it was hypothesized that male expert witnesses would receive higher ratings of credibility (as measured by the WCS subscales and total) than female expert witnesses. Only the hypothesis regarding increased ratings of likeability for male expert witnesses was supported, although the effect of this finding was determined to be of a low value. It may be of interest to note that likeability was measured by items measuring friendliness, respect, kindness, manners, and pleasantness of the expert witness. These characteristics which are used frequently to describe women were assigned at lower rates to female expert witnesses in this study. This single finding may be explained by "role congruity theory of prejudice" (Eagly & Karau, 2002, p. 573). This research has identified prejudice toward female leaders who may be perceived as incongruent with characteristics typically adopted by women. It may be that this subcategory of credibility was rated significantly lower for women because they were not solely exuding these typical characteristics of likeability on the witness stand.

Overall, mock jurors perceived the expert witness to be trustworthy, knowledgeable, confident, and credible whether a man or a woman was presented. Although it was expected that status theory would contribute to the increased perceived credibility of men, it may be that status theory applied to these findings in explaining the believability of an expert witness regardless of sex. Contrary to the aforementioned prejudice against female leaders regarding results of likeability ratings, the overall findings suggest that female expert witnesses are rated with

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comparable credibility in relation to male expert witnesses. Perhaps the acceptance of women in authoritative roles such as expert witnesses is supported by the increased presence of women in psychology over the years (Eagly & Karau, 2002). In other words, it may be less challenging for individuals to accept women in high-status positions of an increasingly female-dominated field. Still, the rejection of these hypotheses may present some evidence to explore the acceptance of women as expert witnesses in this field. Although the current study found that female expert witnesses were rated as less likeable than male experts, there was no impact on overall credibility for expert witnesses based on sex.

Expert Witness Smiling

It was hypothesized that expert witness smiling behaviors would be associated with higher ratings of ratings of credibility, and the results supported the relation between smiling and ratings of likeability, trustworthiness, and credibility. As expected, the results indicated that smiling was positively linked with increases in perceived likeability. This finding builds upon numerous studies that had already established the relation between smiling behaviors and likeability in social contexts. While previous research had initially investigated this association in a courtroom context with all types of witnesses (Nagle et al., 2014), the current study narrowed these findings as specifically applicable to expert witnesses.

Expert witness smiling behaviors were linked significantly with increased ratings of confidence. There were no known scholarly studies after searching in numerous databases that examined the effect of smiling behaviors on perceived confidence. One study rated public speakers as more positive when portraying more smiles and appearing more confident (Ayres & Heuett, 2009), but the current researchers did not find an actual manipulation of smiling behaviors with outcome measures examining perceived confidence. An informal search on the

Google search engine led to over ten million results, with titles such as "Smiling and Self-Confidence" and "What Does Your Smile Say About You?" Although the idea of the confident smile appears to be ubiquitous in the media, it has not been addressed in scholarly research articles in the context of credibility.

It may be that smiling behaviors are included in the positive characteristics that are attributed to individuals who are perceived as highly confident. Individuals, especially those with social anxiety, may associate desirable characteristics with confidence, including happiness (Bielak & Moscovitch, 2013). Although smiling behaviors may be associated with nervousness or embarrassment, the smiling behaviors in the current study were more of a polite nature. To mock jurors, the smiling behaviors may be associated with more positive characteristics like happiness than negative emotional states. The smiles may be associated with increased confidence instead of perceptions of social anxiety or nervousness. The current study is the first to link expert witness smiling behaviors with increased ratings of perceived confidence by mock jurors.

Expert witness smiling behaviors were also associated with significantly higher ratings of overall credibility. Expert witnesses in the moderate smiling condition had significantly higher ratings than those in the non-smiling and low smiling conditions. As hypothesized, the presence of increased smiling behaviors contributed to increased ratings of likeability and trustworthiness, which are two important source-mediated factors associated with credibility. As Brodsky (2002) noted, genuine emotion but not exaggerated affect may contribute to testimony efficacy in court. The current study provides some empirical evidence supporting the effective use of polite or warm smiling in the courtroom. Overall, smiling behaviors may improve an expert witness's perceived likeability and confidence, as well as on overall credibility. The results suggest a

potentially beneficial strategy to promote testimony efficacy. An increase in polite, warm smiling behaviors at appropriate opportunities during testimony may lead to greater perceived likeability, confidence, and overall credibility, which significantly influences testimony efficacy and justice in the courtroom.

It was hypothesized that smiling behaviors would significantly correspond with ratings of attractiveness based on previous research establishing this link. However, the current study found no significant differences in attractiveness ratings of the expert witness based on smiling behaviors. It may be that mock jurors were less attentive to peripheral distractors like smiling behaviors or attractiveness. The infrequent presence of smiling behaviors in the current study may have been at a threshold in which attractiveness was not affected.

The smiling behaviors in the current study were scripted to be held constant throughout conditions; however, the actual smiling behaviors may not be perceived as equivalent across participants. The actors were instructed to portray polite smiling by manipulating the zygomatic major muscles, or by pulling up the upper corners of their lips. Therefore, the portrayal of smiles may have been slightly different by actor due to the unique, natural smiles of the individual. This may have had an impact on the perception of smiling behaviors by mock jurors. Instead of polite smiles, the jurors may have perceived smirks or fake smiles. Although there was no criticism related to this in the thought listing measure or the pilot investigation feedback comment section, it may be useful to more strictly monitor smiling behaviors in future studies. It may be helpful to portray warmth and friendliness through more genuine smiles in order to prevent any potential perception of fakeness in the expert witnesses.

It may be of note to mention that the study design incorporated slight nodding in the non-smiling condition, and slight nodding plus smiling in the low and moderate smiling condition in

order to keep nodding constant across conditions. The findings of the current study are related to smiling behaviors coupled with nodding behaviors, rather than smiling behaviors alone. An analysis of the expert witness testimony videos did result in an increase in head nodding from the non-smiling to moderate smiling condition for each of the actors. Among the video clips, the non-smiling condition contained about four to five nods, the low smiling condition contained about six to eight nods, and the moderate smiling condition contained about eight to fourteen nods. The nods were found to be slightly inconsistent throughout conditions.

In the literature, head nodding has been found to correspond positively with enhanced confidence in one's thoughts about a persuasive message. Simple head nodding can signal broad approval of an individual's own internal thoughts (Briñol & Petty, 2003). These findings were extended to nodding by mock jurors, in which nodding jurors rated the expert as more credible than control jurors (Brodsky & Griffin, 2009). Head nodding by the expert witness in this study may have had an impact on credibility and persuasiveness. With this information in mind, the generalizability of the current study findings may not apply simply to smiling behaviors but smiling paired with head nodding.

Expert Witness Sex and Smiling Behaviors

Based on the literature supporting a link between smiling and likeability and likeability and trustworthiness, an interaction was proposed in which smiling female expert witnesses would receive higher ratings than male experts. The results indicated that there indeed was a significant interaction between expert witness sex and smiling behaviors for ratings of likeability but the proposed hypothesis was not supported. Smiling female experts were not assigned more likability or trustworthiness than smiling and non-smiling male experts. Male expert witnesses received higher ratings of likeability than female experts in all conditions (no, low, and moderate

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smiling), although there were only significant differences between moderately-smiling men and non-smiling and low-smiling women. Female expert witnesses were found to be more likeable when in the moderate smiling condition and were given significantly higher ratings than women in the no and low smiling conditions. There were no significant findings for interactions of expert witness sex and smiling for trustworthiness, knowledge, confidence, or overall credibility.

