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Expert Prevalence, Persuasion and Price: What Trial Participants Really Think About Experts

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Expert Prevalence, Persuasion, and Price: What Trial Participants Really Think About Experts

ANDREW W. JURTS*

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INTRODUCTION

Conventional wisdom about expert witnesses will tell you:

There are more experts in court today than ever;¹
Experts must have an attractive personality to be effective with a jury;²

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1. See Robert J. Shaughnessy, *Dirty Little Secrets of Expert Testimony*, LITIG., Winter 2007, at 47, 52 (2007) (suggesting a “proliferation of experts” and noting “it is not unheard of for one side to designate 20 or more experts”); Bob Sexter, *Hired Guns Can Confuse, Sway Jurors*, CHI. SUN-TIMES, May 11, 1995, at 24 (citing author Peter Huber regarding an “avalanche of hazy expert testimony [that] has clogged courts with specious lawsuits and distorted verdicts”).

2. JACK V. MATSON, EFFECTIVE EXPERT WITNESSING 146–47, 162–64 (5th ed. 2013) (“Likeability is associated with credibility; experts who are perceived as likeable are more persuasive and credible than experts whom jurors dislike.”); Diane M. Sumoski, *Expert Advice: Practical Tips for the First Meeting with Your Expert*, SEC. ON LITIG. (Am. Bar Ass’n Annual Meeting), Aug. 7–10, 2008, at 1, 5, available at http://www.ccsb.com/pdf/Publications/Business%20Litigation/Meeting_with_your_expert.pdf [<http://perma.cc/7EGK>].

Expert compensation is essential in establishing the expert's bias;³
 Lawyers can accurately assess what jurors want in an expert;⁴
 Lawyers will usually choose an expert based on support for their
 position;⁵
 Experts have a clear idea of what makes them effective in court;⁶ and
 Large numbers of experts are "hired guns" who earn a living through
 testimony.⁷

Yet every one of these tenets of conventional wisdom is not true. After collecting survey data about expert witnesses, these were only a few of the interesting facts that the data revealed.

This project began with a sense of frustration that standard, baseline data about expert witnesses was either unavailable,⁸ dated,⁹ or narrowly focused.¹⁰ To fill the

-SZ6J] (noting that an expert may lack the personality to effectively testify, so a lawyer should ask: "Is the expert personable?").

3. See Richard Alcorn, *Ethics and Expert Witnesses*, ARIZ. ATT'Y, Oct. 2006, at 24, 32 (citing *Wroblewski v. de Lara*, 727 A.2d 930, 934 (Md. 1999)).

4. See Mark L.D. Wawro, *Effective Presentation of Experts*, LITIG., Spring 1993, at 31, 33–34 (1993) (suggesting methods that lawyers can appeal to what jurors want in an expert; for example: "Even when an expert report is not required, consider having the expert prepare one. Such a document has an inherent persuasiveness, quite apart from its content. For jurors, someone who has put his conclusions on paper will seem more committed to them and more professional.").

5. See Elliott D. Petty, *Ethical Implications of "Hired Gun" Expert Witness—When Ethics Rules Fail*, MD. B.J., March 2011, at 36, 39 (suggesting that lawyers' "duty to zealously advocate for their clients may require them to hire outliers if it would help their client's case"); see also Samuel R. Gross, *Expert Evidence*, 1991 WIS. L. REV. 1113, 1132–33 (1991) (stating that lawyers will choose experts who give helpful testimony and believe it, thus increasing the relative importance of outliers or those willing to shade their testimony for the client's benefit).

6. See MATSON, *supra* note 2, at 142–49; Gross, *supra* note 5, at 1133 (noting that "expert witnesses can become expert courtroom performers; they can learn by repeated practice to present their testimony to achieve maximum effect"); see also Laurence Miller, *May It Please the Court: Testifying Tips for Expert Witnesses*, THE DOE REPORT, http://www.doereport.com/article_testifying_tips.php [<http://perma.cc/AUM5-S849>] (providing a detailed list of advice on how to present in court).

7. John M. Freeman, Editorial, *A Broken Tort System*, WASH. POST, Aug. 4, 2004, at A18; John M. Freeman, Editorial, *For Truth in Testimony*, BALT. SUN, Dec. 23, 2003, at 15A; Ron Galperin, *'Expert' Testimony Offers Steady Cash in a Slow Market*, L.A. TIMES, Jan. 31, 1995, at 8 (interviewing an expert who laments that "[m]any experts . . . are too willing to mold their expert opinions based on who is paying them"); see also DAVID M. MALONE & PAUL J. ZWIER, *EFFECTIVE EXPERT TESTIMONY*, at xi (2d ed. 2006).

8. One researcher suggests an explanation for the infrequency of studies in this area, and it involves a systematic lack of data. Simon A. Cole, *Where the Rubber Meets the Road: Thinking About Expert Evidence as Expert Testimony*, 52 VILL. L. REV. 803, 823 (2007).

9. See, e.g., Anthony Champagne, Daniel Shuman & Elizabeth Whitaker, *An Empirical Examination of the Use of Expert Witnesses in American Courts*, 31 JURIMETRICS J. 375 (1991); Gross, *supra* note 5; Daniel W. Shuman, Elizabeth Whitaker & Anthony Champagne, *An Empirical Examination of the Use of Expert Witnesses in the Courts—Part II: A Three City Study*, 34 JURIMETRICS J. 193 (1994).

10. Interview studies tend to focus on jurors' reactions to experts, which is an important

gap, this Institutional Review Board (IRB)-approved study included every civil case that went to trial in 2012 in one medium-sized urban county in Iowa and then surveyed four different groups of participants in those cases: judges, jurors, experts, and lawyers.¹¹ In doing so, the responses revealed many interesting facts, which when broadly grouped fit into the categories of expert prevalence, persuasion, and pricing. Each area demonstrates that some of the common conventional wisdom about experts is incorrect, but also provides solid baseline data about how experts are used today, what makes them effective, and how different participants in trial can anticipate or weigh characteristics of experts differently.

Regarding prevalence of experts in cases, the data reveals that expert witnesses appear in 86% of the cases in the study, which is an identical percentage as in two prior research studies.¹² While the overall percentage of experts has not changed, the number per case has dropped—compared to prior studies—to an average of 3.64 per case, with 64% retained by the plaintiff.¹³

In assessing what makes an expert effective in court, both types of factfinders—judges and jurors—agree that the most important trait for an expert is the ability to convey technical information in a nontechnical way, and that an attractive physical appearance is the least important factor.¹⁴ The experts' responses are broadly consistent with factfinders, although they seriously overvalue some factors (e.g., pleasant personality) and undervalue others (e.g., impressive educational credentials).¹⁵ Lawyers also agree with the factfinders and experts at the margins, but like experts, lawyers overvalue or undervalue certain characteristics.¹⁶ Even then, majorities of all groups surveyed remain confident that both judges and jurors can understand expert testimony.¹⁷

To find these and other basic baseline data about experts, I will begin in Part I with a review of prior empirical research into the areas of expert witnesses. There have been significant studies touching upon expert prevalence, persuasion, and pricing in the past, although few studies have occurred in recent years, and those that have collected data have done so as part of a larger project. In Part II, I will explain the methodology of the current study by explaining how the locale was selected, how surveys were administered, and what the response rates were. I will then evaluate the

but narrow part of the overall expert issue. *See, e.g.,* MOLLY SELVIN & LARRY PICUS, THE DEBATE OVER JURY PERFORMANCE (1987), available at <http://www.rand.org/content/dam/rand/pubs/reports/2007/R3479.pdf> [<http://perma.cc/438P-HJ26>]; SPECIAL COMM. ON JURY COMPREHENSION, AM. BAR ASS'N, JURY COMPREHENSION IN COMPLEX CASES (1989); Joseph Sanders, *Jury Deliberation in a Complex Case: Havner v. Merrell Dow Pharmaceuticals*, 16 JUST. SYS. J. 45 (1993).

11. For a more detailed explanation of the methodology of this study, including response rates, see *infra* Part II.A.

12. Shari Seidman Diamond, *How Jurors Deal with Expert Testimony and How Judges Can Help*, 16 J.L. & POL'Y 47, 56 (2007); Gross, *supra* note 5, at 1119.

13. *See infra* Table 1. For an explanation of how this number relates to prior studies in the area, see *infra* text accompanying note 141.

14. *See infra* Appendix.

15. *See infra* Table 5.

16. *See infra* Table 8.

17. *See infra* Table 6.

responses in detail, breaking down the frequency data on experts, the factors experts must have to be effective, and how much experts cost, while also comparing the responses of the different parties. I will then finish in Part III with a discussion of the implications of the survey findings, as well as thoughts on follow-up research to address possible weaknesses of this study.

By measuring how expert witnesses are actually used in court, this study offers important new data about what makes experts effective and suggests that some commonly held beliefs about experts are misguided. In doing so, the data establishes an important new baseline for measuring expert witnesses in court, updating and expanding on prior research in the field.

I. PRIOR RESEARCH IN THE AREA

Research on the impact and effectiveness of expert witnesses has been performed sporadically throughout the last several decades, with many of the studies surrounding the 1993 U.S. Supreme Court decision in *Daubert v. Merrell Dow Pharmaceuticals*.¹⁸ When examining the use of experts in actual litigation,¹⁹ researchers have analyzed three broad categories of issues: expert witness prevalence in trial, expert witness persuasion to the judge or jury, and expert witness payment or fees for preparation or testimony. Before discussing the current study in detail, this paper will review what work has been done in each of these areas and then consider why updated research is critically important.

A. Studies Examining Expert Prevalence at Trial

One major cohort of studies examines how frequently experts appear in modern litigation. This literature contains two main components: studies that examine the overall percentage of trials that have an expert witness and studies that focus on the mean number of experts per trial.²⁰ Within each group there are studies that rely on a survey methodology but also ones that analyze reported cases from third-party reporters.

18. 509 U.S. 579 (1993).

19. There is a separate body of work that examines the use of expert witnesses using an experimental approach, instead of actual cases. For a brief overview of that literature, see Neil Vidmar & Shari Seidman Diamond, *Juries and Expert Evidence*, 66 BROOK. L. REV. 1121, 1149–67 (2001).

20. That is not to say studies regarding trial use are the only studies on experts either, because other research exists on the use of experts in general, or on the separate issue of independent experts under Rule 706. See Joe S. Cecil & Thomas E. Willging, *Accepting Daubert's Invitation: Defining a Role for Court-Appointed Experts in Assessing Scientific Validity*, 43 EMORY L.J. 995 (1994) (analyzing the frequency of independent experts); Stephanie Domitrovich, Mara L. Merlino & James T. Richardson, *State Trial Judge Use of Court Appointed Experts: Survey Results and Comparisons*, 50 JURIMETRICS J. 371 (2010) (discussing the use of experts in all cases, but not limited to trial, as well as independent expert use); Andrew W. Jurs, *Questions from the Bench and Independent Experts: A Study of the Practices of State Court Judges*, 74 U. PITT. L. REV. 47 (2012) (reviewing the frequency of judicial use of, and reluctance to use, independent experts).

One early study by Anthony Champagne, Daniel Shuman, and Elizabeth Whitaker analyzed the prevalence of experts by examining civil trials occurring in Dallas, Texas, in 1988.²¹ When the researchers examined court files for all cases that went to trial between August and December of 1988, they found that fifty-seven cases out of ninety (63%) involved expert witness testimony.²² The research then expanded beyond the files to encompass surveys of participants as well.²³ Having used the Dallas study as their pilot project, the same research group then wrote a follow-up paper, which expanded the analysis to Baltimore, Seattle, and Tucson.²⁴ For each city, they examined the records of civil and criminal cases tried within approximately a two-month span in either 1990 or 1991, finding that 72% of the cases involved expert witnesses.²⁵ The results varied significantly between the cities, from 46% in Seattle to 92.5% in Baltimore.²⁶ As with the first study, the research was then expanded to include surveys of the participants in those trials.²⁷

Using a different methodology, Samuel R. Gross examined expert prevalence in his 1991 study *Expert Evidence*.²⁸ Instead of relying on court records as Champagne, Shuman, and Whitaker had done, Gross instead examined reported verdicts in civil cases from 1985 and 1986 from *Jury Verdicts Weekly*.²⁹ In the 529 reported cases, Gross reported that 86% of them involved expert testimony.³⁰ The study then disaggregated the data by determining the background of experts, the side of the case, the mean number of experts per side, and the types of cases, resulting in suggestions to reform the system.³¹

The most recent research examining the frequency of experts in real trials occurred in a 2007 study by Shari Diamond.³² Her analysis examined civil trials in Arizona, which were videotaped as part of a detailed study of jury behavior occurring in 1998.³³ Of the fifty cases involved, forty-three involved expert testimony (86%).³⁴

21. Champagne et al., *supra* note 9, at 380.

22. *Id.*

23. *See infra* text accompanying notes 55–61.

24. Shuman et al., *supra* note 9, at 197.

25. *Id.*

26. *Id.*

27. *See infra* text accompanying notes 55–61.

28. Gross, *supra* note 5.

29. While the results appear in the 1991 article *Expert Evidence*, the methodology of the study is explained in detail in a separate piece. Samuel R. Gross & Kent D. Syverud, *Getting to No: A Study of Settlement Negotiations and the Selection of Cases for Trial*, 90 MICH. L. REV. 319, 330 (1991).

30. Gross, *supra* note 5, at 1119.

31. Regarding background of experts and side of the case, see *id.* Regarding the mean number of experts and the types of cases, see *infra* text accompanying notes 37–40.

