4-1-2006

Alternative Dispute Resolution and Court-Appointed Experts

Joseph R. Slights III

Mark G. Haug

Follow this and additional works at: http://digitalcommons.pepperdine.edu/drlj

Part of the Civil Procedure Commons, Courts Commons, Dispute Resolution and Arbitration Commons, and the Judges Commons

Alternative Dispute Resolution and Court-Appointed Experts

Honorable Joseph R. Slights, III*

Mark G. Haug**

I. INTRODUCTION

This article shamelessly borrows its subtitles—the Court's Tale and the Expert's Tale—from Chaucer's tale-telling.[1] The two tales examine the life cycle of a case utilizing a court-appointed expert. The Court's Tale begins with a presumption against the court-appointed expert.[2] Certain characteristics of a dispute, however, may be sufficient to rebut this presumption.[3] The Court's Tale tells of one such case.[4] The case involved complex damage calculations and irreconcilable positions that invite an objective analysis.[5] The article then turns toward the Expert's Tale which describes how an expert helped resolve the problem.[6] Following the Expert's Tale, the court assesses the outcome of the collaboration.[7]

---

*   Honorable Joseph R. Slights, III was appointed by Governor Thomas Carper to the Delaware Superior Court in 2000. He received his Bachelor of Science degree from James Madison University and his Juris Doctor degree from the Washington & Lee University School of Law. Prior to joining the Superior Court, Judge Slights was in private practice in Wilmington, Delaware where his practice focused on commercial and corporate litigation and white collar criminal defense. He currently is assigned to preside over the court's complex tort litigation docket.

**   Mark G. Haug, Ph.D., J.D., is on the faculty at the University of Kansas School of Business. His research interests include Finance, Business Ethics, Epidemiology, and Scientific Evidence and the Law. At the University of Kansas he teaches Business Law, Statistics, Operations Management and Professional Development courses. His B.S. and M.S. are in Statistics from Kansas State University, his Ph.D. in Research and Evaluation Methodology from the University of Colorado and his J.D. from the University of Kansas. Mr. Haug was admitted to the Kansas Bar in 1997.

1.   GEOFFREY CHAUCER, THE CANTERBURY TALES (Nevill Coghill trans., Penguin Books 1969).

2.   *See infra* notes 10-11 and accompanying text.

3.   *See infra* notes 12-22 and accompanying text.

4.   *See infra* Part II.A-B.

5.   *See infra* Part II.B.

6.   *See infra* Part III.A-G.

7.   *See infra* Part IV.

333

II. THE COURT'S TALE

Generally, judges are reluctant to utilize court-appointed experts.[8] This reluctance is grounded in several legitimate concerns including the potential for diluting the adversarial process, usurping the role of the fact-finder, and incurring process-related difficulties and cost.[9] Nevertheless, the court's inherent authority to appoint its own expert, memorialized in Rule 706 of the Federal Rules of Evidence and state counterparts to the rule, is well-settled—and for good reason.[10] In some cases, the subject matter of the controversy is complex; and the court cannot reconcile the opinions of the parties' experts.[11] Judges may view such cases as an opportunity to introduce a less venal expert into the fray in the hopes of developing a clearer picture of the dispute and assisting the trier of fact in its pursuit of a just verdict.[12]

The advisory committee's note to Rule 706 describes the inevitable "sobering" effect that a court-appointed expert likely will have on both the parties and their expert witnesses.[13] For this reason, a court typically will wait to appoint its expert until after the parties' experts have voiced their opinions, and the parties have utilized these opinions to fortify their theories of the case.[14] This approach makes sense for several reasons. First, the parties' experts may define the issues in a way that renders further expert review unnecessary.[15] Second, the parties' experts may assist the court in defining the role of the court-appointed expert by drawing the "battle lines"

---

8. *See* JACK B. WEINSTEIN & MARGARET A. BERGER, WEINSTEIN'S EVIDENCE MANUAL ¶ 13.06[01] (1991) ("[J]udges have not exercised their power to call experts frequently . . . .").