Based on gender role norms in which women smile more than men (Briton & Hall, 1995), it was expected that smiling female expert witnesses would be more likeable and trustworthy than male expert witnesses. The findings indicated that smiling female experts were not more likeable than smiling male experts. Men who smiled were found to be more likable than men who did not smile, which is inconsistent with research on gender role expectations for men to be less expressive and emotional (Brody, 1985; Kring & Gordon, 1998). The smiling men were also more likeable than non-smiling and low-smiling women, which may indicate increased favorability over women who were less congruent with gender role norms. These findings imply that male expert witnesses may elicit more likeability from jurors when defying gender role norms by exhibiting smiling behaviors.

Women who were more congruent with gender role norms in the moderate smiling condition were more likeable than women with incongruent behaviors in no or low smiling conditions. Women are observed to smile more frequently than men; additionally, they are *expected* to smile more than men (LaFrance & Carmen, 1980; Reis et al., 1990). Female expert witnesses who adhered to this role with moderate smiling were attributed with greater likeability than female experts who limited smiling or did not display any smiling behaviors at all. These findings suggest that female expert witnesses may promote testimony efficacy through likeability by portraying a moderate amount of smiling at appropriate times during testimony.

Gender Role Stereotypes

It was hypothesized that participant endorsement of gender role stereotypes would interact with the primary independent variables to affect ratings of expert witness credibility. It was expected that participants with high endorsement of gender role stereotypes would assign less favorable ratings of credibility to expert witnesses who defy gender role norms (i.e., female expert witnesses with no smiling and male expert witnesses with smiling behaviors). The results did not support the hypothesized interaction between endorsement of stereotypes, expert witness sex, and expert witness smiling behaviors for ratings of likeability, trustworthiness, confidence, and total credibility. The computed interaction term was not retained in any model of linear regression analyses for this hypothesis. However, gender role stereotypes did contribute a significant portion of explained variance in ratings of the WCS subscales and total. Of note, the percentage of explained variance was less than seven percent for each model. While the influence was significant, the overall impact of these findings may be considered small in size of effect.

Higher scores on the MRNI-R were associated with lower ratings of likeability, trustworthiness, knowledge, confidence, and overall credibility for the expert witness. Participants who scored higher on this measure may believe that men and women should adhere to traditional gender role norms. In the current study, participants who endorsed gender role norm stereotypes tended to be significantly more religious and politically conservative. Religious jurors have been found to be more punitive towards defendants than non-religious jurors (Johnson, 1985), and some religious factors have been found in one study to be more associated with favor of the death penalty (Miller & Hayward, 2008). While personality as a whole may be only marginally related to perceptions of expert witness credibility (Cramer,

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Brodsky, & DeCoster, 2009), it may be that an interaction of specific characteristics like religiosity, political conservativeness, and endorsement of gender role norm stereotypes may affect mock juror perceptions.

There may have been little interaction of gender role norm stereotypes and the independent variables due to the non-normal distribution of the credibility ratings. The ratings were highly negatively skewed, which was indicative of high ratings assigned regardless of condition. Therefore, the main effects or interaction effects of the independent variables were inhibited by the limited distribution of the credibility scores. Although the box cox transformations were applied, there were still no significant interactions retained to support hypothesis four. Future studies may consider examining this characteristic due to its potential influence in these contexts. Still, there may be some utility to the current study findings regarding gender role norm stereotypes.

The measure used in this study has a shortened form (MRNI-SF; Levant, Hall, & Rankin, 2013) with 21 instead of 53 items, which may provide a quick way to identify such beliefs during jury selection. The current study findings lend minimal support to the effect of participant characteristics on expert witness credibility and testimony efficacy when participants identify stereotypical beliefs about gender role norms. These results may potentially be applied to a courtroom context with jury selection and expert witness testimony. If measures like the MRNI-R or MRNI-SF are appropriate given the nature of the trial, then persons involved in the trial such as trial consultants, attorneys, and expert witnesses may refer to the current study findings in their practice. Jurors with high endorsement of gender role norm stereotypes may be less responsive to expert witness testimony.

Trial Outcome

Exploratory analyses investigating trial outcome, witness credibility, and gender role norm stereotypes revealed significant positive correlations between these variables. The trial outcome variables of verdict, guilt, and punishment were moderately to highly correlated with one another, suggesting that they were in fact measuring similar constructs. The trial outcome variables were moderately correlated with all of the WCS subscales and total, including expert witness likeability, trustworthiness, knowledge, confidence, and overall credibility. These findings suggest that expert witness credibility was directly associated with decision-making in the mock jurors. Higher ratings on the WCS corresponded positively with mock juror decisions of NGRI, lower ratings of guilt for the defendant, and lower ratings of punishment for the defendant. The nature of the expert witness testimony regarding mental illness and opinion of NGRI may be related to trial outcome and decision-making by mock jurors. These results provide additional support for the importance of expert witness testimony during trials, as well as the need to promote testimony efficacy and justice.

Participant Characteristics

Participant characteristics and demographics were explored for initial investigations of their relations to trial outcome, WCS, and gender role norm stereotypes. Participant sex was correlated with several different variables, including exploratory and primary ones. Male participants were more likely to assign higher ratings of trustworthiness, knowledge, and overall credibility to the expert witness. These findings suggest that perhaps male participants are slightly more inclined to rate expert witnesses are more credible than female participants. Of note, all of the male participants in this sample were enrolled in introductory psychology courses, which may indicate some different characteristics from men in general. The male respondents in

this study may not be generalizable to the population as a whole. Female participants were more likely to be registered to vote (one potential criterion for jury eligibility in most states) and more likely to identify as religious. Political orientation significantly correlated with several different variables. The more conservative the participant, the more likely the participant was to assign a guilty verdict, more guilt to the defendant, and more punishment to the defendant. Conservative participants were also more likely to rate themselves as religious. The more liberal the participant, the more likely the participant was to be a registered voter. These findings suggest that conservative participants may be more likely to be punitive in criminal trials, regardless of expert witness testimony.

Expert Witness Pair

Multiple actors were used to portray expert witnesses in order to increase generalizability of study findings. However, it was expected that there would be some variability across expert witness pair. Indeed, results indicated that actor pair two was significantly less credible than actor pair one. When analyzing individual actor differences, it was revealed that actor two had significantly lower ratings of credibility than the other three actors. Although this variability may have led to less significant findings, it also led the current study to be more generalizable since there is variability in the presentation of actual expert witnesses. Because the current study intended to analyze results by actor pair, there was no "cherry-picking" of the data to remove effects from actor two. Rather, the current findings may be considered stronger due to their significance despite slight variability in stimulus presentation.

After exploratory analyses revealed significant differences in ratings between the actor pairs portraying the expert witnesses, additional analyses were conducted to investigate the potential moderating effect of actor pair. Of note, this investigation was exploratory and was not

of primary interest in the current study. As previously mentioned, any effect of actor pair was used to promote the generalizability of the findings. Actor pair was found to be a significant moderator in hypotheses one, two, and three.

In hypothesis 1 regarding the effect of expert sex on credibility, actor pair moderated the influence of expert sex on ratings of trustworthiness, confidence, and credibility. The female actor of pair two received the lowest ratings on these factors. In hypothesis 2a regarding the effect of expert smiling on credibility, actor pair two in the non-smiling condition received the lowest ratings of confidence. In hypothesis 2a regarding the interaction of expert sex and smiling on credibility, the female actor of pair two received the lowest ratings of likeability, confidence, and credibility in the non-smiling and low smiling conditions.