32. Diamond, *supra* note 12.

33. While the results appear in the 2007 article *How Jurors Deal with Expert Testimony and How Judges Can Help*, the methodology of the study is explained in more detail in Shari Seidman Diamond & Neil Vidmar, *Jury Room Ruminations on Forbidden Topics*, 87 VA. L. REV. 1857, 1869–73 (2001); *see also* Shari Seidman Diamond, Neil Vidmar, Mary Rose, Leslie Ellis & Beth Murphy, *Juror Discussions During Civil Trials: Studying an Arizona Innovation*, 45 ARIZ. L. REV. 1, 16–19 (2003).

34. Diamond, *supra* note 12, at 56.

Diamond then examined juror decision-making processes, as well as persuasion by experts.³⁵

In those studies that have examined the frequency of experts in actual trials, the findings vary from 63% in the 1991 Champagne, Shuman, and Whitaker study to 86% for both the Gross and Diamond analyses.³⁶ In addition to these pieces, other researchers have examined a closely related but distinct issue—the frequency of experts as expressed in mean expert per trial or by party.

In a 1996 follow-up study to his 1991 work, Samuel Gross and Kent Syverud examined the same set of reported cases from *Jury Verdicts Weekly* in 1985–86 and a similar set of reported cases from 1990–91.³⁷ In the 1996 paper, Gross and Syverud reported that the earlier sample showed a mean of 3.3 experts per trial, which increased in the later sample to 4.1.³⁸ In both samples, products liability cases had the most experts per case, while vehicular cases (earlier sample) or nonvehicular negligence cases (later sample) had the fewest.³⁹ Medical experts made up a majority of experts in these cases.⁴⁰

Using a different methodology, Carol Krafska and her colleagues also measured the frequency of experts in cases in a 2002 study.⁴¹ Instead of using reported cases as Gross and Syverud did, Krafska et al. relied on surveys of federal judges from 1991 and 1998.⁴² When the judges were asked about the frequency of experts in their most recent trial,⁴³ they reported a mean of either 4.31 experts per trial (1998) or 4.80 (1991).⁴⁴ Analysis of the 1998 responses indicates that a majority of the experts testified on behalf of the plaintiff, and that tort cases had more experts than other case types.⁴⁵ Krafska et al. also found, in contrast to the Gross and Syverud study, that only 42.5% of the experts in their survey were medical specialists.⁴⁶ The study is careful to note its limits in stating: “Our data do not provide insight into the absolute frequency of expert testimony in civil trials because we have no estimate of the number of trials involving no expert testimony.”⁴⁷

In 2010, David Flores, James Richardson, and Mara Merlino investigated the same issue by looking at a sample of cases from 1991–92 and comparing them to a 2005–06 sample.⁴⁸ The analysis of the earlier sample discovered a slightly smaller

35. See *infra* text accompanying notes 63–68.

36. See *supra* text accompanying notes 22, 30, and 34.

37. Samuel R. Gross & Kent D. Syverud, *Don't Try: Civil Jury Verdicts in a System Geared to Settlement*, 44 UCLA L. REV. 1, 9–10 (1996).

38. *Id.* at 31–32.

39. *Id.* at 33 tbls.17 & 18.

40. *Id.*

41. Carol Krafska, Meghan A. Dunn, Molly Treadway Johnson, Joe S. Cecil & Dean Miletich, *Judge and Attorney Experiences, Practices, and Concerns Regarding Expert Testimony in Federal Civil Trials*, 8 PSYCHOL. PUB. POL'Y & L. 309 (2002).

42. *Id.* at 311.

43. *Id.* at 312.

44. *Id.* at 319.

45. *Id.*

46. *Id.* at 320 tbl.2.

47. *Id.* at 318.

48. The researchers examined the actual court files of the 1991–92 cases in storage at a facility in Georgia. David M. Flores, James T. Richardson & Mara L. Merlino, *Examining the*

mean number of experts per case, 4.15 per case, than Krafka et al. had found in either the 1991 or 1998 data; the analysis also showed that the vast majority of the experts (78%) were plaintiff's experts.⁴⁹ When they examined the newer sample, the data showed that the mean number of experts had decreased in a nonstatistically significant way, to 3.58 per case.⁵⁰ The main difference, however, was that the plaintiff's percentage of those experts had dropped significantly by eighteen percentage points, to 60%.⁵¹ They also reported a drop in the overall number of medical experts between the earlier and later samples.⁵² This finding is consistent with the drop in medical experts between the Gross and Syverud findings, where they were a majority of experts, to the Krafka analysis, where they were not.⁵³

Overall, researchers have in the past analyzed the frequency of experts using different methodologies, and by examining their frequency both within all trials and within cases that have experts at all, they have established some interesting baseline data on the issue. To recap, studies have found that experts appear in between 63% and 86% of cases, with studies in the 1990s showing between 4.1 and 4.8 experts per case and the newest study in 2005 finding 3.6 experts per case.

B. Studies Examining Expert Persuasion

Many of the studies addressing expert prevalence also examined persuasion of experts as well. For analysis of real cases, researchers have approached the issue with surveys, observational studies, and thorough juror interviews.⁵⁴

Champagne, Shuman, and Whitaker examined expert persuasion using a survey approach in their studies on expert witnesses from 1991 and 1994.⁵⁵ In each study, they asked trial participants—judges, jurors, and counsel—about the characteristics necessary for an expert to be effective in court.⁵⁶ In both studies, experts responded that the two most important characteristics for an expert to be effective in court are “ability to convey technical information non-technically” and “willingness to draw firm conclusions.”⁵⁷ In both studies, jurors largely agreed, choosing “ability to

Effects of the Daubert Trilogy on Expert Evidence Practices in Federal Civil Court: An Empirical Analysis, 34 S. ILL. U. L.J. 533, 546 (2010). The 2005–06 cohort, however, could be accessed via the U.S. Court's PACER system. *Id.* at 545.

49. *Id.* at 548 tbl.1. Krafka et al. found 4.8 experts per case with their 1991 survey, and 4.31 experts per case with their 1998 survey. Krafka et al., *supra* note 41, at 319. The 1998 survey data also showed that 57% of testifying experts were plaintiff experts. *Id.*

50. Flores et al., *supra* note 48, at 548 tbl.1.

51. *Id.*

52. *Id.* at 551 tbl.2.

53. *See supra* text accompanying notes 40 and 46.

54. As with the issue of expert prevalence, there are also studies examining the issue of expert persuasion using an experimental approach. For a brief overview of literature on that approach, see Sanja Kutnjak Ivković & Valerie P. Hans, *Jurors' Evaluations of Expert Testimony: Judging the Messenger and the Message*, 28 LAW & SOC. INQUIRY 441, 446–50 (2003); Vidmar & Diamond, *supra* note 19, at 1149–67.

55. *See* Champagne et al., *supra* note 9, at 380; Shuman et al., *supra* note 9, at 197.

56. *See* Champagne et al., *supra* note 9, at 386–91; Shuman et al., *supra* note 9, at 202–04.

57. Shuman et al., *supra* note 9, at 200 tbl.1; *see* Champagne et al., *supra* note 9, at 386 tbl.5.

convey technical information non-technically” and “willingness to draw firm conclusions” as the most important characteristics of an expert to make them believable.⁵⁸ The lawyers who responded to both surveys believed that the characteristic of an expert most important to them when retaining an expert was their credentials or qualifications, although the two studies disagree on what the next most important is: “appearance/demeanor” (1991) and “adamancy of support for lawyer’s position” (1994).⁵⁹

The largest difference between the 1991 and 1994 studies came from the judges’ responses. When asked what characteristics of an expert make them credible, the 1991 respondents chose demeanor as the most important characteristic, with credentials second.⁶⁰ On the other hand, the judges from the 1994 study believed that the expert’s experience and objectivity were the most important factors in assessing credibility, while demeanor and credentials were less important.⁶¹

Since those early 1990s studies, researchers have not used survey methodologies to assess expert persuasion, instead relying on either observation or direct interviews of jurors. In her 2007 study, Shari Diamond used an observational method, qualitatively assessing juror analysis of experts from fifty civil trial deliberations that had been videotaped.⁶² When she examined those tapes, she found that jurors were far more likely to focus on the content of testimony rather than peripheral clues in deciding whom to believe.⁶³ When jurors could ask questions of the witnesses at trial, Diamond found that jurors asked very few questions of the experts regarding their qualifications, and instead the focus was on gathering more information to evaluate the content of the testimony.⁶⁴ Independent of the juror questions, Diamond found that the juror deliberations also focused on the content of the message, finding jurors “do not accept expert testimony on face value. They consider credentials and expertise, but are actively engaged with the content and attempt to assess the accuracy of what the experts say.”⁶⁵ She is careful to mention that this finding does not render credentials irrelevant, but instead indicates they are important solely as a cue to decide which content to believe.⁶⁶ In addition, she found that if jurors understand testimony of an expert, then use of technical language may actually boost the expert’s influence.⁶⁷ Clearly, Diamond’s observations contrast strongly with the survey data from Champagne, Shuman and Whitaker.

Independent of these survey and observational studies, the largest number of studies on expert witness persuasion involved interviewing jurors from complex

58. Shuman et al., *supra* note 9, at 200 tbl.2; see Champagne et al., *supra* note 9, at 388.

59. See Champagne et al., *supra* note 9, at 387 tbl.6; Shuman et al., *supra* note 9, at 202 tbl.4.

60. See Champagne et al., *supra* note 9, at 391.

61. Shuman et al., *supra* note 9, at 199.

62. Regarding methodology, see *supra* note 33 (discussing methodological explanations in other law review articles).

63. Diamond, *supra* note 12, at 58, 62.

64. *Id.* at 57.

65. *Id.* at 62.

66. *Id.* at 63.

67. *Id.*

cases and asking about their impressions of the evidence.⁶⁸ In the mid-1980s, Jane Goodman, Edith Greene, and Elizabeth Loftus interviewed jurors from a variety of product liability cases.⁶⁹ They found that jurors had difficulty with expert evidence, although jurors were helped when the presentation was highly organized.⁷⁰ When trying to resolve a dispute between experts on a single issue, Goodman, Greene, and Loftus reported that some jurors review the data underlying each opinion while others rely on the expert's overall credibility.⁷¹ On the other hand, they also reported that some jurors may have simply abandoned efforts to resolve a "[b]attle of the [e]xperts," leading to discounting of all expert opinions.⁷² Jurors also mentioned confusion with statistics or with the jury instructions.⁷³

Two years later, Molly Selvin and Larry Picus observed an asbestos-related civil lawsuit and then interviewed the six jurors afterward regarding the evidence presented to them.⁷⁴ When examining jurors' analysis of the testimony of an expert, Selvin and Picus found that the jurors' assessments were based "not only on the substance of his or her testimony but also on the perception of that witness's characteristics, personality and behavior."⁷⁵ This led the jurors to consider an expert's income from prior cases and an expert's social standing.⁷⁶

An American Bar Association (ABA) committee studied many aspects of juror handling of complex litigation, including how jurors reacted to expert witnesses, for its 1990 report *Jury Comprehension in Complex Cases*.⁷⁷ The researchers interviewed forty-three jurors from four different complex cases, three of which involved expert testimony.⁷⁸ When asked about experts, the jurors in two of the three expert cases remarked that they did not rely heavily on the experts in resolving the case.⁷⁹ The jurors often relied on peripheral clues about the experts in deciding on their testimony, disregarding "hired gun" experts while accepting the testimony of experts who had independent involvement in the case.⁸⁰ Jurors also commented

68. For an overview of the literature in this area, see Vidmar & Diamond, *supra* note 19, at 1140–49 (discussing interview studies authored by Neil Vidmar, Sanja Ivkovich and Valerie Hans, Molly Selvin and Larry Picus, the American Bar Association, Joseph Sanders, and the New Zealand Law Reform Commission).

69. Jane Goodman, Edith Greene & Elizabeth F. Loftus, *What Confuses Jurors in Complex Cases*, TRIAL, Nov. 1985, at 65.

70. *Id.* at 66.

71. *Id.* at 68.

72. *Id.* at 66–68.

73. *Id.* at 69–71.

74. SELVIN & PICUS, *supra* note 10, at 3–5.

75. *Id.* at 26–27.

76. *Id.* at 27–28, 49 ("The *Newman* jurors had a generally negative attitude toward the defendant's medical experts in that case, based in part on their perception of the social gap between themselves and these physicians, and the amount of income jurors perceived the experts earned from this and other asbestos cases.").

77. See SPECIAL COMM. ON JURY COMPREHENSION, *supra* note 10, at 5–6.

78. *Id.* at 6–8.

79. *Id.* at 366, 490.

