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Attorney beliefs concerning scientific evidence and expert witness credibility

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ABSTRACT

Expert witnesses play a pivotal role in offering a variety of scientific evidence at trial. Although judges are the ultimate gatekeepers of what constitutes valid scientific evidence, attorneys play an important part in determining what evidence is presented to the court. Employing experimental and descriptive analyses, the present study sought to address gaps in the attorney/expert witness literature by addressing three questions: One) To what extent do attorneys prefer forensic or social scientific evidence and experts?, Two) How knowledgeable are attorneys concerning empirically-supported indicators of expert credibility?, Three) What do attorneys believe concerning the frequency and nature of expert errors in their own trials relative to others? Results showed that attorneys prefer forensic science evidence and experts compared to social/psychological counterparts. Moreover, attorneys displayed considerable knowledge of factors that will impact perceived expert credibility. In particular, attorneys value perceived expert trustworthiness, communication skills, content of testimony/reports, perceived expert knowledge, and years and type of expert experience. Finally, attorneys displayed a consistent and strong self-serving bias pattern, such that they believe expert errors occur more much frequently in other attorneys' cases compared to their own. Implications are discussed with respect to vetting expert witnesses, scientific evidence/errors and wrongful conviction, and training for attorneys.

Expert witnesses provide legally relevant knowledge to the court based on their area of expertise (Melton, Petrila, Poythress, & Slobogin, 2007), educating fact-finders on scientific or professional data, conclusions, and opinions (Brodsky, Griffin, & Cramer, 2010). Testifying roles of an expert include court appointed testimony, neutral evaluator, case-blind didactic fact expert, testifying, evaluating expert hired by either the defense or the prosecution, and work product reviewer (Gould, Martindale, Tippins, & Wittman, 2011). The U.S. Supreme Court has held that expert testimony, to be admissible in federal courts, must be relevant to the case and based on principles, theories, or techniques that are scientifically reliable and valid. In making this determination, courts should generally consider the following factors: (a) Whether the principles, theories, or techniques of the expert can be tested and has been tested? (b) Whether they have been subject to peer review? (c) What are their known or potential error rates? (d) Whether they have been generally accepted in the relevant scientific community? (Daubert v. Merrell Dow Pharmaceuticals & Inc., 1993; General Electric v. Joiner, 1997; Kumho Tire Co. & Ltd. v. Carmichael, 1999). These determining factors of admissibility, commonly known as the *Daubert* standards, have been widely adopted by many states; however, there is no compulsion to do so, as *Daubert* was a case that merely interpreted the Federal Rules of Evidence.

Furthermore, it is important to note that in criminal cases, it has been found that in cases containing *Daubert* issues, the prosecutor's position (whether it is in support of questioned expertise or in opposition to it) is much more likely to be sustained than is that of the defense counsel's (Risinger, 2000). Also, due to many criminal defendants' lack of resources, scientific evidence is often used as a tool of the resource-laden prosecution rather than the defense (Rozelle, 2007). In reference to this potential prosecution bias, Rozelle (2007) proposes, "The game of scientific evidence looks fixed" (Rozelle, 2007, p. 598). Meanwhile, the same pattern is not seen in Risinger's (2000) examination of a large random sample of civil *Daubert* appeals. On the contrary, these cases, which were brought forth by the defendant ninety percent of the time, were most often sustained in favor of the defendant (Risinger, 2000).

As representatives of the state or defense, trial attorneys are tasked with advocating his or her side of a case while adhering to established legal standards of evidence presented to the court. Decisions concerning use of expert testimony and differing types of scientific evidence are among the most common, and potentially challenging, issues attorneys must evaluate in this context. Despite the great need for credible experts and science evidence, data presented in court sometimes fails to meet scientific and legal expectations of sound evidence. The role attorneys play in vetting expert testimony and scientific evidence is especially important and somewhat lacking in empirical study. The present study has two aims: 1) to describe attorney beliefs concerning important aspects of expert witness credibility and the most valued

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types of scientific evidence, and 2) to ascertain the role of attorney views of perceived expert credibility and types of science in their decisions to utilize an expert at trial. As such, we offer reviews of the foundations of expert credibility, role of social and forensic science in the courtroom, and state of legal professionals' knowledge concerning these issues.

1. Empirically-supported indicators of perceived expert witness credibility

Given the adversarial nature of the legal system, evidence is often presented to the court in a "battle-of-the-experts situation" (Greenberg & Wursten, 1988, p. 374). Legal decision makers are often faced with the task of deciding which expert is the most credible in order to determine which evidence to accept at face value. Subjective determinations about a witness's credibility are known to impact the persuasiveness of the expert witness's testimony in the courtroom; moreover, perceptions of expert credibility can influence verdict and sentencing recommendations (Brodsky et al., 2010). Furthermore, literature on persuasion suggests jurors may not engage in careful scrutiny of expert testimony upon hearing evidence which they may not have the preparation or background to fully comprehend (Cooper, Bennett, & Sukel, 1996). Especially with complex expert testimony, jurors may rely on the expert's credentials rather than evaluating the validity of the scientific testimony by thoroughly analyzing it (Cooper et al., 1996).