The overall trend displayed the tendency for the expert witness portrayed by the female actor of pair two to receive lower ratings than all other actors. There may be potential reasons for the decreased credibility ratings for this actor, including lower perceived age. Her age was equivalent to the actor in pair one, but there may be differences in perceived age by mock jurors. Although the actor was accurately perceived as representative of the 25-35 year-old range during pilot investigations, there were no younger alternatives provided in the categorization. There may have been hesitancy to accept her as an expert or of high role status due to her younger age. Although her voice pitch seemed to be higher than the other actors, recent research found no differences in credibility ratings based on pitch – although it was previously thought that preference would be given to the lower pitch (Boyle, 2014). It may be of interest to examine the current data without constraints of actor pair in future studies.

Qualitative Thoughts

The Elaboration Likelihood Model of persuasion (Petty & Cacioppo, 1986) and the heuristic-systematic model of processing (Chaiken, 1980) prompted an exploratory investigation of participant thoughts regarding expert witness testimony. It was expected that participants would engage in both central thoughts about testimony content, as well as peripheral thoughts about the expert witness and other random issues. While the current study found that participants did report peripheral thoughts, there tended to be significantly more central thoughts about the testimony content. The attention to content and central thoughts may have occurred for several different reasons. The initial instructional manipulation check may have been successful in its attempt to promote attention and accurate responding by participants. In fact, some of the feedback from participants noted their surprise and subsequent alertness to the study. There may also have been some attempt by participants to respond in a socially desirable or favorable manner that would be appropriate in the study context. While the thought-listing measure instructed participants to note anything that came to mine, participants may have been dissuaded to report unrelated or inappropriate thoughts due to social desirability, or the tendency for individuals to self-report favorable images of themselves on questionnaires (van de Mortel, 2008). These findings may also be the result of genuine participation in the study. Some feedback from participants noted their excitement and enjoyment of the study, which may have served as additional motivation to attend to the testimony content.

Limitations and Future Directions

Although the current study collected additional data above the recommended sample size, effect sizes were still at a low or modest value for most of the study findings. It may be beneficial to collect additional data in order to improve effect sizes for significant findings. It

may also be beneficial to recruit more diverse participants. Most of the current study included young, Caucasian, female participants. The current study was limited by sample type, in which only college students were recruited as mock jurors. Although Amazon.com's MTurk was initially proposed for data collection with community samples, the IRB identified problems with the confidentiality and privacy of participants in studies through that pool. The online nature of this study may allow for additional data collection with community samples with moderate effort, time, and expense. Future studies may be focused on collecting additional data with non-college community participants.

The data was non-normative and required additional transformations and analysis to ensure that results using non-parametric data upheld integrity. The nature of this study in examining expert witness credibility led to a negatively skewed dataset due to the tendency for participants to assign higher credibility ratings to the expert witness. However, there were no variables introduced in the current study that would elicit very low or unfavorable ratings for the expert witness. While it is difficult to collect normative data, it was a limitation in this study to run transformed and nonparametric analyses.

The online nature of the study may have subtracted from the external validity of the study. Participants were allowed to complete the study at settings of their choosing, which could include their homes, classrooms, libraries, or other settings. None of these settings actually mimic the courtroom context. This type of limitation is common with experiments; however, this study features an additional potential limitation in the removal of social pressures from other participants and the primary investigator. While it is not clear as to the motivation or attention of the participants with an online study, the introduction of an instructional manipulation check and post-experiment manipulation check ensured some attention and accuracy.

There are several issues present in the current study that impair ecological validity of the findings. The expert witness testimony script was used by used previously in research by a former pre-doctoral student of the Witness Research Lab. His dissertation research also found little significant differences in credibility ratings besides knowledge, but the researcher speculated that the findings were not due to any restricted range of responses due to variation in ratings. However, after reviewing the testimony script it appears too well-written so that testimony appeared written and scripter rather than like spoken language. Although natural characteristics of speech were inserted to make the flow of the script more conversational, the content of the testimony script may be too convincing to elicit significantly different ratings in credibility.

The testimony script did include cross-examination by the prosecuting attorney, but the expert witness was portrayed as prepared without surprise for the adversarial questions. In the future, the testimony script could expand the cross-examination section with decreased composure and preparation by the expert witness. In actual trials, expert witnesses are unaware of questions that the prosecution attorney will ask during cross-examination. It may be helpful to use this information when conducting experiments of this nature.

Additionally, the design of the current study did not incorporate the portrayal of an opposing expert witness with equivalently convincing testimony. Although not every trial includes an opposing expert witness, cases including psychological issues like mental status may have the opposing side call their own expert witness to testify on the same mental health issues of the defendant. The presence of an opposing expert witness would likely contribute to differences in credibility ratings for the expert witness testifying for the defense in this case.

Expert witnesses were portrayed by actors who were Caucasian in two age group categories including 25-35 and 36-45 years. Future studies should expand on this research by including expert witnesses of different racial backgrounds and of older ages. While the current study attempted to generalize with additional expert witness actors, future studies may enhance external validity by including experts with varied demographic characteristics.

The actors who portrayed the attorneys' voices were held constant across all conditions; however, this may have had some influence on participant ratings of credibility. A female actor portrayed the voice of the defense attorney while a male actor portrayed the voice of the prosecuting attorney. The prosecuting attorney had an adversarial and confrontational script, while the defense attorney had more opportunities for polite or objective interactions with the expert witness. As previously mentioned, recent dissertation research by Boyle (2014) did not find any significant differences in credibility by vocal pitch. There may not have been preference toward either attorney voice. Still, it may be helpful in future research to portray the attorneys as the same sex, or to replicate videos with alternating sexes of attorneys.

Future studies could focus on qualitatively analyzing thoughts provided by participants, rather than quantitatively categorizing responses. The thought-listing measure provided rich details about participants' thoughts directly following testimony. It may be useful to identify common themes and strategies used by participants in the decision-making process. Because expert witness credibility was correlated with trial outcome, it may promote testimony efficacy by identifying the central foci of participants' thoughts regarding testimony content.

Conclusions

The current study contributed to existing literature on testimony efficacy and expert witness credibility by examining the effect of expert witness sex, smiling behaviors, and

participant characteristics on credibility ratings and trial outcome. As previously established in

studies, male expert witnesses had slight advantages over female expert witnesses regardless of

smiling. Smiling behaviors did improve expert likeability with both men and women. Findings

revealed the influence of participant gender role norm stereotype endorsement, which led to

lower ratings of credibility overall. The current study provided initial information on the

potential promotion of testimony efficacy with appropriate smiling behaviors by expert witnesses

in the courtroom context. More research is needed to examine the beneficial impact of smiling

behaviors for expert witnesses testifying in court.

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Appendices

Appendix A

The following information will be provided on the psychology research pool website to describe the study (along with the IRB approval code for the study):

Study Name – "Criminal Trial for Assault Charges: You be the juror!"

Description - Participants will be asked to read a short fact sheet about a criminal case where the defendant is charged with 2nd degree assault. The participants will then view a videotaped excerpt of testimony from the trial and complete questionnaires about the case and about themselves.

Eligibility Requirements – Participants must be 18 years of age or older.

Duration – 30-40 minutes

Credits – 1 Credit

Researcher – Jacklyn Nagle
Email: jenagle@crimson.ua.edu

Appendix B

The following information will be provided on the MTurk website to describe the study:

Title: Criminal Trial for Assault Charges: You be the juror!