80. *Id.* at 40–42.

extensively on the quality of presentation, criticizing opaque, circular, lengthy, or jargon-laced presentations.⁸¹

In his 1993 study, Joseph Sanders interviewed jurors after a complex case involving birth defects, in order to assess their understanding of the evidence.⁸² Like the ABA research, he found these jurors were likely to discount experts who they felt were “hired guns” due to their repeated litigation work, but Sanders also found that the jury had focused their attention on weaker types of causation evidence in the case.⁸³ He also explained that jurors tend to begin any case with an “anchor point” that all disputes are evenly divided until evidence is produced to the contrary;⁸⁴ in the studied case, this anchoring led to the jury overestimating the scientific consensus in the contested areas.⁸⁵ Sanders concluded that the jury “had difficulty understanding and assessing the scientific evidence.”⁸⁶

Only two years later, Neil Vidmar examined the jury handling of complex evidence in a series of medical malpractice cases.⁸⁷ In contrast to the Selvin and Picus jurors, Vidmar found the jurors to be quite competent in assessing the complex evidence, with “a basically solid understanding” of how the expert testimony fits into the case, as well as the ability to evaluate the testimony in the overall context of all evidence at trial.⁸⁸ He acknowledged that some individual jurors did rely on appearance, character, or charm to determine the merits of testimony.⁸⁹

In the most recent study (2003) of the issue of expert persuasion in actual cases, Sanja Ivković and Valerie Hans interviewed over fifty jurors from a variety of complex cases.⁹⁰ Their interviews provide a complex picture of the factors jurors consider in evaluating experts, finding that both the expert’s credentials and the quality of the presentation were important.⁹¹ Jurors preferred experts with quality credentials, but the most common item mentioned by the jurors was presentation.⁹² A clear presentation appeared to be the most important factor for the jurors in assessing the expert, along with completeness or lack of evasion.⁹³ On the other hand, experts who appeared repeatedly for the same attorney, who used jargon, who were evasive, or who were inconsistent in their opinions were considered less credible.⁹⁴ The researchers also found that jurors started cases naturally skeptical of experts, as

81. *Id.* at 40–42, 151–52.

82. Sanders, *supra* note 10. Sanders notes that he was able to perform a complete interview with only four of the twelve jurors in the *Havner* case. *Id.* at 56.

83. *Id.* at 61–63, 65.

84. *Id.* at 64.

85. *Id.* at 64–65.

86. *Id.* at 65.

87. NEIL VIDMAR, *MEDICAL MALPRACTICE AND THE AMERICAN JURY* (1995).

88. This specific characterization appears in a description of the 1995 juror interviews in Vidmar and Diamond’s 2001 article in *Brooklyn Law Review*. Vidmar & Diamond, *supra* note 19, at 1142.

89. *See* VIDMAR, *supra* note 87, at 172.

90. Ivković & Hans, *supra* note 54, at 450.

91. *Id.* at 457–58.

92. *Id.* at 458.

93. *Id.* at 470–71, 473.

94. *Id.* at 466, 470–71, 473. *But see* Diamond, *supra* note 12, at 63 (noting technical language enhances experts).

opposed to accepting their testimony without hesitation.⁹⁵ Ivković and Hans comprehensively analyzed jurors' impressions of experts, although in a more qualitative way than the survey studies, finding jurors with a more nuanced and sophisticated assessment of experts than studies from previous decades.

C. Studies Examining Expert Compensation

Only a few of the studies discussed above touch upon the issue of expert compensation, but those that do examine both the hourly rates charged by experts and overall income earned as an expert.⁹⁶ In the 1991 Champagne, Shuman, and Whitaker survey, the experts charged an average of \$258 per hour.⁹⁷ Fees varied widely based on specialty, with an equine veterinary specialist charging the lowest fee of \$65 per hour and a neurosurgeon with the highest at \$1000 per hour.⁹⁸ When asked how much of their income came from expert work, the vast majority of experts (82%) answered less than 5% of their annual income.⁹⁹ No expert earned more than 35% of his or her income through expert fees.¹⁰⁰

The researchers' 1994 survey used a similar methodology, but the results varied on several points.¹⁰¹ While expert fees varied greatly depending on specialty, the average fee charged by the experts in this study was \$185 per hour, 28% less than the 1991 respondents.¹⁰² In contrast to the 1991 survey, 9% of experts indicated they earned more than 35% of their annual income by expert witness fees.¹⁰³ Of those experts, the researchers noted that half were forensic specialists who worked for the state, while the rest "fit the stereotypical image of the highly paid professional expert."¹⁰⁴

More recently, researchers for expert witness marketing services have performed proprietary surveys on expert fees as a marketing tool attendant to their websites.¹⁰⁵

95. *Id.* at 452, 478.

96. For purposes of clarity, I will report the original dollar figure for prior research, but also adjust it to 2014 dollars using the Inflation Calculator from the Bureau of Labor Statistics, for comparative purposes. *CPI Inflation Calculator*, BUREAU OF LABOR STATISTICS, http://www.bls.gov/data/inflation_calculator.htm [<http://perma.cc/3FL4-QH36>].

97. Champagne et al., *supra* note 9, at 382. In 2014 dollars, this is equal to a rate of \$516.30 per hour. *CPI Inflation Calculator*, *supra* note 96 (converting dollars from the year of data collection—1988—to 2014 dollars).

98. Champagne et al., *supra* note 9, at 382. The veterinary specialist fee converts to \$130.07 per hour in 2014 dollars, while the neurosurgeon fee converts to \$2001.15 per hour. *CPI Inflation Calculator*, *supra* note 96 (converting 1988 dollars to 2014 dollars).

99. Champagne et al., *supra* note 9, at 383.

100. *Id.*

101. See Shuman et al., *supra* note 9, at 197 (discussing the methodology of the study).

102. *Id.* at 205 (noting that, as with the 1991 study, medical experts again charged the most). In 2014 dollars, this is equal to a rate of \$321.56 per hour. *CPI Inflation Calculator*, *supra* note 96 (converting dollars from the primary year of data collection—1991—to 2014 dollars).

103. Shuman et al., *supra* note 9, at 205.

104. *Id.*

105. The website ExpertPages issued its annual expert witness fee survey for 2014, which is available to members of the website. EXPERTPAGES, 2014 EXPERT WITNESS FEES &

As for-profit endeavors, however, these data are unavailable for nonlitigation research purposes.

D. The Critical Need for Additional and Updated Data

While there are prior studies on expert witnesses, as discussed above in Parts I.A–C, the literature review exposes why additional research is critical in the area. In sum, updated baseline research is necessary since much of the basic baseline data about experts is twenty or more years old, and while it is extensive, there remain many unresolved questions about experts.

On the issue of expert prevalence, the most comprehensive studies of frequency of experts date to the early 1990s. Champagne, Shuman, and Whitaker's 1991 study relied on data about trials in Dallas, Texas in 1988, and the 1994 follow-up study used cases in three cities from 1990 and 1991.¹⁰⁶ Gross's evaluation of expert frequency is similarly dated, relying on reported cases from the *Jury Verdicts Weekly* reporter from 1985 and 1986.¹⁰⁷ More recently, several additional studies have been done, but they have several weaknesses. Diamond's 2007 analysis of Arizona civil trials relied on trials from the 1990s, but the researchers also noted that while the initial selection of cases was random, due to the opt-out provisions for jurors and attorneys, the final sample included only 22% of the eligible cases.¹⁰⁸ Krafka's 2002 study involved judicial surveys from the 1990s as well, but it also focused on capturing the mean number of experts but not overall expert frequency.¹⁰⁹ The 2010 study of Flores, Richardson, and Merlino did establish baseline data on the mean number of experts per trial, as Krafka's study did by surveys, but never established a baseline frequency of experts in all trials.¹¹⁰ These studies represent all recent inquiries into expert frequency, and while they find interesting facts about experts, they are either dated or focus on a different issue than absolute frequency.¹¹¹ It is

PRACTICES SURVEY (2014), available at [http://connect.expertpages.com/getsurvey/\[http://perma.cc/DS8T-62FJ\]](http://connect.expertpages.com/getsurvey/[http://perma.cc/DS8T-62FJ]). An executive summary of the report suggests it may contain some data on expert fees, by profession. GERRY GOLDSCHOLLE, EXECUTIVE SUMMARY: EXPERTPAGES 2014 EXPERT WITNESS FEES & PRACTICES SURVEY (2014), available at <http://www.debow.com/documents/ExecSummaryReport0825V2.pdf> [<http://perma.cc/Y8RP-XK7B>]. The same is true for another proprietary report performed for SEAK, Inc., another expert witness website. JAMES J. MANGRAVITI, JR., STEVEN BABITSKY & NADINE NASSER DONOVAN, 2014 SEAK, INC. SURVEY OF EXPERT WITNESS FEES (2014), available at <http://www.seak.com/wp-content/uploads/2014/07/Expert-Witness-Fee-Data.pdf> [<http://perma.cc/Z76F-KWE6>] (containing the summary report only).

106. Champagne et al., *supra* note 9, at 380; Shuman et al., *supra* note 9, at 197.

107. Gross & Syverud, *supra* note 29, at 330.

108. Diamond & Vidmar, *supra* note 33, at 1871 (noting a 22% yield rate among eligible trials).

109. Krafka et al., *supra* note 41, at 311 (noting methodology); *id.* at 318 (mentioning that analysis did not assess absolute frequency of experts).

110. See *supra* text accompanying notes 48–52.

111. One researcher suggests an explanation for the infrequency of studies in this area, and it involves a systematic lack of data. Cole, *supra* note 8, at 823. This is consistent with my experience. See *infra* Part II.A.

difficult to believe, but when law students ask, “What percentage of cases involve expert testimony?,” professors lack current baseline data to answer the question.

The same can be said of studies on expert persuasion as well. The survey work in the area dates to Champagne, Shuman, and Whitaker’s work in the early 1990s, and Ivković and Hans’s juror interview study is the most recent, having been published in 2003.¹¹² In addition, the studies also suggest a significant issue that, as yet, remains unresolved: whether jurors’ assessment of expert witnesses has changed over time. The early studies, such as the juror interviews of Selvin and Picus, indicate demeanor and appearance may be more important for experts than other characteristics.¹¹³ This contrasts sharply with the later work of Diamond, who found jurors likely to examine expert content to try to determine the validity of what the expert asserted on the stand.¹¹⁴ Vidmar’s 1995 study—occurring between the other studies—found that some jurors evaluated the expert content while others relied on peripheral clues.¹¹⁵ These studies suggest that jurors in more recent litigation focus on the content of testimony to a greater extent than their counterparts from the 1980s, but the trend is not clear based on the existing data. New data about juror approaches to experts could offer support for this phenomenon or could discount it.

On the issue of expert compensation, the existing data are also significantly dated. Champagne, Shuman, and Whitaker’s surveys of the 1990s provide the most comprehensive data on the subject, but since they are twenty or more years old, may not accurately represent the current situation in courtrooms today.¹¹⁶ Even between those two surveys, the results vary on many points.¹¹⁷

Finally, there is another reason to think that studies from the 1990s cannot be relied upon, and that is the changes in reliability screening occurring during that decade. In the 1993 decision *Daubert v. Merrell Dow Pharmaceuticals*, the Supreme Court rejected the *Frye* general acceptance standard for expert gatekeeping, finding that judges must analyze reliability of expert testimony under Federal Rule of Evidence 702 prior to admission.¹¹⁸ That does not mean, however, that 1993 is the only date of interest. After *Daubert*, the Supreme Court in *General Electric Co. v. Joiner* held that reliability screening would be subjected to an “abuse of discretion” standard of review, giving trial judges enormous leeway in evaluating science in the courtroom.¹¹⁹ Only two years later, in the 1999 decision *Kumho Tire Co. v. Carmichael*, the Court held that expert gatekeeping applied not only to “scientific” experts under Rule 702, but to “technical” experts as well.¹²⁰ Together, the *Daubert*, *Joiner*, and *Kumho* decisions would ensure that judges would take an active role in

112. Champagne et al., *supra* note 9; Ivković & Hans, *supra* note 54; Shuman et al., *supra* note 9.

113. SELVIN & PICUS, *supra* note 10, at 26–28; *see supra* text accompanying notes 75–76.

114. Diamond, *supra* note 12, at 62; *see supra* text accompanying notes 65–66.

115. VIDMAR, *supra* note 87, at 172; *see Vidmar & Diamond, supra* note 19, at 1142; *supra* text accompanying notes 88–89.

116. Champagne et al., *supra* note 9; Shuman et al., *supra* note 9.

117. *See supra* text accompanying notes 97–104.

118. 509 U.S. 579, 589 (1993).

119. 522 U.S. 136, 139 (1997).

120. 526 U.S. 137, 147 (1999) (quoting FED. R. EVID. 702).

evaluation of the scientific merit of expert testimony, necessitating enhanced attention to the methodologies of science.¹²¹

Beyond these changes in federal court, state supreme courts have, since *Daubert*, also been reviewing state gatekeeping standards.¹²² After 1993, many of these courts followed the Supreme Court's lead and rejected *Frye*,¹²³ but many did not.¹²⁴ Without question, the role of judges in evaluating scientific reliability of experts was at issue in the states as well.

The combination of the *Daubert* trilogy with contemporaneous evaluation of similar issues in state courts suggests that the 1990s was a period of great change in judicial handling of experts, generally resulting in enhanced evaluation of scientific merit of evidence. If so, studies relying on data from before—or even during—this period may not reflect expert witness management in its current form. Updated baseline data is therefore critical to understanding the effect of the *Daubert/Kumho* and state-level changes to gatekeeping.

II. A NEW STUDY ON EXPERT WITNESSES

To update prior studies, explore the role of experts in modern litigation, and provide baseline data about the use of experts, I decided to design a survey about the use of expert witnesses in actual cases. Since I wanted the survey to cover both the issue of expert frequency, but also expert persuasion and compensation, I decided to model my study on the Champagne, Shuman, and Whitaker studies, the broadest examination of these three issues in prior research.¹²⁵ Starting with their approaches, I then widened the scope of the survey by adding additional questions and considerations. The responses to this survey provide a great deal of information about experts in modern litigation.