Source credibility exists at the root of witness credibility research. McCroskey and Young (1981) identified two central domains of source credibility: competency and character. More recent work indicates that perceptions of expert witness credibility are comprised of expert trustworthiness, confidence, likeability, and knowledge (Brodsky et al., 2010; Cramer, DeCoster, Harris, Fletcher, & Brodsky, 2011). Moreover, perceptions of expert witness credibility are also influenced by various factors including believability and credentials (Brodsky et al., 2010; Shuman, Champagne, & Whitaker, 1996a,b; Shuman et al., 1996a,b). Boccaccini and Brodsky (2002) illustrated this point; they found that, in a survey of 488 adult community members, expert witnesses were rated as most believable if they were from the same community as the participants, had previously testified for both the prosecution and the defense, and were not paid for their testimony. On the other hand, community members found experts who are from neighboring communities, who mostly write books, who testified previously for only the defense or the prosecution, and who charge a significant amount of money for their testimony to be less believable (Boccaccini & Brodsky, 2002).

The manner in which these indicators of perceived credibility affect legal decisions is often complicated. For instance, social science and legal scholars alike (e.g., Brodsky, 1999; Cramer, Brodsky, & DeCoster, 2009; Slovenko, 1999) note that expert witness confidence is a prominent factor in jury decision making. Moreover, aspects of credibility such as confidence and likeability may be assessed through verbal and nonverbal cues (Brodsky, Neal, Cramer, and Ziemke, 2009; Cramer et al., 2011). However, research has indicated that effects of perceived credibility (overall and facets such as confidence) is dependent upon the legal decision and nature of the expert at hand (Champagne, Shuman, & Whitaker, 1992; Cramer et al., 2011; Rogers, Bagby, Crouch, & Cutler, 1990). One particular study found that mock jurors rate medium- and high-confidence witnesses highly in perceived credibility; however, the jurors found the medium-confidence witnesses to be more credible than the high-confidence witnesses (Cramer et al., 2009). In contrast, judges and lawyers prefer experts who are highly confident (Champagne et al., 1992). An emerging body of literature on applied studies of witness behaviors during testimony builds on existing foundations of credibility. Collectively, these studies articulate a list of empirically-supported lay and expert witness behaviors associated with credible or believable witnesses (e.g., Brodsky et al., 2009; Cramer et al., 2009; Neal & Brodsky, 2008; Boccaccini, Gordon, & Brodsky, 2003, 2005).

A natural question for attorneys arises based on this literature: What empirically-supported factors of perceived credibility do (or should) trial attorneys attend to in selecting an expert to use at trial? The present study evaluates the nature of attorney views of perceived expert witness credibility, as well as how these perceptions impact potential selection of an expert. A related, and potentially interacting, variable to consider in selection of an expert is the type of scientific data being offered during testimony. We review this topic next.

2. Acceptance of scientific evidence in the courtroom

While credibility judgments are invariably important to factor into decisions concerning usage of expert witnesses, so too is the type of evidence offered. For the purpose of the present study we focus on social science and forensic science expert witnesses who testify in criminal cases. Notably, types of scientific expertise may be received differently by the court. Accordingly, a focus group on scientific and forensic evidence in the courtroom emphasized the important role attorneys play in the courtroom's scientific acceptance process (McClure, 2007). In the following sections we highlight the nature of acceptance of these types of evidence.

2.1. Social and forensic science evidence in the courtroom

Criminal cases often present issues of social fact, defined by Acker (1990) as "general, empirical propositions about social events or relationships that may be instrumental to legal rule-making" (p. 25–26). For the purposes of the current study, social science research includes empirical findings from a number of scientific disciplines, including psychology and sociology. Social science research can influence court decisions in a number of ways (Roesch, Golding, Hans, & Reppucci, 1991). Besides expert testimony, a few ways in which this may happen include: when judges cite published data as secondary sources for their opinions, when formal briefs are brought directly to the attention of the courts, or when (perhaps most commonly) judges cite prior legal decisions to substantiate their opinion (Roesch et al., 1991). Additionally, Roesch et al. (1991) asserted that judges might be more reluctant to rely on social science evidence presented in court because they are generally unfamiliar with research methodology, which suggests an innate inclination toward reliance on legal scholarship and precedent during decision making. Furthermore, judges may be reluctant to use social scientific expert testimony because it is time consuming and expensive. Because many criminal defendants are indigent, the state is often left to the pay for the expert's testimony — if an expert is made available at all (Saltzburg & Capra, 2000).

Expert testimony may be the best way to introduce social science evidence in the courtroom because it allows judges to determine the relevancy of testimony, the experts to educate the court regarding complex literature, and judges to evaluate the evidence subject to cross-examination (see Tremper, 1987 for a review, as cited by Roesch et al., 1991). Taking this into consideration, scholars question the ability of experts to present accurate and unbiased accounts of the scientific literature under the pressures of the adversarial legal system (Saks, 1990), while also doubting the ability of judges and juries to interpret and weigh scientific information presented by individuals within an adversarial format (Roesch et al., 1991).

Specific to social scientific mental health expertise, the legal community's view of the appropriate role for mental health expertise is conflicted, if not paradoxical (Edens et al., 2012). Concerning social science's place in the courtroom, sentiment varies from regarding experts as essential to addressing certain legal issues, to viewing the experts with suspicion, disdain, or hostility (Edens et al., 2012). Despite an increase in improving the quality and objectivity of social science testimony in the last few decades (Shuman & Greenberg, 2003), the legal

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