Requester: Witness Research Lab

HIT Expiration Date: _____

Time Allotted: 30-40 minutes

Reward: $0.10

HITs Available: 400

Instructions (Open full instructions in a separate window)

Participants will be asked to read a short fact sheet about a criminal case where the defendant is charged with 2nd degree assault. The participants will then view a videotaped excerpt of testimony from the trial and complete questionnaires about the case and about themselves.

Appendix C

Pilot Investigation Feedback

Thank you for your participation. We would appreciate any of your feedback that might help improve any aspect of this study.

Appendix D

Participant Information Sheet – Student

Title of Research Project: *Criminal trial: You be the juror!*

Investigators: Jacklyn Nagle, M.A. & Stanley Brodsky, Ph.D.
Please read the following explanation of this research study. This document describes the
purpose, procedures, possible benefits and risks, and confidentiality of this study.

Purpose and Procedures
The current study is examining mock-jurors perceptions of criminal and civil cases. If you
decide to be in this study you will be asked to read a one-page case background summary. You
will then be asked to complete a written questionnaire. The questionnaire asks you to provide
your perceptions of the case described and give a short demographic description of yourself (e.g.,
age, sex, ethnicity, etc.). Participating in this study will take about 30-40 minutes.

Benefits and Risks
There are no direct benefits to you for participating in the study, but you will receive 1 research
credit. Potential benefits include gaining insight into your personal beliefs regarding justice and
learning how research is conducted. This study will help psychologists and lawyers understand
aspects of the cases presented and inform future research. There are minimal foreseeable risks or
discomforts involved with participating in this study. If at any point you feel uncomfortable, you
may stop participating without any penalty and research credit will be awarded.

Confidentiality
Your name will be recorded temporarily to ensure you receive credit for your participation and
will be kept separate from the other study materials. The documents containing participant
names will be destroyed once all credit has been awarded. There will be no identifying
information on the demographic sheet or questionnaires that would allow the researcher, or
anyone else, to determine which person completed the materials.

Withdrawal without Prejudice
Your participation is voluntary. You may choose not to take part at all. If you decide to
participate, you are free to withdraw at any time. Leaving the study will not result in any
penalty, and you will still receive the 1 research credit.

Cost of Participation
There will be no cost to you for participating in the current research study. All materials needed
for the study will be provided for you.

Alternative Procedures
Please see your class professor for any alternative procedures or assignments you can complete if
you choose not to participate in this study.

Questions

If you have any questions regarding the research study or any possible research related injuries right now, please ask them. If you have questions about the study later on, please contact Jacklyn Nagle at jenagle@crimson.ua.edu or Dr. Stanley Brodsky at sbrodsky@bama.ua.edu. Dr. Brodsky is a licensed clinical psychologist and is available if any aspect of participation is emotionally difficult or upsetting. If you have any questions about your rights as a research participant, you may contact Ms. Tanta Myles, The University of Alabama Research Compliance Officer, at 348-8461 or 1-877-820-3066.

Appendix E

Instructional Manipulation Check

Sports Participation

Most modern theories of decision making recognize the fact that decisions do not take place in a vacuum. Individual preferences and knowledge, along with situational variables can greatly impact the decision process. In order to facilitate our research on decision making we are interested in knowing certain factors about you, the decision maker. Specifically, we are interested in whether you actually take the time to read the directions; if not, then some of our manipulations that rely on changes in the instructions will be ineffective. So, in order to demonstrate that you have read the instructions, please ignore the sports items below, as well as the continue button. Instead, simply click on the title at the top of this screen (i.e., "sports participation") to proceed to the next screen. Thank you very much.

Which of these activities do you engage in regularly?
(click on all that apply)

| skiing | soccer | snowboarding | running | hockey |
| football | swimming | tennis | basketball | cycling |

Continue

Appendix F

Case Summary

Judge's Preliminary Instructions:
Good morning. We are ready to begin the next stage of the trial. I want to give you some brief opening instructions. My function as Judge is to make the legal rulings and to instruct you on the law. Your function is different, but you are equally judges; judges of the facts, the sole and exclusive judges of the facts. It's your duty to base your judgment on the evidence or lack thereof in the case and your evaluation of credibility and weight of the evidence. Under our legal system, the prosecution has the burden of proving the crime. However, since the defendant has entered a plea of Not Guilty by Reason of Insanity, the defense has the burden of proving with a preponderance of the evidence (i.e., the degree of certainty should be more certain than uncertain) that the defendant was insane at the time of the offense. Keep an open mind while hearing the evidence; don't form opinions or conclusions with respect to the guilt or non-guilt or responsibility of the defendant, except to continue to presume him innocent.

Case Background:
On May 7, 2007, Gary Wilder was arrested and charged with second degree assault, a class C felony. Mr. Wilder was involved in an argument with his neighbor. The police were called after Mr. Wilder punched his neighbor in the mouth and pushed him off his front porch, causing him to strike his head on the ground. The neighbor's wife witnessed the exchange and called the police. When the police arrived, Mr. Wilder appeared agitated and made many odd statements. The officers thought that Mr. Wilder may have had a mental illness. The neighbor was taken to a hospital where he was examined and underwent a computerized tomography (CT) scan of his head. All tests came back normal, but the victim did sustain a concussion. He also suffered a cut to his head (where it hit the ground) that required four stitches. He was discharged from the hospital later that evening.

Mr. Wilder was taken to jail and charged with the crime. While in jail, Mr. Wilder continued to make odd statements. He yelled that he was "God's messenger" and that he had a device implanted in his head that allowed him to read people's minds. Mr. Wilder was assigned a court-appointed attorney who discovered that Mr. Wilder had previously been diagnosed with Schizophrenia – Paranoid Type, a mental illness that includes experiencing hallucinations and delusions. People with this mental illness often believe that others are "out to get them" or cause them harm in some way. Mr. Wilder was diagnosed with this mental illness approximately 15 years before the incident. Over this time period, Mr. Wilder received mental health treatment in and out of hospitals. At the time of the incident, Mr. Wilder had stopped taking his prescribed medications because he had ran out of the medication and could not afford to refill the prescription. This was the first time that Mr. Wilder was accused of committing any type of violent act.

At his arraignment, Mr. Wilder pled Not Guilty by Reason of Insanity to the charge of second degree assault. This means that Mr. Wilder claimed that he was suffering from a mental illness at the time of the crime. Because of the mental illness, Mr. Wilder stated that he did not know that his acts were wrong at the time he committed them. The events surrounding the accident are not in dispute.

You are to think as if you are a juror on this case and determine what the verdict should be in Mr. Wilder's case. Even though you may want additional details regarding this case, specific questions regarding the case history or testimony will not be answered. Like all jurors, you must rely on the information you have been presented to reach your decision.

Appendix G

Qualification Questions

(Only the expert will be recorded on camera.
The attorneys and judges will speak to the
witness from behind the camera. The expert
will be dressed in professional attire, and
will be seated in the witness stand.)

(The expert is polite and warm. Aware of court
proceedings, the expert knows what to expect
for testimony. The expert has had a few
professional meetings with the defense
attorney, and they have discussed the expert's
qualifications and evaluation of the defendant.
The expert feels comfortable on the stand and
at ease with questioning from the defense
attorney.)

*The expert will flash a brief, mild, polite smile to the
camera prior to any dialogue.*

DEFENSE ATTORNEY:
Your Honor, the defense would like to call Dr. Taylor Smith.
Dr. Smith, please state your name for the court.

EXPERT:
My name is Dr. Taylor Smith.

DEFENSE ATTORNEY:
Thank you, Dr. Smith. Where did you earn your degree and do
your training?