121. While the tests for reliability screening between the two standards are clearly dissimilar, there is general consensus that enhanced reliability screening occurs in *Frye* jurisdictions as well. See DAVID H. KAYE, DAVID E. BERNSTEIN & JENNIFER L. MNOOKIN, *THE NEW WIGMORE: EXPERT EVIDENCE* § 7.4.2(b), at 337 (Richard D. Friedman ed., 2d ed. 2011) (citing David E. Bernstein, *Frye, Frye, Again: The Past, Present, and Future of the General Acceptance Test*, 41 *JURIMETRICS J.* 385 (2001)) (“In *Frye* jurisdictions, the judicial scrutiny of scientific evidence also is becoming more demanding . . .”). To say the scrutiny has increased in both types of jurisdictions, however, is not to say that the standards are the same. Andrew W. Jurs & Scott DeVito, *Et Tu, Plaintiffs? An Empirical Analysis of Daubert's Effect on Plaintiffs, and Why Gatekeeping Standards Matter (a Lot)*, 66 *ARK. L. REV.* 975 (2013) (finding that *Daubert* is a stricter standard than *Frye*); Andrew W. Jurs & Scott DeVito, *The Stricter Standard: An Empirical Assessment of Daubert's Effect on Civil Defendants*, 62 *CATH. U. L. REV.* 675 (2013) [hereinafter Jurs & DeVito, *The Stricter Standard*] (same).

122. Jurs & DeVito, *The Stricter Standard*, *supra* note 121, at 686–87.

123. KAYE, ET AL., *supra* note 121, § 7.4.2(a); *see id.* at 333 n.18 (listing the states that have adopted the *Daubert* standard for gatekeeping).

124. *Id.* at 333; *see id.* at 333 n.19 (listing the states that have retained the *Frye* standard for gatekeeping).

125. *See supra* Part I.A–D (explaining Champagne, Shuman, and Whitaker's examinations of expert frequency, persuasion, and compensation in their 1991 and 1994 studies).

A. Methodology

To investigate the role of expert witnesses, this study needed to gather information about experts in real cases, but in a manageable way. With those considerations in mind, I proceeded with a two-step process of investigation: case file analysis followed by surveys.

Initially, I had to decide what location to include so I could have access to the large amounts of underlying data needed for the study. After considering several options, I decided to proceed with Polk County, Iowa, as the jurisdiction to study. Polk County is a medium-sized urban county with a population of about 430,000 in 2010.¹²⁶ The dataset included all civil cases that proceeded to jury trial in Polk County in the year 2012, the most recent complete year prior to the start of the project. The Clerk of Court of Polk County provided access to the court files, which allowed the data collection to proceed.

In 2012, Polk County had a total of forty-two civil jury trials.¹²⁷ Of those forty-two cases, thirty-six had at least one expert witness endorsement (86%).¹²⁸ I was able to review the court files for thirty-three of those thirty-six cases,¹²⁹ and for those cases I then recorded the names of the trial judge, attorneys of record, endorsed expert witnesses, and jurors. The final number of eligible participants included 496 individuals.

Having collected this information, I then proceeded to the second stage of the research, the survey questionnaire. I sent a letter to all judges, attorneys, experts, and jurors from those thirty-three cases, explaining the general goals of the survey as well as how to access it online. All participants received a unique personal authentication code, ensuring access only to the appropriate person.¹³⁰ Months after the initial letter, I sent a second letter to all persons who had not yet responded, asking again for their participation.¹³¹

126. *State & County Quickfacts: Polk County, Iowa*, U.S. CENSUS BUREAU (Dec. 2, 2015, 9:55 AM), <http://quickfacts.census.gov/qfd/states/19/19153.html> [<http://perma.cc/QT5G-KZ5Y>].

127. The list of cases that proceeded to trial was compiled by Randy Osborn, Clerk of Court for the Polk County District Court. E-mail from Randy Osborn, Clerk, Polk Cnty. Dist. Court, to Andrew W. Jurs, Assoc. Professor of Law, Drake Univ. Law Sch. (Mar. 17, 2014, 3:52 CDT) (on file with the author). This list excludes one case where the file was sealed on Order of the Court, eliminating the possibility of any evaluation. *Id.*

128. I used expert endorsement instead of expert testimony due to the inability to collect data on the latter. A discussion of whether this distinction matters to the overall results appears *infra* note 138 and accompanying text.

129. The other three cases remained active and on appeal, so were in the custody of the Iowa Supreme Court and Iowa Court of Appeals rather than the Polk County clerk.

130. The survey used the Qualtrics online survey system, which allows online responses and collects the data. The authenticator consisted of a three- to six-letter word unique to each participant. See *generally Creating Surveys*, QUALTRICS, <http://www.qualtrics.com/research-suite/creating-surveys/> [<http://perma.cc/2N7C-URTL>].

131. For those participants with a publically available email, I sent an email reminder as well. That email included a hyperlink to the survey.

In total, I received 124 responses for an overall response rate of 25%.¹³² However, the response rate varied widely among the different groups, from a high of 60% for judges to a low of 15% for jurors.¹³³ These response rates are typical for questionnaires and are similar to the Champagne, Shuman, and Whitaker studies of the 1990s.¹³⁴ As with many such studies, it cannot be ruled out that nonrespondents differ in any significant way from those who responded, although the similarity of response rate to prior studies and the methods to ensure participation suggest the response rate is acceptable.¹³⁵

132. My thanks to all participants who completed the survey.

133. The response data breaks down as follows:

	Eligible Participants	Responded	Response Rate (%)
Judges	15	9	60
Attorneys	105	47	45
Experts	135	32	24
Jurors	241	36	15
<i>Total</i>	<i>496</i>	<i>124</i>	<i>25</i>

134. The response rates meet or exceed reports of response rates to online surveys. Response rates for web-based surveys have been reported as low as 10–15% and as high as 34%. See Brian J. Love, *Do University Patents Pay Off? Evidence from a Survey of University Inventors in Computer Science and Electrical Engineering*, 16 YALE J.L. & TECH. 285, 299 & n.45 (2014) (citing *Survey Sample Size*, SURVEY MONKEY, <https://www.surveymonkey.com/mp/sample-size/> [<http://perma.cc/C2PR-NAAS>] (reporting 10–15% response rates)) (reporting an 11.3% response rate, deemed “typical” considering standard response rates for online surveys); Stephen R. Porter & Michael E. Whitcomb, *The Impact of Contact Type on Web Survey Response Rates*, 67 PUB. OPINION Q. 579, 582, 584 (2003) (reporting response rates of 13.6% and 17.5% in survey experiments); Tse-Hua Shih & Xitao Fan, *Comparing Response Rates from Web and Mail Surveys: A Meta-Analysis*, 20 FIELD METHODS 249, 257 (2008) (reporting a mean response rate for multiple web-based surveys as 34%).

In the Shuman, Whitaker, and Champagne 1994 study, the response rates were as follows: 70% for judges, 19% for jurors, 30% for lawyers, and 42% for experts. Shuman et al., *supra* note 9, at 197–98. The response rates for their 1991 study were higher in all areas. See Champagne et al., *supra* note 9, at 380. When the response rate of this study is compared to the 1994 study, the response rate for attorneys is significantly higher (45% here to 30% there), the juror and judge rates are similar (14% here to 19% there for jurors; 60% to 70% for judges), and the expert response rate is significantly lower (24% to 42%). See Shuman et al., *supra* note 9, at 197–98.

135. MARTYN DENSCOMBE, *THE GOOD RESEARCH GUIDE: FOR SMALL-SCALE SOCIAL RESEARCH PROJECTS* 26–29 (5th ed. 2014). Denscombe suggests three methods to assess if the response is acceptable: (1) responses similar to other surveys, (2) measures taken to minimize nonresponse rates, and (3) differences between respondents and nonrespondents. *Id.* Since the response rate of this study is similar to Champagne et al., the most similar prior study, and since multiple efforts were made to ensure response, the rate is likely to be acceptable. See *supra* note 132–34 and accompanying text. It is also important to note that nonresponse does not in and of itself indicate response bias. ROBERT M. GROVES, FLOYD J. FOWLER, JR., MICK P. COUPER, JAMES M. LEPKOWSKI, ELEANOR SINGER & ROGER TOURANGEAU, *SURVEY*

B. Expert Prevalence

Expert frequency can be characterized, as either an absolute frequency (percentage of cases with experts) and as a relative frequency (mean number of experts per case). Prior studies in the area have generally chosen one approach or the other.¹³⁶ My examination of the Polk County records produced both statistics.

Since there were forty-two civil jury trials in this study and thirty-six had at least one expert who was formally disclosed, the absolute frequency of experts is 86%. That percentage is similar to the Champagne, Shuman, and Whitaker studies of the 1990s (63% & 72%), and identical to both the Gross and Diamond studies (both 86%).¹³⁷ I will note, however, that this study evaluated cases with an expert endorsement while those studies measured the frequency of expert testimony.¹³⁸

As for relative frequency of experts, the data reveal both the total number of experts per trial and the number per side. When we consider only cases with an expert endorsement, there was a mean of 3.94 experts per case. That includes a mean of 2.53 experts for the plaintiff (64% of total) and 1.42 for the defense.¹³⁹ However, if the sample includes all cases instead of only those with expert endorsements, the number decreases to a mean total of 3.64, with 2.33 for the plaintiff and 1.31 for the defense.¹⁴⁰ These data appear in Table 1.

METHODOLOGY 191 (2d ed. 2009); Linda J. Sax, Shannon K. Gilmartin & Alyssa N. Bryant, *Assessing Response Rates and Nonresponse Bias in Web and Paper Surveys*, 44 RES. HIGHER EDUC. 409, 412 (2003).

136. Compare Champagne et al., *supra* note 9, at 380 (containing percentage of all cases with experts), Diamond, *supra* note 12, at 56 (same), Gross, *supra* note 5, at 1119 (same), and Shuman et al., *supra* note 9, at 197 (same), with Flores et al., *supra* note 48, at 548 tbl.1 (containing mean number per case), and Krafka et al., *supra* note 41, at 319 (same).

137. Champagne et al., *supra* note 9, at 380; Diamond, *supra* note 12, at 56; Gross, *supra* note 5, at 1119; Shuman et al., *supra* note 9, at 197.

138. The distinction between experts who are endorsed and those who testify may not be as significant as it appears at first blush, as the mean number of experts for this sample is consistent with, and not significantly higher than, prior studies in the area measuring testifying experts. See *infra* text accompanying notes 141–42. If anything, it may show that the overall number of experts is declining. See *infra* Part III.A (discussing implication of expert per trial data).

139. In statistics, the *p* value is defined as the probability of finding the observed value or values even more extreme, assuming the null hypothesis is true. ALAN AGRESTI & CHRISTINE FRANKLIN, STATISTICS 370 (2007). The null hypothesis will be rejected when the *p* value is less than the conventional level for statistical significance of 0.05. *Id.* at 170–71, 379; SCOTT E. MAXWELL & HAROLD D. DELANEY, DESIGNING EXPERIMENTS AND ANALYZING DATA: A MODEL COMPARISON PERSPECTIVE § 2.8.3 (2d ed. 2004). Applying these conventions, the observed difference in the mean number of experts meets the conventional level of statistical significance ($p < 0.05$).

140. This difference is also statistically significant at the conventional level ($p < 0.05$). See AGRESTI & FRANKLIN, *supra* note 139, at 388–98.

Table 1. Mean number of experts, all cases and in cases with an expert endorsement

	Mean number of experts (all cases)	Mean number of experts (expert endorsement)
Plaintiff	2.33	2.53
Defense	1.31	1.42
<i>Total</i>	<i>3.64</i>	<i>3.94</i>

These findings are similar to the most recent prior study, by Flores, Richardson, and Merlino in 2005–06, which found a mean of 3.58 experts per case, but lower than the findings of Krafka (4.31 in 1998), Flores (4.15 in 1991–92), Krafka again (4.80 in 1991) and Gross (4.1 in 1990–91).¹⁴¹ The higher percentage for the plaintiff’s side is also consistent with prior research, where Flores, Richardson, and Merlino found plaintiff accounting for 60% of experts in their 2005–06 sample and 78% in their earlier 1991–92 sample while Krafka et al. found plaintiff accounting for between 57% and 59% of experts in their 2002 sample.¹⁴²

As for the types of experts represented in the data, the sample includes: physicians, economists/accountants, lawyers, engineers, insurance adjusters, contractors, and accident reconstruction experts. Physicians constituted a plurality of the expert respondents, constituting 37.5% of the sample.¹⁴³

The experts in the study have a wide range of experience with the legal system. The respondents have been working as experts for an average of seventeen years, although the experience ranged from one to forty years.¹⁴⁴ The respondents are retained twenty-two times per year on average, although since four experts answered they are retained 100 times per year experience variability is significant.¹⁴⁵ Testimony is clearly less frequent. When asked how many times they testified in court in a typical year, the average was 4.2 times per year with over half of the respondents (63%) selecting either zero or one time per year. When the question asked specifically about the expert’s last twelve months, the average dropped by 14% to 3.6 times during that period. This is significantly lower than the findings of

141. Flores et al., *supra* note 48, at 548 tbl.1; Gross & Syverud, *supra* note 37, at 31–32; Krafka et al., *supra* note 41, at 319. Further analysis of the comparison of prior studies to the current one occurs see *infra* Part III.A.

142. Flores et al., *supra* note 48, at 548 tbl.1; Krafka et al., *supra* note 41, at 319.

143. There were twelve physicians. This includes a respondent with a doctor of psychology degree in addition to physicians with either a medical doctor or doctor of osteopathic medicine degree.

144. In statistics, “standard deviation” is a mathematical expression of a typical distance of observations from the mean value of all observations. AGRESTI & FRANKLIN, *supra* note 139, at 57–60. A smaller standard deviation means that most values will be close to the mean value, while a larger one indicates a greater spread of observations. *Id.* For the survey data here, the standard deviation of the observed values from the mean of seventeen years was 10.9. Standard deviations will be indicated in the following format: SD = 10.9.