*After the defense attorney says, "Thank you, Dr. Smith,"
the expert flashes a brief, mild, acknowledging smile
toward the camera.*

EXPERT:
I received my Ph.D. from Loyola and did a post-doctoral
fellowship in forensic psychology at the University of
Massachusetts Medical Center.

DEFENSE ATTORNEY:
Would you tell the Judge and jury what your profession is?

EXPERT:
I am a clinical psychologist and I specialize in forensic
psychology.

DEFENSE ATTORNEY:
    Are you licensed in this state?

EXPERT:
    Yes, I have been licensed in this state for over 10 years.

DEFENSE ATTORNEY:
    Where are you currently employed?

EXPERT:
    I teach at Purdue University, and I also have a private
    practice, where I primarily conduct forensic psychological
    assessments.

DEFENSE ATTORNEY:
    Ok... what are your duties at the University?

EXPERT:
    Let's see... I teach classes at both the graduate and
    undergraduate level. I also conduct research in the area of
    forensic psychology.

DEFENSE ATTORNEY:
    So has any of your, uh, research been published?

EXPERT:
    Currently, I have been an author on thirty-two... well,
    actually, thirty-three articles. Um.. I also have several
    articles that are being reviewed by journals for publication.

DEFENSE ATTORNEY:
    Thank you, Dr. Smith. Your Honor, I move that the court
    accept Dr. Taylor Smith as a qualified expert in the field of
    forensic psychology.

        *As the defense attorney speaks to the judge, the expert
        witness relaxes his/her focus from the camera. When the
        defense attorney says, "Thank you, Dr. Smith," the expert
        flashes a brief, mild, acknowledging smile toward the
        camera.*

JUDGE:
    Prosecution, any objections?

PROSECUTING ATTORNEY:
    No, Your Honor.

JUDGE:
    Dr. Taylor Smith is admitted as a qualified expert in the
    field of forensic psychology. Proceed, counselor.

                    Substantive Direct Testimony

DEFENSE ATTORNEY:
    Dr. Smith, how did you become involved in this case?

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EXPERT:
       In June of 2011, I was contacted by the defense and was asked
       to perform a neuropsychological evaluation of Mr. Wilder.

DEFENSE ATTORNEY:
       Did you receive any records prior to the evaluation?

EXPERT:
       I did receive the police records from the day of the incident,
       as well as Mr. Wilder's past inpatient hospital records. I
       also looked over Mr. Wilder's employment records, including
       his employment history, and behavior at work.

DEFENSE ATTORNEY:
       You mentioned that you reviewed hospital records?

EXPERT:
       Yes.. it appears that Mr. Wilder has been hospitalized two..
       um.. *oh, I'm sorry, three (mild, polite, apologetic smile)*...
       times.. since he was 22, due to his mental illness.

DEFENSE ATTORNEY:
       What mental illness does he have?

EXPERT:
       Well, throughout his hospitalizations, he has been diagnosed
       with several different mental illnesses... Schizophrenia,
       Schizoaffective Disorder, and Psychotic Disorder - Not
       Otherwise Specified.

DEFENSE ATTORNEY:
       Dr. Smith, in your opinion, does Mr. Wilder suffer from a
       mental illness?

EXPERT:
       Yes. Based on my evaluation and review of the records, I
       believe that Mr. Wilder suffers from Schizophrenia - Paranoid
       Type.

DEFENSE ATTORNEY:
       Can you explain for the jury what Schizophrenia - Paranoid
       Type   - is?

EXPERT:
       Certainly, Schizophrenia is a severe mental illness. It causes
       severe disruption of almost all mental functioning and is
       considered perhaps the most serious of all mental illnesses.
       The core symptoms are hallucinations, um, which are
       perceptions that have no basis in reality, such as hearing
       voices when no one is there. Another core symptom is
       experiencing delusions... these are false beliefs held with
       conviction, even though they have no basis in reality. An
       example of a delusion is a paranoid thought that someone is
       trying to kill you. Another symptom is thought disorder.
       Patients who suffer from schizophrenia say that they can't get
       their thoughts straight. They can't think properly.. or...

reach logical conclusions. Schizophrenics get confused, and
their speech is often hard to understand... illogical. Then
there is a disturbance in emotional expression; called
"constricted emotions" where they don't show the full range of
emotions. They may appear flat, dull, spacey, or even show
inappropriate emotions.

DEFENSE ATTORNEY:
    When does this... disease.. generally start?

EXPERT:
    Symptoms usually begin to appear during a person's late teens
    or early 20's. In Mr. Wilder's case, records suggest that he
    began experiencing symptoms around age 19... he was first
    hospitalized when he was 22.

DEFENSE ATTORNEY:
    Why was Mr. Wilder hospitalized?

EXPERT:
    Based on the records and interviews with Mr. Wilder's family,
    it appears that he was hospitalized the first time because he
    was experiencing psychotic symptoms. During his first
    hospitalization he was diagnosed with Schizophrenia – Paranoid
    Type, stabilized, and released. Mr. Wilder's subsequent
    hospitalizations were due to the increase of psychotic
    symptoms that probably resulted from Mr. Wilder not taking his
    prescribed medication.

DEFENSE ATTORNEY:
    Is this a common course of the illness doctor?

EXPERT:
    Yes, it is. There are usually times in which the patient's
    symptoms become more intense than usual. With medication,
    these major symptoms may subside, but the medications cannot
    control the thought disruption, so they tend to be unable to
    work or maintain relationships. Schizophrenic patients may
    become belligerent or even aggressive. So, they have a level
    of baseline functioning, and then from time to time the severe
    symptoms of hearing voices or becoming agitated can flare up.
    It is also quite common for patients with Schizophrenia to
    stop taking their medications and need to be re-hospitalized.

DEFENSE ATTORNEY:
    Dr. Smith, do you know whether or not Mr. Wilder was taking
    his medication on and around May 7, 2011?

EXPERT:
    Medical records indicate that he was not taking his medication
    at that time.

DEFENSE ATTORNEY:
    Do you know why not?

EXPERT:

According to Mr. Wilder, he had run out of his medication and could not afford to refill his prescription. His family stated that they were not aware he had run out of his medication until after the crime occurred. This is also quite common in patients with Schizophrenia.

DEFENSE ATTORNEY:
Dr. Smith, do you know if Mr. Wilder has any history of past violent acts?

EXPERT:
Based on interviews with Mr. Wilder, his family, and jail personnel as well as a thorough review of his medical and employment records, this appears to be the first incident of violence that Mr. Wilder has committed.

DEFENSE ATTORNEY:
I see, and did you have an opportunity to speak to Mr. Wilder about the events that occurred on.. um.. May 7?

EXPERT:
Yes. He - he was able to describe the event accurately. He stated that he got in an argument with the victim. He also reported that he does not know why he engaged in that argument. He *was* able to accurately describe the assault... and the events that followed.

DEFENSE ATTORNEY:
In your.. expert psychological opinion... what have you concluded about that incident?

EXPERT:
He assaulted the victim at a time.. when... he was off his medication and.. his psychotic symptoms were at their worst. He could not think or plan. He had no reason. It was a sudden, psychotic act.

DEFENSE ATTORNEY:
Ok, one final question, doctor, and I'll let you go.

> *The defense attorney pauses, and the expert expectantly waits for the final question, giving an acknowledging and mild smile to the camera.*

Can you render an opinion to a... *reasonable* degree of.. scientific certainty.. whether Gary Wilder, be*cause* of his mental illness, lacked.. substantial ability to know, or understand, the quality and consequences of his actions...? or - that such conduct was wrong during the incident on May 7, 2011?

EXPERT:
I can render an opinion. To the *best* of my expert scientific knowledge, I believe, that at that time, he did not know the quality and nature of his actions, or that they were wrong.

DEFENSE ATTORNEY:
     Thank you, Dr. Smith. Nothing further, Your Honor.

          When the defense attorney says, "Thank you, Dr. Smith,"
          the expert flashes a brief, mild, acknowledging smile
          toward the camera.

JUDGE:
     Any questions from the prosecution?

PROSECUTING ATTORNEY:
     Yes, Your Honor.

                    Substantive Cross-Examination:

          (The expert is still polite and warm, but knows
          that cross-examination with the defense
          attorney will be different. The expert has
          prepared for questioning by the prosecuting
          attorney, and feels competent to handle
          questions about the evaluation. The expert
          knows that the prosecuting attorney may try to
          discredit his/her testimony or evaluation in
          order to promote the prosecution's arguments.
           The expert still feels comfortable on the
          stand, and is ready to defend his/her opinions
          and statements.)

          The expert will flash a brief, mild, polite smile to the
          camera prior to any dialogue.

PROSECUTING ATTORNEY:
     Dr. Smith... what symptoms... exactly... of Schizophrenia, has
     Mr. Wilder suffered?

EXPERT:
     Well, records indicate that prior to his *first* diagnosis...
     Mr. Wilder had been.. hearing voices, and, began to believe
     that strangers were trying to harm him. He - he also had
     significant impairments in his attention and concentration
     abilities. Additionally, he displayed a flat affect.. which
     means that he did not respond in an emotionally appropriate
     manner to.. different emotional events in his life. Since the
     symptoms *first* appeared, Mr. Wilder has experienced.. minimal
     symptoms, when he has been on his medications.

PROSECUTING ATTORNEY:
     Well, what about when he *wasn't* on his medications?

EXPERT:
     Well... when *not* on his medications, Mr. Wilder *does* begin to
     hallucinate, and, experience delusional beliefs that strangers
     are trying to hurt him. When he experiences these delusions,
     he does become belligerent and hostile towards individuals.

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PROSECUTING ATTORNEY:
     Belligerent... and hostile? Doctor, I thought that you had
     testified that *this* was Mr. Wilder's *first* violent act?

EXPERT:
     Well, yes, that is technically correct. Um... prior to May
     7th, there is no indication that Mr. Wilder has
     ever engaged in *violence* towards another individual. His prior
     belligerence and hostility I mentioned, consisted of, yelling
     at people. Mainly family members, and hospital staff.. *and
     then walking away*.

PROSECUTING ATTORNEY:
     So Dr. Smith... is it fair to say that Mr. Wilder's symptoms
     are getting *worse*?

EXPERT:
     No, I do not believe that is a fair assessment.

PROSECUTING ATTORNEY:
     Hmm. Why not, doctor?

EXPERT:
     Prior to running out of his medication, Mr. Wilder was
     functioning very well in the community. He was holding down a
     job, and living independently - under the supervision of his
     family. If anything, I would say that Mr. Wilder has been
     managing his mental illness much *better* recently... with the
     exception of the events of May 7th.

PROSECUTING ATTORNEY:
     I see, doctor. Um.. when did you examine Mr. Wilder?

EXPERT:
     I saw him on three separate occasions, for a total of 15
     hours. In the first session, a clinical history was taken to
     establish the nature of Mr. Wilder's background, family
     history, education, work experiences, and his history of
     mental illness. The next two sessions were spent on,
     psychological testing.. and more psychological interviews.

PROSECUTING ATTORNEY:
     Dr. Smith, did you do all of the testing yourself?

EXPERT:
     Yes, I did.

PROSECUTING ATTORNEY:
     What type of testing did you do?

EXPERT:
     I administered a comprehensive battery of psychological tests
     and procedures to determine his current level of psychological
     functioning. These tests are designed to assess a wide variety
     of areas including the symptoms of his mental illness. I also

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spent a great deal of time speaking to Mr. Wilder about the days leading up to May 7th and what occurred on that day.

PROSECUTING ATTORNEY:
Do you mean that you just asked him some questions, and.. gave him some problems to solve?

EXPERT:
Well, in the simplest form: yes (brief smile/mild humor when speaking). But I used psychological measures that have been developed specifically for the assessment of forensic issues. These measures have been tested with large groups of people, up to thousands of people in some cases. And they have been proven to be reliable and valid. That means that the measure provides accurate, consistent results. After all, these tests are an important component of what we forensic psychologists base our conclusions on and they need to be the best measures available.

PROSECUTING ATTORNEY:
Okay. Let's start there. Tell me about the evaluation.

EXPERT:
I conducted a thorough assessment of his mental illness to arrive at an accurate diagnosis. To achieve this I used the Structured Clinical Interview for DSM Disorders, or SCID. This interview helped me to arrive at my final diagnosis of Schizophrenia – Paranoid Type. In addition to this interview I also administered the Personality Assessment Inventory, a measure of personality functioning, and the Rogers Criminal Responsibility Assessment Scale, the R-CRAS, a measure designed to help a psychologist determine an examinee's psychological functioning at the time of the crime.

PROSECUTING ATTORNEY:
What were the results from these tools?

EXPERT:
The results indicated that Mr. Wilder was suffering from Schizophrenia – Paranoid Type. They also indicated that his personality was consistent with an individual with Schizophrenia. These results may seem redundant, but it is important for forensic psychologists to base their conclusions on results from different sources. Additionally, the R-CRAS indicated that Mr. Wilder did not understand the nature of his acts at the time of the crime or that they were wrong.

PROSECUTING ATTORNEY:
Do you feel your testing results are a valid estimate of Mr. Wilder's true functioning?

EXPERT:
Yes, I do.

PROSECUTING ATTORNEY:
Nothing further, Your Honor.

After the prosecuting attorney says, "Nothing further,
Your Honor," the expert gives a brief, polite, departing
smile toward the camera.

JUDGE:

                    The witness may step down.

Appendix H

DEM – Student

1. My sex is:
   __Male   __Female

2. I consider myself to be:
   __ African American   __ Caucasian   __ Asian/Pacific Islander
   __ Hispanic   __ Native American __ Biracial
   __ Other

3. I am _____ years old.

4. Freshman_____   Sophomore_____   Junior_____   Senior_____   Other_____

5. Major: _____

6. Where were you born? _____

7. Where were you raised? If you lived in various places when you were growing up, please state where you consider yourself to have been raised. _____

8. Are you registered to vote? YES_____ or NO_____

9. Are you a U.S. citizen? YES_____ or NO_____

10. Have you been convicted of a felony? YES_____ or NO_____

11. On a scale of 1 to 10, with "1" = "Not at all religious" and "10" = Extremely religious," I consider myself to be: (PLEASE INDICATE ONE **NUMBER**)

Not at all Religious	1	2	3	4	5	6	7	8	9	10	Extremely Religious

12. What is your political orientation? PLEASE INDICATE ONE **NUMBER**:

Very Conservative	1	2	3	4	5 Moderate	6	7	8	9	10	Very Liberal

Appendix I

TLM

We are interested in **<u>any</u>** and all thoughts that you remember coming to mind when you heard the case. Please write your thoughts in the space provided on the paper. PLEASE WRITE ONLY ONE (1) "THOUGHT" PER BOX.

Don't worry about grammar or writing complete sentences, just write the basic meaning of each thought you can recall coming to mind.