145. SD = 32.1. Regarding the definition and interpretation of standard deviation in statistics, see *supra* note 144.

Champagne, Shuman, and Whitaker who found experts testified an average of seven times per year in 1991.¹⁴⁶

Finally, experts seem to work for a wide variety of clients. On average, the experts in this sample responded that they worked with 9.9 law firms in a typical year.¹⁴⁷ When asked how a client learned of their willingness to serve, the respondents most commonly selected that clients relied on other lawyers (84% of experts), previous work with the same client (75%), or personal contacts (62.5%).¹⁴⁸ Only a small percentage of experts in this group relied on expert referral services (12.5%), another available method for expert selection. These responses are consistent with the findings of Champagne, Shuman, and Whitaker, who explained that experts may be repeatedly retained by a client since doing so reduces preparation time, permits for mutual trust, and provides a dependable level of testimony.¹⁴⁹

C. Expert Persuasion

In the area of expert persuasion, the study inquired into not only the methods experts use to persuade factfinders at trial, but also factors that affect attorney selection of experts. Breaking down the data, it becomes apparent that the different parties often have different views on what qualities make for the best experts.

1. Factors Regarding Expert Effectiveness in Court

The analysis will begin with the factfinders, specifically with the persuasion of jurors. The survey asked jurors about characteristics that make experts believable, and they could choose among six options. In response, jurors believed that “the ability to convey technical information in a nontechnical fashion” is the most important characteristic for an expert to have, as 94% of the jurors selected this option. Two other options—“leading expert in the field” (81%) and “willingness to draw firm conclusions” (72%)—were also commonly selected. On the other hand, these jurors did not believe that an “attractive physical appearance” was necessary to be believable, with only 28% of jurors selecting that option. Less than half of the respondents selected the option of “pleasant personality,” with only 47% believing this is necessary.¹⁵⁰ These responses appear in Table 2 below.

146. Champagne et al., *supra* note 9, at 381.

147. SD = 12.1. Regarding the definition and interpretation of standard deviation in statistics, see *supra* note 144.

148. The lawyers in this study were largely consistent with the expert answers, relying on “other lawyers” (83%), advice from other experts in the field (70%), and personal contacts (65%) to find experts to retain. As with the experts themselves, lawyers were less likely to use an expert referral service (30% using method), although they were more likely to choose that method than experts (12.5% choosing expert referral service).

149. Champagne et al., *supra* note 9, at 382.

150. More than one astute reviewer of this piece commented that these responses may be indicative of “social desirability bias,” a well-documented tendency of respondents to answer surveys in compliance with larger societal norms. See, e.g., Todd A. Berger, *Jimmy Carter’s “Malaise” Speech, Social Desirability Bias, and the Yuppie Nuremberg Defense*, 22 KAN. J.L. & PUB. POL’Y 139, 145–46 (2012) (suggesting social desirability effects with law student

In addition to asking about characteristics that influenced persuasiveness, the survey asked jurors about whether experts are helpful to cases. A huge majority of the jurors believed that they understood expert testimony in their trial (97%) and nearly as many believed that experts are helpful to resolve legal disputes (94%). A lesser majority was confident with other jurors' ability to handle experts, as only 69% believed that juries in general understood experts.

While jurors stated that they understood the experts in their case, they did not believe that the expert was essential to their verdict. When asked if the testimony of an expert was critical to their verdict, only 36% believed that to be the case. Jurors were also skeptical of common myths about experts, since only 36% of them believed that payment of experts affected their believability and 17% believed experts should be impartial. Clearly, jurors did not adhere to the conventional wisdom that payment engenders bias, while remaining skeptical of expert impartiality in general.

The survey also asked judges about what factors would affect juror perception of experts, and the data shows their responses were consistent with the juror responses in some areas, while they varied in others. Judges accurately predicted that "ability to convey technical information in a nontechnical fashion" (100% selected) was important to jurors, and also that "attractive appearance" was not (22%). Some factors were roughly similar, with "impressive educational credentials" being selected by 78% of judges and 61% of jurors, and "willingness to draw firm conclusions" selected by 100% of judges and 72% of jurors. In contrast, judges overvalued the importance of personality to jurors. Of the respondent judges, 89%

career expectations when entering law school); Tim Cramm, Arthur J. Hartz & Michael D. Green, *Ascertaining Customary Care in Malpractice Cases: Asking Those Who Know*, 37 WAKE FOREST L. REV. 699, 741 (2002) (citing WIL DIJKSTRA & JOHANNES VAN DER ZOUWEN, RESPONSE BEHAVIOR IN THE SURVEY-INTERVIEW 18–19 (1982)) (examining social desirability bias in context of surveys about medical malpractice); Christopher S. Elmendorf & Douglas M. Spencer, *The Geography of Racial Stereotyping: Evidence and Implications for VRA Preclearance After Shelby County*, 102 CALIF. L. REV. 1123, 1146–47 (2014) (reviewing social desirability effects in surveys touching on racial stereotypes). See generally Bernard C.K. Choi & Anita W.P. Pak, *A Catalog of Biases in Questionnaires*, PREVENTING CHRONIC DISEASE, Jan. 2005, at 1, 8, available at http://www.cdc.gov/PCD/issues/2005/jan/pdf/04_0050.pdf [<http://perma.cc/3ZGX-K36J>]; Frauke Kreuter, Stanley Presser & Roger Tourangeau, *Social Desirability Bias in CATI, IVR, and Web Surveys*, 72 PUB. OPINION Q. 847, 848 (2008).

The concern with social desirability bias with this study is a real one, since it cannot be ruled out that it has affected the responses here regarding expert witness persuasion. However, two reasons exist to suggest it has been minimized or mitigated. First, the surveys in question were performed online, and prior research suggests online administration of surveys can minimize response bias. Kreuter et al., *supra*, at 862–64. Second, many of the respondents were asked about the effectiveness of experts to another group of respondents (e.g., judges about jurors). See *infra* tbls.2, 4, 7, & app. If so, social desirability bias may not be as much of an issue, since *self*-presentation is the origin of the bias. Berger, *supra*, at 146 (citing Robert J. Fisher, *Social Desirability Bias and the Validity of Indirect Questioning*, 20 J. CONSUMER RES. 303, 303 (1993)). To minimize the concern in future surveys, additional research in this area could attempt to minimize or otherwise control for social desirability effects. See *infra* Part III.B.

believed personality was important to juries compared to the 47% of jurors who selected this option.¹⁵¹ On the other hand, judges undervalued the importance of “leading expert” status, with 44% of judges believing this was important to jurors, as compared to 81% of the jurors themselves.¹⁵² These responses, and differences, are depicted in Table 2 below.

Table 2. Expert effectiveness factors for jurors, jurors themselves versus judge responses about jurors

	Percentage (%) of jurors	Percentage (%) of judges asked about jurors	Difference
Ability to convey technical information in a nontechnical fashion	94	100	+6
Leading expert in the field	81	44	-37
Willingness to draw firm conclusions	72	100	+28
Impressive educational credentials	61	78	+17
Pleasant personality	47	89	+42
Attractive physical appearance	28	22	-6

When asked if juries could handle experts, judges expressed confidence in them as 67% believed “juries understand expert testimony.” Judges also believed experts are central to verdicts, with an identical 67% agreeing that “experts are crucial to how jurors decide a case.”¹⁵³

In addition to the questions to the judges about jurors, the survey also asked the judges which characteristics of experts they personally find to be effective in court or find to be distressing. As with the jurors, judges found “ability to convey technical information in a nontechnical way” as the most important characteristic for an expert (100% selected), while an attractive physical appearance was least important (0%). Other factors important to a judge included impressive educational credentials (78%) and willingness to draw firm conclusions (67%). In contrast, a majority of judges did not select “pleasant personality” (44% selected) or “leading expert in the field” (33%). Table 3 contains these responses, as well as how they diverge from juror responses on what makes an expert effective.¹⁵⁴

151. This difference is statistically significant at the conventional level ($p < 0.05$).

152. This difference is also statistically significant at the conventional level ($p < 0.05$).

153. These responses appear *infra* Table 6 (comparing judges to expert and lawyer responses).

154. While the chart tracks all differences between these groups of respondents, the sole difference that meets the conventional level of statistical significance is for responses about “leading expert in the field” status ($p < 0.05$).

Table 3. Expert effectiveness factors, judges versus jurors¹⁵⁵

	Percentage (%) of judges	Percentage (%) of jurors	Difference
Ability to convey technical information in a nontechnical fashion	100	94	-6
Impressive educational credentials	78	61	-17
Willingness to draw firm conclusions	67	72	+5
Pleasant personality	44	47	+3
Leading expert in field	33	81	+59
Attractive physical appearance	—	28	+28

When asked what they found distressing about experts, judges indicated concerns with both the content of the materials and the expert's character. Every judge in the survey found that an expert who lacks integrity is distressing, as are those experts who testify beyond the scope of their expertise. A 78% majority of the judges found "lack of impartiality" to be a distressing issue, and 67% found an expert who is either "too tentative" or relies on "use of unnecessary technical language" to be problematic. Only about half of the judges (55%) expressed concern with experts overemphasizing presentation over substance.

Finally, the survey asked judges about the use of experts in general, and they agreed on many points. Every judge in the sample also believed that experts do get the chance to explain their opinions when they testify. When asked if judges understand expert testimony, a majority of 78% agreed that they did.¹⁵⁶ Finally, most judges (89%) believed court-appointed experts can be an effective tool for judges. In contrast, the responses split when judges were asked about financial compensation causing bias among experts. A small majority of 55% believed that expert fees can give the expert a financial interest in the case, although a majority disagreed with the statement "an expert's compensation is an important factor in weighing the expert's bias."

Having reviewed the factfinder's opinions on what makes an expert persuasive, this study also asked the same question of experts and attorneys. Each was asked what factors make an expert persuasive to a jury and what factors make an expert persuasive to a judge. The responses show some significant variance based on the audience.

Expert witnesses believed their most important characteristic to be effective is "ability to convey technical information in a nontechnical fashion," whether the audience is a jury (100% agreed) or a judge (97% agreed). Experts also discounted the importance of physical appearance to their effectiveness, with only 13% believing this is important with judges and 28% believing this is important with jurors. Experts believed certain factors are more important with different audiences. For the factor of pleasant personality, 72% of experts believed it is necessary to be effective with a jury while only 31% agreed it is necessary when testimony is to a judge. Conversely,

155. The data on persuasion for all respondents—judges, jurors, experts, and lawyers—appears together in one chart in the Appendix, for comparative purposes.

156. These responses appear *infra* Table 6 (comparing judges to expert and lawyer responses).

experts believed that “willingness to draw firm conclusions” is very important to testimony with a judge (81% selected), but not as important to testimony with a jury (59%). These responses, and their differences, appear in Table 4.

Table 4. Expert responses on factors for effectiveness, audience of judges versus of jurors¹⁵⁷

	Percentage (%) of experts with respect to judge	Percentage (%) of experts with respect to jury	Difference
Ability to convey technical information in a nontechnical fashion	97	100	+3
Willingness to draw firm conclusions	81	59	-22
Leading expert in field	56	53	-3
Impressive educational credentials	44	53	+9
Pleasant personality	31	72	+41
Attractive physical appearance	13	28	+15

These responses differ from what jurors and judges themselves believed make experts effective. Experts inaccurately believed some factors were more important than they actually were to the factfinder. Most experts (72%) believed that a pleasant personality was important to jurors, but less than half of the jurors selected that factor (47%).¹⁵⁸ Similarly, most experts (56%) believed that status as a “leading expert in the field” is important for judges, but only 22% of judges actually selected that factor.¹⁵⁹ In contrast, several factors that were important to the factfinder were not recognized fully by the experts. Judges believed that impressive educational credentials are important for experts (78% selected), while less than half of experts selected that factor (44%).¹⁶⁰ A large majority of 81% of jurors believed that being a “leading expert in the field” is important, but a slim majority of experts agreed (53%).¹⁶¹ These data appear in Table 5.

157. The data on persuasion for all respondents—judges, jurors, experts, and lawyers—appears together in one chart in the Appendix, for comparative purposes.

158. This difference is statistically significant at the conventional level ($p < 0.05$).

159. This difference does not meet the conventional level of statistical significance, so the null hypothesis that the result is only a product of random chance cannot be rejected. *See, e.g.,* AGRESTI & FRANKLIN, *supra* note 139, at 380. Yet because of the thirty-point difference in response percentages, it certainly remains possible that respondents genuinely disagree about the question but that the number of responses in this study was insufficient to detect the difference. As such, this issue could benefit from further replication studies with a greater number of responses. *See infra* Part III.B.

160. This difference does not meet the conventional level of statistical significance, so the null hypothesis that the result is only a product of random choice cannot be rejected. *See supra* note 159.

161. This difference is statistically significant at the conventional level ($p < 0.05$).

Table 5. Experts' most undervalued and overvalued factors, when compared to actual responses of factfinders

	Percentage (%) of experts about factfinder	Percentage (%) of factfinders about themselves	Difference
Pleasant personality (to jury)	72	47	-25
Leading expert in field (to judge)	56	22	-34
Impressive educational credentials (to judge)	44	78	+34
Leading expert in field (to jury)	53	81	+28

When asked about their effectiveness overall, most experts also expressed confidence their message was being received. When asked if they were understood by the factfinder in general, 84% believed judges understood them while 66% believed that the jurors did. A supermajority of experts also believed that their testimony helps resolve legal disputes (91% agree). When asked about compensation, a large majority of 84% of the experts believed it is not important in weighing their bias. Finally, most experts did not find testifying to be a bad experience, since only 31% found it unpleasant while 88% wish to serve again as an expert.

Lawyers agreed broadly with experts on these ideas.¹⁶² Lawyers overwhelmingly agreed that experts help resolve legal disputes (85%) and that experts are crucial to the lawyer's strategy in certain cases (93%). They also agreed that compensation does not establish bias in an expert, with 76% believing that it does not. Most lawyers thought experts do not find testifying unpleasant (63%), broadly similar to the 69% of experts who did not find it to be unpleasant.

Table 6. Opinions about experts, different groups

	Percentage (%) of judges	Percentage (%) of experts	Percentage (%) of lawyers
Juries understand expert testimony	67	66	63
Judges understand expert testimony	78	84	85
Compensation is an important factor in weighing an expert's bias	44	16	24
Experts find testifying to be unpleasant	33	37	31
Experts are helpful in resolving disputes	n/a ¹⁶³	91	85

162. There are no differences between respondents here that are statistically significant. The question with the largest difference, on the issue of compensation, has a *p*-value of 0.197.

163. A majority of 67% agreed with a statement that "experts are crucial to how jurors decide a case." See *supra* text accompanying note 153.

Just as with the other participants, lawyers could also select factors that make experts effective. As with the experts themselves, the lawyers were asked what factors make an expert persuasive to a jury and what factors make an expert persuasive to a judge. The responses show some significant variance based on the audience.

As with the other respondents, lawyers believed the most important characteristics for an expert to have are the ability to convey technical information in a nontechnical way, with 98% believing that it is important to present to a jury and 91% believing that it is important for presentation to a judge. However, the responses diverge from there, depending on the audience. Lawyers believed that, when presenting to a jury, a pleasant personality is the next most important characteristic for an expert, selected by 87% of the respondents. A majority of lawyers also selected willingness to draw firm conclusions (75%) and impressive educational credentials (59%), while less than half believed that an attractive physical appearance (33%) or status as a leading expert in the field (30%) is important. In contrast, when the audience is a judge, lawyers believed that impressive educational credentials are important (74% selected), while pleasant personality is not (46% selected). These responses appear below in Table 7.

Table 7. Lawyer responses on factors for effectiveness, audience of judges versus of jurors¹⁶⁴

	Percentage (%) of lawyers with respect to judge	Percentage (%) of lawyers with respect to jury	Difference
Ability to convey technical information in a nontechnical fashion	91	98	+7
Impressive educational credentials	74	59	-15
Willingness to draw firm conclusions	70	74	+4
Pleasant personality	46	87	+41
Leading expert in field	43	30	-13
Attractive physical appearance	9	33	+24

These responses differ from what jurors and judges themselves believed make experts effective. Lawyers inaccurately believed some factors were more important than they actually were to the factfinder. Most lawyers believed that a pleasant personality was important to jurors, as 87% believed that was necessary to be an effective expert, but less than half of the jurors selected that factor (47%).¹⁶⁵ Many lawyers believed that status as a “leading expert in the field” is important for judges (43% selected), while judges were less likely to select that factor (22% selected).¹⁶⁶

164. The data on persuasion for all respondents—judges, jurors, experts, and lawyers—appears together in one chart in the Appendix, for comparative purposes.

165. This difference is statistically significant at the conventional level ($p < 0.05$).

166. This difference does not meet the conventional level of statistical significance ($p > 0.05$). Regarding the issue of statistically insignificant data, see *supra* note 159.

At least one factor was important to the factfinder, but lawyers did not recognize it. When asked if “leading expert in the field” was important to jurors, only 30% of lawyers believed so, but an overwhelming majority of jurors selected that factor (81%).¹⁶⁷ These differences appear in Table 8 below.¹⁶⁸

Table 8. Lawyers’ most undervalued and overvalued factors, when compared to actual responses of factfinders

	Percentage (%) of lawyers about factfinder	Percentage (%) of factfinders about themselves	Difference
Pleasant personality (to jury)	87	47	-40
Leading expert in field (to judge)	43	22	-21
Leading expert in field (to jury)	30	81	+51

2. Factors Regarding Decision to Retain an Expert

While experts must be ready to testify in court, a lawyer’s decision to retain an expert may rest on factors independent of those necessary for courtroom effectiveness. To test that concern, the study asked both experts and lawyers what factors experts should possess in order to be retained on a case.

The experts’ responses in this area are similar to the experts’ responses regarding what is persuasive when presenting evidence to a judge.¹⁶⁹ As with factors that persuaded judges, experts most often selected “ability to convey technical information in a nontechnical fashion” (94%) and “willingness to draw firm conclusions” (66%) as factors that attorneys examine in the decision to retain. The experts’ responses on the least important factors in order to be retained also are similar to the experts’ responses on what is persuasive to a judge. Experts were least likely to select “attractive physical appearance” (13%) and “pleasant personality” (41%) as necessary factors to be retained. The main difference in responses appears with the factors of “leading expert” and “impressive educational credentials.” A majority of experts (53%) believed that impressive educational credentials were important to the decision to retain, while only 44% selected leading expert as a factor. These numbers are nearly flipped from their responses for judicial persuasion, where 56% selected “leading expert” status as important, while only 44% selected educational credentials.¹⁷⁰

167. This difference is statistically significant at the conventional level ($p < 0.05$).

168. To further assess the issue, I also split the attorney responses into groups based on years of experience (fewer than twenty, twenty and over) and side of the case (defense, all but defense). These subsets of attorneys did not have significant differences in their responses for these areas.

169. The factors that experts believe are persuasive to judges appear *supra* Table 5.

170. See *supra* Table 5.

When asked about the tactics lawyers use in managing their experts, a majority of experts expressed confidence in lawyers' understanding of their field. About 59% of the experts believed that the lawyers who retained them understand their expertise. A supermajority of 97% also believed that lawyers will not try to get experts to testify outside of the firm scientific basis for their field. On the other hand, experts believed that lawyers try to shade their opinions in a beneficial manner, as 59% agreed that lawyers "frequently urge experts to be less tentative in their testimony." Experts were evenly split about whether lawyers coach experts on how to present their testimony, suggesting that while lawyers may urge less tentative testimony, they are less likely to directly coach the opinion.

Since lawyers make the decision on whom to retain, the study asked them about a broader range of factors that affect their decision on who to hire. The factors that lawyers were most interested in seeing were qualifications and experience (98%), credibility (91%), knowledge (85%), and appearance and demeanor (78%). This final factor of appearance/demeanor appears to be the largest difference between the lawyers' responses and the experts' responses, as a majority of experts did not select either attractive appearance (13%) or pleasant personality (41%). The least important characteristics were impartiality and "support for my position," each selected by less than half of the lawyers. Lawyers were about evenly split on some factors, including cost (50% selected), "strength of opinion" (50%), and availability (52%). The most and least important factors appear in Table 9.

Table 9. Most and least important factors to attorneys in decision to retain an expert

Most important	Least important
Qualifications and experience	Impartiality
Credibility	Support for my position
Knowledge	
Appearance and demeanor	

When asked about management of the expert, lawyers expressed confidence that experts understand how they fit into the legal dispute at hand. Over 89% of the lawyers agreed with the statement "experts understand when I explain their role in the case." While experts were evenly split on whether lawyers coached their testimony, a majority of lawyers (72%) agreed that "experts are willing to be coached about how their testimony should be presented." Finally, as a point of agreement, similar percentages of lawyers (70%) and experts (63%) disagreed with the statement "you work for who pays you."

3. Factors Affecting Admissibility of Testimony

Just as lawyers are in the unique position of deciding which experts to retain, judges have to screen expert evidence before admission, known as "gatekeeping." Since *Daubert* in 1993, judicial gatekeeping has focused on screening expert

testimony for scientific reliability.¹⁷¹ While many states and the federal system follow the *Daubert* standard, other states continue to use the *Frye* standard, but the jurisdiction in question here—Iowa—uses a state-specific standard.¹⁷² However, at the time of the Champagne, Shuman, and Whitaker studies, gatekeeping for scientific reliability in civil cases would often be minimal.¹⁷³ Instead of examining reliability, judges focused their evaluation on expert qualifications.¹⁷⁴ Due to the change in reliability standards after *Daubert*, I needed to make a methodological choice on how to assess judicial screening of experts in this new study. Since I constructed this study to both find new data and to update the existing data from older analyses, I decided to focus the question of gatekeeping on the factors considered by those prior works. That way, I could compare my data to the Champagne, Shuman, and Whitaker survey responses.

To examine what factors were important to judges in allowing an expert to testify, the survey asked judges about expert qualifications, requesting they decide which factors were very important, which were somewhat important, and which were not important. Judges were most likely to find the expert's experience very important, with 89% of judges deeming it very important. The next most important factor was educational credentials, selected as very important by 78% of judges, and somewhat important by the rest. On the other hand, judges were less interested in an expert's publications, which 67% of judges labeled as somewhat important and an additional 22% labeled as very important. Finally, a large majority of judges did not feel an expert's previous experience testifying in court was important, with 67% deeming it not important and 22% saying it was somewhat important. These responses appear in Table 10, and are similar to the responses in Champagne, Shuman, and Whitaker's 1991 study.¹⁷⁵

171. See generally *supra* text accompanying notes 118–24.

172. Regarding which states have adopted *Daubert* and which have remained with *Frye*, see KAYE, ET AL. *supra* notes 123–24. The Iowa test for reliability requires a judge to determine if the expert's opinion is "reliable enough to assist the trier of fact." *Ranes v. Adams Labs., Inc.*, 778 N.W.2d 677, 686 (Iowa 2010); *State v. Hall*, 297 N.W.2d 80, 85 (Iowa 1980); see also LAURIE KRATKY DORE, IOWA PRACTICE: EVIDENCE 644–49 (2011). However, in cases involving novel or complex science, a judge may consider the *Daubert* factors. *Ranes*, 778 N.W.2d at 686.

173. On the issue of the limited application of *Frye* to civil cases, see, for example, David E. Bernstein, *Frye, Frye Again, The Past, Present, and Future of the General Acceptance Test*, 41 JURIMETRICS J. 385, 387, 394 (2001) (noting the infrequency of application of *Frye* standards to civil litigation and that for decades *Frye* applied to criminal cases only); Michael D. Green, *The Road Less Well Traveled (and Seen): Contemporary Lawmaking in Products Liability*, 49 DEPAUL L. REV. 377, 398–99, 399 n.114 (1999) (calling *Frye* "virtually nonexistent" in civil cases until 1991); Susan Haack, *What's Wrong with Litigation-Driven Science? An Essay in Legal Epistemology*, 38 SETON HALL L. REV. 1053, 1059 (2008).

174. Regarding the screening of experts for qualifications prior to *Daubert* in 1993, see KAYE, ET AL., *supra* note 121, at §2.1 (reviewing judicial analysis of expert qualifications); David E. Bernstein, *The Misbegotten Judicial Resistance to the Daubert Revolution*, 89 NOTRE DAME L. REV. 27, 31 (2013) (citing KAYE, ET AL., *supra* note 121) (noting that, prior to *Daubert* in 1993, judges in civil cases would focus attention on expert qualifications).

175. See Champagne et al., *supra* note 9, at 390.

Table 10. Judicial opinion of expert qualification factors

	Percentage (%) of judges finding the quality very important	Percentage (%) of judges finding the quality somewhat important	Percentage (%) of judges finding the quality not important
Expert's experience in field	89	11	—
Expert's educational credentials	78	22	—
Expert's publications	22	67	11
Expert's previous experience testifying in court	11	22	67

In addition to these questions, the study also asked attorneys whether judges were making appropriate gatekeeping choices. Unlike the judicial question above, these questions did measure both analyses of expert qualifications and scientific reliability. When asked if judges properly screen expert qualifications, only 20% of lawyers agreed with the statement “judges properly screen experts so that only qualified experts are permitted to testify.” While lawyers were skeptical of judges in that regard, they were even less likely to agree that judges properly screen experts for scientific merit. When asked if judges properly screen opinions for reliability, only 15% agreed that “judges properly screen expert opinions so they reflect currently accepted scientific knowledge.” Clearly, lawyers have concerns about the quality of judicial screening of experts, whether for qualifications or for scientific reliability.

4. Overall Comfort Level with Experts, and of Experts

Once all respondents had been asked specific questions about factors making experts effective, the study also asked them about their overall comfort level with experts, in general. For these questions, the survey asked the respondent to rate their comfort level with experts on a scale from one to seven, with one defined as “entirely comfortable” and seven defined as “not comfortable.”¹⁷⁶ This was intended as a way to distill the different groups’ opinions about experts into a short but comprehensive estimate of experts’ effectiveness.