1.)
2.)
3.)
4.)
5.)

Appendix J

Witness Credibility Scale

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

Example:

1	2	3	4	5	6	7	8	9	10

Dressed Formally   *Dressed Informally*

1	2	3	4	5	6	7	8	9	10

Unfriendly   Friendly

1	2	3	4	5	6	7	8	9	10

Disrespectful   Respectful

1	2	3	4	5	6	7	8	9	10

Unkind   Kind

1	2	3	4	5	6	7	8	9	10

Ill-mannered   Well-mannered

1	2	3	4	5	6	7	8	9	10

Unpleasant   Pleasant

1	2	3	4	5	6	7	8	9	10

Untrustworthy   Trustworthy

1	2	3	4	5	6	7	8	9	10

Untruthful   Truthful

1	2	3	4	5	6	7	8	9	10

Undependable   Dependable

1	2	3	4	5	6	7	8	9	10

Dishonest   Honest

1	2	3	4	5	6	7	8	9	10
Unreliable									Reliable

1	2	3	4	5	6	7	8	9	10
Not confident									Confident

1	2	3	4	5	6	7	8	9	10
Inarticulate									Well-spoken

1	2	3	4	5	6	7	8	9	10
Tense									Relaxed

1	2	3	4	5	6	7	8	9	10
Shaken									Poised

1	2	3	4	5	6	7	8	9	10
Not Self-Assured									Self-Assured

1	2	3	4	5	6	7	8	9	10
Uninformed									Informed

1	2	3	4	5	6	7	8	9	10
Illogical									Logical

1	2	3	4	5	6	7	8	9	10
Uneducated									Educated

1	2	3	4	5	6	7	8	9	10
Unwise									Wise

1	2	3	4	5	6	7	8	9	10
Unscientific									Scientific

Appendix K

Juror Decision Scale

Instructions: Please answer the following questions as best you can. If you have no opinion, please provide YOUR BEST JUDGMENT.

1. What is your verdict?

           Guilty   Not Guilty by Reason of Insanity

2. Where on the following scale would your verdict fall?

1	2	3	4	5	6	7	8	9	10

Definitely   Definitely
Not Guilty by   Guilty
Reason of Insanity

3. What should the level of punishment be?

1	2	3	4	5	6	7	8	9	10

As Lenient   As Harsh
As Possible   As Possible

Appendix L

MRNI-R

Please complete the questionnaire by circling the number which indicates your level of agreement or disagreement with each statement. Give only one answer for each statement.

Strongly Disagree	**Disagree**	**Slightly Disagree**	**No Opinion**	**Slightly Agree**	**Agree**	**Strongly Agree**
1	**2**	**3**	**4**	**5**	**6**	**7**

1. Homosexuals should never marry.
    1   2   3   4   5   6   7

2. The President of the US should always be a man.
    1   2   3   4   5   6   7

3. Men should be the leader in any group.
    1   2   3   4   5   6   7

4. A man should be able to perform his job even if he is physically ill or hurt.
    1   2   3   4   5   6   7

5. Men should not talk with a lisp because this is a sign of being gay.
    1   2   3   4   5   6   7

6. Men should not wear make-up, cover-up or bronzer.
    1   2   3   4   5   6   7

7. Men should watch football games instead of soap operas.
    1   2   3   4   5   6   7

8. All homosexual bars should be closed down.
    1   2   3   4   5   6   7

9. Men should not be interested in talk shows such as Oprah.
    1   2   3   4   5   6   7

10. Men should excel at contact sports.
    1   2   3   4   5   6   7

11. Boys should play with action figures not dolls.
    1   2   3   4   5   6   7

12. Men should not borrow money from friends or family members.
    1   2   3   4   5   6   7

13. Men should have home improvement skills.
   1   **2**   **3**   **4**   **5**   **6**   **7**

14. Men should be able to fix most things around the house.
   1   **2**   **3**   **4**   **5**   **6**   **7**

15. A man should prefer watching action movies to reading romantic novels.
   1   **2**   **3**   **4**   **5**   **6**   **7**

16. Men should always like to have sex.
   1   **2**   **3**   **4**   **5**   **6**   **7**

17. Homosexuals should not be allowed to serve in the military.
   1   **2**   **3**   **4**   **5**   **6**   **7**

18. Men should never compliment or flirt with another male.
   1   **2**   **3**   **4**   **5**   **6**   **7**

19. Boys should prefer to play with trucks rather than dolls.
   1   **2**   **3**   **4**   **5**   **6**   **7**

20. A man should not turn down sex.
   1   **2**   **3**   **4**   **5**   **6**   **7**

21. A man should always be the boss.
   1   **2**   **3**   **4**   **5**   **6**   **7**

22. A man should provide the discipline in the family.
   1   **2**   **3**   **4**   **5**   **6**   **7**

23. Men should never hold hands or show affection toward another.
   1   **2**   **3**   **4**   **5**   **6**   **7**

24. It is ok for a man to use any and all means to "convince" a woman to have sex.
   1   **2**   **3**   **4**   **5**   **6**   **7**

25. Homosexuals should never kiss in public.
   1   **2**   **3**   **4**   **5**   **6**   **7**

26. A man should avoid holding his wife's purse at all times.
   1   **2**   **3**   **4**   **5**   **6**   **7**

27. A man must be able to make his own way in the world.
   1   **2**   **3**   **4**   **5**   **6**   **7**

28. Men should always take the initiative when it comes to sex.
   1   **2**   **3**   **4**   **5**   **6**   **7**

29. A man should never count on someone else to get the job done.
    1   2   3   4   5   6   7

30. Boys should not throw baseballs like girls.
    1   2   3   4   5   6   7

31. A man should not react when other people cry.
    1   2   3   4   5   6   7

32. A man should not continue a friendship with another man if he finds out that the other man is homosexual.
    1   2   3   4   5   6   7

33. Being a little down in the dumps is not a good reason for a man to act depressed.
    1   2   3   4   5   6   7

34. If another man flirts with the women accompanying a man, this is a serious provocation and the man should respond with aggression.
    1   2   3   4   5   6   7

35. Boys should be encouraged to find a means of demonstrating physical prowess.
    1   2   3   4   5   6   7

36. A man should know how to repair his car if it should break down.
    1   2   3   4   5   6   7

37. Homosexuals should be barred from the teaching profession.
    1   2   3   4   5   6   7

38. A man should never admit when others hurt his feelings.
    1   2   3   4   5   6   7

39. Men should get up to investigate if there is a strange noise in the house at night.
    1   2   3   4   5   6   7

40. A man shouldn't bother with sex unless he can achieve an orgasm.
    1   2   3   4   5   6   7

41. Men should be detached in emotionally charged situations.
    1   2   3   4   5   6   7

42. It is important for a man to take risks, even if he might get hurt.
    1   2   3   4   5   6   7

43. A man should always be ready for sex.
    1   **2**   **3**   **4**   **5**   **6**   **7**

44. A man should always be the major provider in his family.
    1   **2**   **3**   **4**   **5**   **6**   **7**

45. When the going gets tough, men should get tough.
    1   **2**   **3**   **4**   **5**   **6**   **7**

46. I might find it a little silly or embarrassing if a male friend of mine cried over a sad love story.
    1   **2**   **3**   **4**   **5**   **6**   **7**

47. Fathers should teach their sons to mask fear.
    1   **2**   **3**   **4**   **5**   **6**   **7**

48. I think a young man should try to be physically tough, even if he's not big.
    1   **2**   **3**   **4**   **5**   **6**   **7**