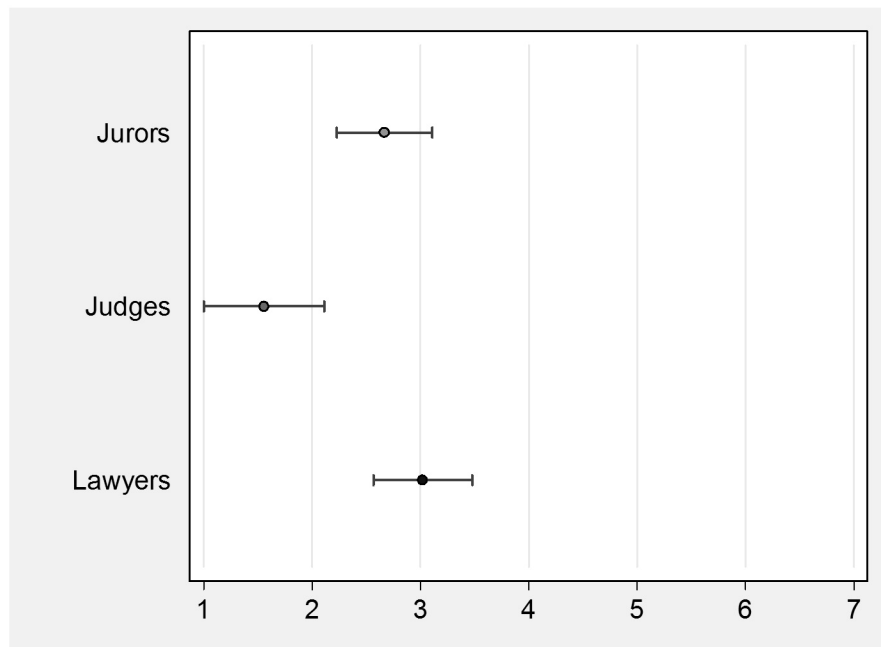
Of the three groups who listen to experts—judges, jurors, and lawyers—the judges were most comfortable with experts, with a mean response value of 1.56 out of 7. Considering the role of judges in expert gatekeeping, this familiarity and comfort with experts makes sense. However, the responses of lawyers were counterintuitive. Lawyers’ responses to this question had a mean score of 3.02 out of 7, lower even than jurors, who had a 2.67 mean value.

176. I used the same seven-point scale in a prior study, which proved to be a useful tool for measuring overall comfort levels. See Andrew Jurs, *Gatekeeper with a Gavel: A Survey Evaluating Judicial Management of Challenges to Expert Reliability and Their Relationship to Summary Judgment*, 83 Miss. L.J. 325 (2014).

Table 11. Comfort level with experts for different groups

	Mean comfort level	95% confidence interval
Jurors	2.67	2.22–3.11
Judges	1.56	0.98–2.11
Lawyers	3.02	2.57–3.48

These responses appear graphically in Figure 1 below.

**Figure 1.** Mean comfort level with experts, with 95% confidence intervals

One possible explanation for lawyers' relative lack of comfort with experts compared to judges involves the frequency of judicial gatekeeping. But the data suggests another possible explanation: the differences in math and science background between groups. When asked how many classes in math and science they had in high school, lawyers took 13% fewer classes in those areas than the judges did; similarly, when asked the same question about college, lawyers took 10% fewer classes than judges.¹⁷⁷

177. These differences do not meet the conventional level of statistical significance ($p > 0.05$). As such, the null hypothesis that the result is only a product of chance cannot be rejected. Yet, because of the difference in responses, the issue is one that would benefit from further replication studies, suggested *infra* Part III.B. The differences in education also may explain the juror/lawyer responses, as college-educated jurors had 30% more math and science classes in college than lawyers did, a difference that is not quite statistically significant ($p = 0.08$).

Finally, the study asked experts whether they were comfortable testifying in court, using the same seven-point scale for responses. In response, the mean score of experts was 2.44, indicating they were generally comfortable in the courtroom. This is consistent with the responses of lawyers and judges on the same issue. When asked if they agree or disagree with the statement “experts find testifying to be unpleasant,” a minority of 37% of lawyers and 33% of judges agreed with the statement. Broadly speaking, experts are comfortable in the courtroom.

D. Expert Compensation

One final group of questions in the study dealt with the fees experts charge. The survey asked both lawyers and experts about rates charged for expert work, and the experts were asked what percentage of their yearly income came from serving as an expert. Responses could also be split by profession or side, to examine whether expert fees changed based on those variables.

Overall, the mean expert fee for an hour of time was \$277.09, with fees ranging between \$60 and \$600 per hour.¹⁷⁸ When we compare responses from experts who primarily work for the defense to their plaintiff-side counterparts, we see that defense experts earn a mean of \$323.92, while plaintiff experts earn a mean of \$256.79.¹⁷⁹ As with prior studies, the responses also could be separated by occupation.¹⁸⁰ The physicians in the study charged \$370.83 an hour, a significantly larger fee than nonphysicians at \$220.85.¹⁸¹ These data appear in Table 12.

Table 12. Mean hourly rate fees for experts, all experts and subgroups

	Mean hourly rate	Number	95% confidence interval
All experts	\$277.09	32	\$227.26–\$326.93
P experts	\$256.79	14	\$175.91–\$337.66
D experts	\$323.92	12	\$232.72–\$415.11
Doctors	\$370.83	12	\$296.07–\$445.59
All but doctors	\$220.85	20	\$164.93–\$276.77

178. Accounting for inflation, the mean fee is significantly lower than in prior studies by Champagne, Shuman, and Whitaker. In their 1991 study, the mean fee was \$258 per hour for their 1988 experts, Champagne et al., *supra* note 9, at 382, and \$185 per hour in 1990–91 for experts, Shuman et al., *supra* note 9, at 205. These fee amounts translate to \$516.30 per hour (1988 group), see *supra* note 97 and accompanying text, and \$321.56 per hour (1991 group), see *supra* note 102 and accompanying text. See also *CPI Inflation Calculator*, *supra* note 96 (converting 1988 or 1991 dollars to 2014 dollars).

179. For the question about which side an expert primarily works for, respondents could choose between the defense, plaintiff, or a third option “neither/does not apply.” These data then represent only those experts who self-identified with one side or the other and exclude the respondents from the third category.

180. See Champagne et al., *supra* note 9, at 382–83; Shuman et al., *supra* note 9, at 205.

181. The physician data includes all respondents with a doctor of medicine degree or doctor of osteopathy degree, plus the one respondent with a doctorate in psychology.

These responses appear graphically in Figure 2 below.

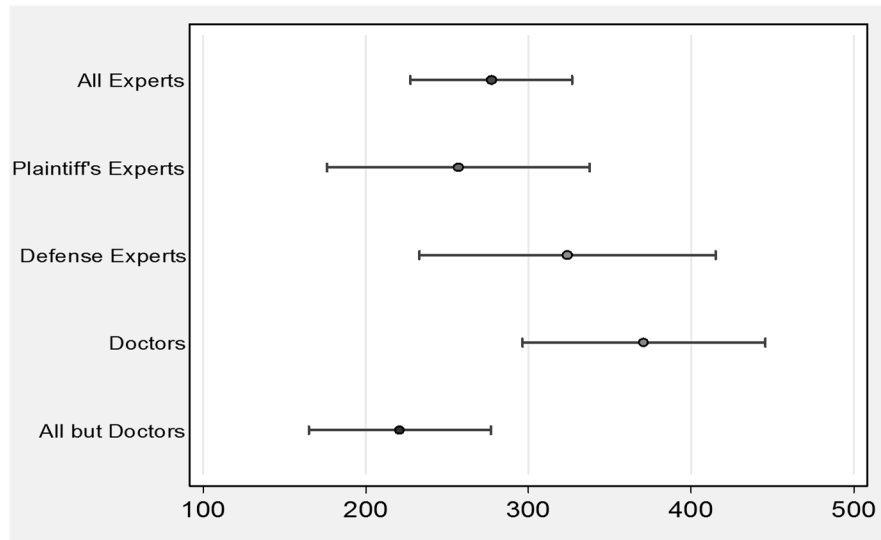


Figure 2. Mean hourly fee for experts, with 95% confidence intervals

In addition to the hourly rates, the survey asked experts about the percentage of their income earned due to expert witness fees. In response, a majority of the experts (53%) responded that less than 5% of their annual income came from expert witness work. A minority (28%) of experts earned more than 35% of their income through expert fees, while an even smaller group (18%) earned between 5% and 35% of their income from fees. These data appear in Table 13.

Table 13. Percentage of income of experts earned through expert fees

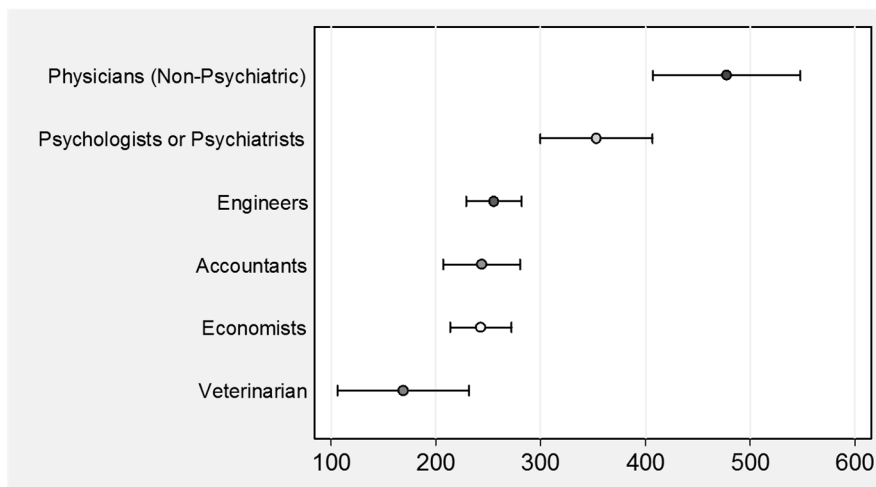
	Percentage (%) of respondents in group
Less than 5%	53
Between 5% and 20%	9
Between 20% and 35%	9
Over 35%	28

In addition to asking experts about fees, the survey also asked lawyers about the rates they paid for experts, and these responses can be compared to the expert responses. On average, lawyers paid physicians the highest fee of \$478 per hour, while veterinarians earned the lowest mean fee at \$169 per hour. The responses regarding different professionals appear in Table 14.

Table 14. Mean hourly rate paid for experts, all experts and subgroups

	Mean hourly fee response	Number of responses	95% confidence interval
Physicians (nonpsychiatric)	\$477.78	36	\$407.34–\$548.22
Psychologists or psychiatrists	\$353.23	31	\$299.67–\$409.79
Engineers	\$255.56	36	\$229.11–\$282.01
Accountants	\$243.55	31	\$206.95–\$280.15
Economists	\$242.86	35	\$213.66–\$272.06
Veterinarians	\$168.85	8	\$105.80–\$231.70
<i>Total Attorney Responses = 47</i>			

These responses appear graphically in Figure 3 below.

**Figure 3.** Mean expert hourly fee paid by lawyers, with 95% confidence intervals

Finally, the survey also asked all groups about the effect of fees on an expert's testimony. To do so, the survey asked all groups except jurors if they agreed or disagreed with the statement, "an expert's compensation is an important factor in weighing the expert's bias." Only a small percentage of experts or lawyers agreed, with 22% of lawyers and 16% of experts believing this statement is true. Judges also mostly disagreed, with 44% of the respondents agreeing. In contrast, the earlier Champagne, Shuman, and Whitaker studies indicated significant concern of the judges about fees as a source of bias. The survey asked jurors a similar question, but personalized it by asking if they agreed or disagreed that "hearing how much an expert earned in fees would affect how much I believed the expert." Only 36% agreed

with the statement. This response is nearly identical to Champagne, Shuman, and Whitaker's 1991 finding of 35% of jurors concerned about expert fees.¹⁸²

III. DISCUSSION

The response data from this survey provides significant insight into the use of, and issues surrounding, expert witnesses in modern civil litigation. In comparing the data to prior studies in the area, many of the findings here update prior research, but others are either contradictory or demonstrate something new that the prior studies did not address. Yet even if the data provide significant insight, future studies may also be necessary to either test, expand upon, or more firmly establish their findings.

A. Implications of the Survey Data on Expert Witnesses

In each of the three main areas of this study—prevalence, persuasion, and pricing—the survey responses show some findings broadly consistent with the prior studies in the area, but offer tantalizing clues to changes in expert witness practice in the last decade or two.

On the issue of expert frequency, the overall rate of cases with experts in this study (86%) was entirely consistent with prior studies, two of which (Gross and Diamond) also found that 86% of cases involved experts.¹⁸³ A momentary glance at that metric might suggest that not much has changed with experts since the 1991 Gross study or 2007 Diamond study. Yet a more detailed examination of the data shows something quite significant: even if experts testify in a similar number of cases overall, the number of experts per case has dropped significantly in the last decade or two. In this study, there was an average of 3.64 experts per case in all cases within the study, or 3.94 experts per case in cases with experts.¹⁸⁴ These numbers are lower than most studies in the area, in which the expert rate is over 4.0 experts per case and has been measured as high as 4.8 per case.¹⁸⁵ Independent of the absolute numerical drop in experts per case, the fact that this study measured experts who had been endorsed instead of experts who testified might indicate an even steeper drop than it appears at first glance.¹⁸⁶ The data on expert fees, discussed below, also provide some

182. Champagne et al., *supra* note 9, at 388.

183. Champagne, *supra* note 9, at 380 (63%); Diamond, *supra* note 12, at 56 (86%); Gross, *supra* note 5, at 1119 (86%); Shuman et al., *supra* note 9, at 197 (72%).

184. See *supra* Table 1.

185. Flores et al., *supra* note 48, at 548 tbl.1 (4.15 experts per case in 1991); Gross & Syverud, *supra* note 37, at 31–32 (4.1 experts per case in 1990–91); Krafka et al., *supra* note 41, at 319 (4.3 experts per case in 1998; 4.8 experts per case in 1991). On the other hand, two sets of researchers found fewer than 4 experts per case, including Flores, Richardson, and Merlino, who found an average of 3.58 experts per case for their 2005 sample, and Gross and Syverud, who found 3.3 experts per case for their earlier 1985–86 sample. Flores et al., *supra* note 48, at 548 tbl.1; Gross & Syverud, *supra* note 37, at 33 tbl.17.