49. In a group, it is up to the men to get things organized and moving ahead.
    1   **2**   **3**   **4**   **5**   **6**   **7**

50. One should not be able to tell how a man is feeling by looking at his face.
    1   **2**   **3**   **4**   **5**   **6**   **7**

51. Men should make the final decision involving money.
    1   **2**   **3**   **4**   **5**   **6**   **7**

52. It is disappointing to learn that a famous athlete is gay.
    1   **2**   **3**   **4**   **5**   **6**   **7**

53. Men should not be too quick to tell others that they care about them.
    1   **2**   **3**   **4**   **5**   **6**   **7**

Appendix M

Actor Matching Variables

1. What is the age range of the actor? PLEASE CIRCLE ONE.

20-30   30-40   40-50   50-60   60-70   70-80

2. How much did the actor have an accent?

1	2	3	4	5	6	7	8	9	10

No
Obvious
Accent

Very
Obvious
Accent

3. How likeable was the actor?

1	2	3	4	5	6	7	8	9	10

Unlikeable

Likeable

4. How trustworthy was the actor?

1	2	3	4	5	6	7	8	9	10

Untrustworthy

Trustworthy

5. How confident was the actor?

1	2	3	4	5	6	7	8	9	10

Unconfident

Confident

6. How much body language did the actor use?

1	2	3	4	5	6	7	8	9	10

Little to
None

A Lot

7. How loud was the actor?

1	2	3	4	5	6	7	8	9	10

Not at ll

Very Loud

8. How was the actor's speech tempo?

1	2	3	4	5	6	7	8	9	10

Very Slow

Very Fast

9. How attractive was the actor?

1	2	3	4	5	6	7	8	9	10

Not at all
Attractive

Extremely
Attractive

Appendix N

Instructions to Actors

Thank you for agreeing to participate as an actor in this study. You are asked to perform as an expert witness testifying in a criminal trial, in which the defendant is being charged for 2nd degree assault. You will be a neuropsychological expert witness who is testifying on the defendant's history of mental illness. The videos should last approximately 10-15 minutes each. There may be feedback and additional recording in order to ensure that the character is portrayed accurately.

There are two different types of testifying styles that you will portray for 3 videos:
1. An expert witness who testifies with NO smiling behaviors. This expert maintains an objective, professional, and neutral manner throughout testimony. Be sure that when taking a breath or pausing, you do not allow the corners of your mouth to turn upward. Maintain a neutral mouth throughout testimony. You may nod slightly during the testimony in replacement times when the expert witness would portray a polite smile in the other videos.
2. An expert witness who testifies with smiling behaviors. This expert is friendly, easygoing, and warm during selected parts of testimony. These smiles are meant to be genuine and portray a likeable manner. This expert maintains a professional manner during testimony, but uses opportunities during testimony to display warmth and likeability. When taking a breath or pausing, you should allow the corners of your mouth to turn SLIGHTLY upward. This should be your resting state.
   a) One video will include testimony with low amounts of smiling. These will be noted in the testimony script, and you will be directed accordingly.
   b) One video will include testimony with moderate amounts of smiling. These will also be noted in the testimony script, and you will be directed accordingly.

Video clip examples from real testimony:
1. http://www.youtube.com/watch?v=ri_ZPPiRiWM
   7:41, 7:45, 9:03 – transitory smile between statements (mouth curved upward, no teeth)
2. http://www.youtube.com/watch?v=xi7LMtc1TuU
2:00 – smile while talking ("that's what he *said*… [smile and slight laugh]… let's look, however, at what he *did*.")

Appendix O

MC

Instructions: Please answer the following questions to the best of your ability in the space provided. If you are unsure of the correct answer please GIVE YOUR BEST GUESS.

1. Which side called the expert witness?

       Prosecution   **Defense**

3. Was the expert witness a man or a woman?

       Man   **Woman**

3. What was the name of the expert witness?
       Dr. Smith   **Dr. Jones**   **Dr. Thomas**

4. Where does the expert witness teach at?

       UCLA   **Purdue**   **Columbia**

5. What was the expert witness' opinion regarding the defendant's mental state at the time the offense occurred?

       The defendant was insane at the time of the offense.

       The defendant was sane at the time of the offense.

6. Did you notice any smiling behaviors by the expert witness?

       Yes, the expert did <u>occasionally</u> smile.

       Yes, the expert did <u>rarely</u> smile.

       No, the expert did not smile.

7. How **<u>attractive</u>** was the **<u>expert witness</u>** who testified in this trial?

1	2	3	4	5	6	7	8	9	10

Not at all   Extremely
Attractive   Attractive

Appendix P

Debriefing Form

To the participant:

If you have any questions or concerns following this session, you may contact the primary investigator, Jacklyn Nagle, at jenagle@crimson.ua.edu. Further, you may contact the faculty supervisor, Dr. Stanley Brodsky at sbrodsky@bama.ua.edu. Dr. Brodsky is a licensed clinical psychologist and is available if any aspect of participation is emotionally difficult or upsetting. If you have questions about your rights as a person taking part in a research study, you may call the Research Compliance Officer at UA at (205) 348-8461 or 1-877-820-3066.

As you already know, the study you participated in today was examining mock-juror perceptions of criminal and civil cases. Specifically, we wanted to investigate how jurors perceive the cases presented so that appropriate cases can be selected for future research.

The overall goals of the current study are to:
1. Determine how jurors perceive the cases presented. Twelve different videos were randomly assigned to participants in this study. Each participant read and rated one criminal case. We are curious about how mock-jurors perceive characteristics of psychologists who testify in court.
2. Allow you to better understand the legal system and the function of legal research, and to allow you to examine your thoughts about the function of the legal system.

If you want to obtain the results of the study once it is complete, please leave your information with the investigator. She will keep your contact information on file and send the results once the data has been analyzed.

Thank you for taking the time to participate in this study. You cooperation is appreciated.

Sincerely

Jacklyn Nagle, M.A.
Department of Psychology
The University of Alabama
404 Gordon Palmer Hall
jenagle@crimson.ua.edu

October 28, 2013

Office for Research

Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
R E S E A R C H

████████

Department of Psychology
College of Arts and Sciences
Box 870348

Re: IRB # 13-OR-290: "Effect of Expert Witness Characteristics on Mock
        Juror Decision-Making"

Dear ██████████

The University of Alabama Institutional Review Board has granted approval for
your proposed research.

Your application has been given expedited approval according to 45 CFR part
46. You have also been granted a waiver of informed consent [student sample]
and waiver of written documentation of informed consent [community sample].
Approval has been given under expedited review category 7 as outlined below:

*(7) Research on individual or group characteristics or behavior (including, but
not limited to, research on perception, cognition, motivation, identity,
language, communication, cultural beliefs or practices, and social behavior) or
research employing survey, interview, oral history, focus group, program
evaluation, human factors evaluation, or quality assurance methodologies.*

Your approval will expire on October 27, 2014. If the study continues
beyond that date, you must complete the eProtocol Renewal Form. If you
modify the application, please complete the eProtocol Revision Form. Changes
in this study cannot be initiated without IRB approval, except when necessary
to eliminate apparent immediate hazards to participants. When the study
closes, please complete the eProtocol Final Report Form. Please use
reproductions of the IRB-stamped participant information sheets and debriefing
form.

Should you need to submit any further correspondence regarding this
application, please include the assigned IRB approval number.

Good luck with your research.

Sincerely,

████████████

Chair, Non-Medical Institutional Review Board
The University of Alabama

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Cc: ████████████████

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