186. Regarding the issue of expert endorsement versus testifying experts, see *supra* notes 128, 138 and accompanying text.

circumstantial evidence that the number of expert witnesses per case is in decline.¹⁸⁷ Certainly the issue merits additional study to better quantify the decline.¹⁸⁸

On the issue of expert persuasion, the responses are broadly consistent with the prior Champagne, Shuman, and Whitaker studies of the 1990s. In their 1991 and 1994 studies, that research group found that, for jurors, the “ability to convey technical information in a non-technical fashion” was the most valuable trait for an expert to be effective while an attractive physical appearance was the least valuable.¹⁸⁹ The responses here confirm those findings for jurors but also for judges.¹⁹⁰ The responses also are consistent with most recent studies, showing that jurors are more concerned about content of the expert testimony than peripheral considerations.¹⁹¹

As with the factfinder responses, expert and lawyer responses about experts’ effectiveness are often consistent with Champagne, Shuman, and Whitaker’s findings. When experts were asked what makes them effective, they most commonly chose the ability to convey technical information in a nontechnical fashion, both in this study and in the Champagne, Shuman, and Whitaker studies.¹⁹² Additionally, when lawyers were asked what factors they consider in retaining an expert, both Champagne, Shuman, and Whitaker’s studies and this study found that lawyers most commonly considered qualifications and experience, while impartiality was not an important consideration.¹⁹³ Finally, when gatekeeping experts, judges rely on the expert’s experience in the field and educational credentials, which a majority of judges found to be very important in both Champagne, Shuman, and Whitaker’s 1991 study and in this study.¹⁹⁴

On the other hand, some of the data contrasts with responses from prior studies. On the issue of gatekeeping, lawyers in this study do not appear satisfied with judicial handling of gatekeeping. Only 20% of lawyers agreed with the statement “judges properly screen expert so that only qualified experts are permitted to testify,” while 15% agreed that “judges properly screen expert opinions so they reflect currently accepted scientific knowledge.”¹⁹⁵ Since Champagne, Shuman, and Whitaker found that a majority of lawyers agreed judges properly screened experts for qualifications and scientific merit, the responses here show a decline in lawyers’ views of effective gatekeeping.¹⁹⁶

187. See *infra* text accompanying notes 202–05.

188. This is one of the suggestions for future research discussed *infra* Part III.B.

189. Shuman et al., *supra* note 9, at 199; see Champagne et al., *supra* note 9, at 388.

190. See *supra* Table 3.

191. See *supra* text accompanying notes 113–15. Compare VIDMAR, *supra* note 87, at 172 (showing jurors more concerned about substance); Diamond, *supra* note 12, at 62 (same); Vidmar & Diamond, *supra* note 19, at 1142 (same), with SELVIN & PICUS, *supra* note 10, at 26–28 (noting importance of peripheral clues).

192. Champagne et al., *supra* note 9, at 386 tbl.5; Shuman et al., *supra* note 9, at 200 tbl.1; see *supra* Table 4.

193. Champagne et al., *supra* note 9, at 387 tbl.6; Shuman et al., *supra* note 9, at 202 tbl.4; see *supra* Table 9.

194. See Champagne et al., *supra* note 9, at 390 tbl.9; *supra* Table 10.

195. See *supra* Part II.C.3.

196. See Shuman et al., *supra* note 9, at 199. This conclusion must be tempered by a

Another difference that is clear is the frequency of testimony for experts. In the 1991 Champagne, Shuman, and Whitaker study, experts testified an average of seven times per year.¹⁹⁷ In these 2014 responses, the responses indicate a lower rate of testimony, at 4.2 times per year in a typical year and 3.6 times in the last twelve months.¹⁹⁸ A majority of the experts in the survey, 63% of the total, testified either zero or one time in a typical year.¹⁹⁹ The data show that experts are less likely to testify repeatedly, which is entirely consistent with the finding that fewer experts are involved in a typical case.²⁰⁰

The expert fee data is consistent with that finding. The responses from the experts in this study indicate that fees paid for expert work have not kept pace with inflation, so they are significantly lower than prior studies. Champagne, Shuman, and Whitaker found a mean expert fee of \$258 per hour in the 1991 study, and \$185 per hour in 1994.²⁰¹ Accounting for inflation, those fees would equate with \$516 per hour (1988 group) and \$322 per hour (1991 group).²⁰² Yet the mean expert rate in this survey was slightly over \$277 per hour.²⁰³ This could be explained by the fact that the data here shows fewer experts involved in each case, and if so, then the market for experts has slumped allowing for lower fees.²⁰⁴ Certainly the issue merits further investigation.²⁰⁵

Finally, one other difference from prior studies involves the issue of expert fees and bias. In Champagne, Shuman, and Whitaker, judges expressed concern that fees could result in bias in testimony, with 68% of judges indicating that they were concerned with the issue.²⁰⁶ Yet for the respondents of this study, a majority did not agree with the statement “an expert’s compensation is an important factor in weighing the expert’s bias.”²⁰⁷ Perhaps over time judges have become less concerned about the issue, consistent with all other groups in the survey.²⁰⁸

consideration of the changes occurring in the law of gatekeeping between the initial studies and this one, discussed *supra* Part I.D.

197. Champagne et al., *supra* note 9, at 381.

198. See *supra* text accompanying note 146.

199. See *supra* text accompanying note 146.

200. See *supra* Table 1 and text accompanying notes 141, 184–85.

201. Champagne et al., *supra* note 9, at 382; Shuman et al., *supra* note 9, at 205.

202. See *supra* notes 97, 102.

203. See *supra* Table 12.

204. See *supra* Table 1 and text accompanying notes 141. One other consideration is the relative cost of living in the survey area. Des Moines, Iowa, is a city with a cost of living 18% less than the national average, according to *Des Moines, Iowa*, SPERLING’S BEST PLACES, http://www.bestplaces.net/city/iowa/des_moines [<http://perma.cc/V8JF-QFS9>] (last visited December 7, 2015). Similar rankings show a consistent level of affordability. See Des Moines Rankings, GREATER DES MOINES CONVENTION AND VISITORS BUREAU, <http://www.catchdesmoines.com/media/des-moines-rankings/> [<http://perma.cc/ASR4-A84D>] (last visited December 7, 2015).

205. Investigating the issue of declining experts per case and declining fees would be a major benefit of replication studies in this area, discussed *infra* Part III.B.

206. Shuman et al., *supra* note 9, at 203.

207. See *supra* text accompanying note 182.

208. The other groups agreed with the statement at lower rates than the judges. Only 22% of lawyers agreed, and 16% of experts. See *supra* text accompanying note 182. Jurors were

Beyond these responses that contrast with prior studies, the response data in this study also provide new insight into areas not previously studied. When we compare the responses of jurors and judges to the responses of experts and lawyers, the data show that experts and lawyers both have some erroneous notions of what makes an expert effective in court. Both experts and lawyers erroneously believe that a pleasant personality is important for an expert to be effective to a jury, yet less than a majority of the jurors agreed.²⁰⁹ Many members of both groups also believe being a “leading expert in the field” is necessary for an expert to be effective to a judge, yet only a small percentage of judges (22%) agreed.²¹⁰ On the other hand, a small percentage of lawyers and experts believed being a leading expert in the field was needed to be effective to a jury, although 81% of the jurors responded it was important.²¹¹

The comfort level data is also new and provides insight into how different groups handle experts. Judges were the most comfortable with experts, with a mean score of 1.56 out of 7.²¹² Considering that judges perform gatekeeping, this makes sense. Yet when we look at jurors and lawyers, both scores are lower than judges, while lawyers scored the lowest of all groups, significantly lower than judges.²¹³ One possibility for this relative comfort level is each group’s training in math and science, showing that lawyers have between 10% and 13% fewer classes in math and science than judges.²¹⁴ Certainly future research could help affirm or reject that theory by exploring why lawyers are less comfortable with experts.²¹⁵

Certainly there are some consistencies between the survey responses and prior studies, but the differences and the new data provide valuable insight into the role of experts and how it may be changing in modern litigation.

B. Suggestions for Future Research

Evaluation of the response data in this study raises many questions that require further research. Clearly a variety of methods would address these open questions.

First, a study with a greater sample size and location diversity would affirm or rebut the responses here, as well as answer some open questions about the responses. With those responses, one could see whether there is truly a decline in both number of experts per case and expert fees, both of which were found in the current study.²¹⁶ If the rates and fees of experts have declined, additional study could evaluate whether the decline in experts caused the decline in fees or if other factors are responsible. A

asked a slightly different question, whether they agreed or disagreed that “hearing how much an expert earned in fees would affect how much I believed the expert.” Only 36% of jurors agreed with the statement. *See supra* text accompanying note 182.

209. *See supra* Tables 5 & 8.

210. *See supra* Tables 5 & 8.

211. *See supra* Tables 5 & 8.

212. *See supra* Table 11.

213. *See supra* Table 11; *supra* Figure 1.

214. *See supra* text accompanying note 177.

215. Investigating the difference in comfort levels between judges and lawyers, and the reasons therefore, would be a major benefit of replication studies in this area, discussed *infra* Part III.B.

216. *See supra* text accompanying notes 185–86, 202–05.

replication study could also expand upon the finding that lawyers are less comfortable with experts than judges and test whether this is due to differences in training in math and science.²¹⁷ Finally, a replication study could begin to answer one question that this study could not: whether the gatekeeping standard of a state has an effect on the responses. Since all of the cases in the study came from one jurisdiction, it was not possible to compare those responses to others from places with different gatekeeping standards.²¹⁸ Adding responses from *Daubert* or *Frye* states would permit that evaluation.²¹⁹

A survey is not the sole methodology that can be employed to answer these questions. In prior studies in the area, researchers evaluated these issues by reviewing reported cases from a local periodical,²²⁰ evaluating case files,²²¹ interviewing jurors,²²² and videotaping trials and deliberations.²²³ Each of these methodologies can provide information that would complement survey data and would therefore be useful to address specific issues raised by this study.

Comparing or contrasting the use of experts in the federal system could also prove to be a helpful analysis. Independent of the gatekeeping standard, discussed above,²²⁴ it might prove useful to see if the use of experts in federal court is similar to state courts, and if not, what differences exist and why. That research could offer an additional point of contrast, to see if the management of experts can be improved upon, and if so, how.

All of these analyses would help clarify the findings, or build upon the findings, from this study, in order to further examine the role of experts within the judicial system.

CONCLUSION

The case file review and survey responses from this study provide important baseline data about expert prevalence, persuasion, and pricing in civil trials, affirming and expanding upon prior research but also debunking common conventional wisdom. The data show how many civil cases have experts, as well as how many experts are involved in each of those cases.²²⁵ When asked about different

217. See *supra* notes 177, 214–15 and accompanying text.

218. The cases in this study are all from Polk County, Iowa, and went to trial in 2012. See *supra* Part II.A (discussing methodology of the study). Iowa does not follow either the *Frye* or *Daubert* standard for gatekeeping. See *supra* note 172.

219. Lists of states that adhere to *Frye* or *Daubert* appear in KAYE, ET AL., *supra* note 121, § 7.4.2(a), 333 n.18 (listing the states that have adopted the *Daubert* standard for gatekeeping); *id.* at 333 n.19 (listing the states that have retained the *Frye* standard for gatekeeping).

220. Gross, *supra* note 5, at 1119 n.18.

221. Flores et al., *supra* note 48, at 545.

222. SELVIN & PICUS, *supra* note 10, at 3–5; SPECIAL COMM. ON JURY COMPREHENSION, *supra* note 10, at 8; Goodman et al., *supra* note 69, at 65; Ivković & Hans, *supra* note 54, at 450; Sanders, *supra* note 10, at 56; Vidmar & Diamond, *supra* note 19, at 1140.

223. Diamond & Vidmar, *supra* note 33, at 1869–73; see *supra* note 33 and accompanying text.

224. See *supra* notes 218–19 and accompanying text.

225. See *supra* Part II.B.

expert traits, there are broad agreements between judges and jurors on what factors make an expert persuasive but also some significant differences.²²⁶ Cross-referencing those responses with the attorney and expert responses, it became clear that lawyers and even experts themselves misunderstand what makes an expert effective in court.²²⁷ The responses also show that, of the different groups, judges are most comfortable with expert witnesses but that lawyers are less comfortable than jurors.²²⁸ Finally, the study also collected data on expert fees, which reveal not only the absolute level of fees paid, but also that they appear to have dropped since the last study in the area collected data in 1991.²²⁹

By collecting data about the use of expert witnesses in actual cases, this study provides new and interesting data on expert prevalence and persuasion, debunking some common myths about experts and providing empirical data to policymakers and practicing litigators alike.

APPENDIX

Percentages (%)			Experts		Lawyers	
	Judges	Jurors	To Judge	To Jury	To Judge	To Jury
Ability to convey Technical information in a nontechnical fashion	100	94	97	100	91	98
Impressive educational credentials	78	61	44	53	74	59
Willingness to draw firm conclusions	67	72	81	59	70	74
Pleasant personality	44	47	31	72	46	87
Leading expert in field	33	81	56	53	43	30
Attractive physical appearance	0	28	13	28	9	33

226. *See supra* Part II.C.1 and Table 3.

227. *See supra* Part II.C.1 and Tables 5 & 7.

228. *See supra* Part II.C.4, Table 11 and Figure 1.

229. *See supra* Part II.D; *supra* note 178 and accompanying text.