9. *See id.*

10. *See* 4 JACK B. WEINSTEIN & MARGARET A. BERGER, WEINSTEIN'S FEDERAL EVIDENCE § 706 app. 100 (Joseph M. McLaughlin ed., 2d ed. 2004) (discussing the inherent power of the court to appoint experts separate and apart from Rule 706).

11. *See* DAVID H. KAYE ET AL., THE NEW WIGMORE: EXPERT EVIDENCE § 10.41, at 353 (Richard D. Friedman ed., 2004).

12. *See* 3 STEPHEN A. SALTZBURG ET AL., FEDERAL RULES OF EVIDENCE MANUAL § 706.02[2] (8th ed. 2002).

13. FED. R. EVID. 706 advisory committee's note.

14. SALTZBURG, *supra* note 12, at § 706.02[2]. *See, e.g.,* NEC Corp. v. Hyundai Elecs. Indus. Co., 30 F. Supp. 2d 546, 554 (E.D. Va. 1998) (noting that the parties' experts had "unfortunately, but understandably become technical advocates for their respective causes, vehemently disagreeing in every particular and abandoning that independence which makes the testimony of such witnesses helpful," compelling the court to appoint its own expert to render "independent, informed opinions.").

15. *See, e.g.,* 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, 1060-61 (1994) (describing methods a court can use to define the issues including "asking experts to stipulate to those issues on which they agree and disagree").

334

of the dispute.[16] Finally, the parties may place more confidence in the court-appointed expert process if their own experts have provided guidance on the selection of the expert and the process by which the court-appointed expert review should be undertaken.[17]

On rare occasions, courts view the appointment of experts as a means of facilitating settlements.[18] In these instances, the court-appointed expert serves more as a consultant to the court, or a court mediator, to assist in the alternative dispute resolution process.[19] Even then, however, the court often will allow the parties to develop their own expert evidence before introducing the idea of a court-appointed expert for settlement purposes.[20] A recent experience of the Delaware Superior Court suggests that a court-appointed expert can be effective early in the litigation to help the court and the parties define the triable issues and promote settlement of the dispute.[21]

A.   Total Care Physicians, P.A. v. O'Hara

In November 1999, the founding members of Total Care Physician, P.A. ("TCP"), a medical practice comprised mainly of general practice physicians, brought suit against a former member of the group, Kevin W. O'Hara, M.D. ("Dr. O'Hara").[22] The suit alleged that Dr. O'Hara misappropriated TCP trade secrets by copying confidential patient

---

16.   *See id.*

17.   *See id.* at 1064 (recommending that parties play a primary role in nominating and choosing a court-appointed expert).

18.   *See, e.g.,* B.H. by Pierce v. Murphy, 984 F.2d 196, 198 (7th Cir. 1993) (A court-appointed expert analyzed Department of Children and Family Services' procedures to aid in settlement of action against the agency.); McGinnis v. Traina, C.A. No. 95-3452, 1996 U.S. Dist. LEXIS 4314, at *2-3 (E.D. La. Apr. 3, 1996) (A court-appointed certified public accountant helped settle a disputed account between two insurance brokers.); Mancuso v. Consol. Edison Co., No. 93 CIV.0001, 1993 U.S. Dist. LEXIS 17731, at *3 (S.D.N.Y. Dec. 13, 1993) (To encourage settlement, the district court recommended a court-appointed expert to test contamination levels in a marina.); S.F. NAACP v. S.F. Unified Sch. Dist., 695 F. Supp. 1033, 1035 (N.D. Cal. 1988) (A team of "the nation's leading experts on school desegregation" helped parties prepare a desegregation plan during settlement talks.).

19.   *See* Reilly v. United States, 863 F.2d 149, 158 (1st Cir. 1988) (distinguishing between the court-appointed expert witness and the court-appointed consultant); FTC v. Enforma Natural Prods., 362 F.3d 1204, 1213 (9th Cir. 2004) (same).

20.   *See Reilly,* 863 F.2d at 158 (using the court-appointed expert to "'reconcil[e] the testimony of at least two outstanding experts who take opposite positions'"); *FTC,* 362 F.3d at 1214 (using the court-appointed expert "to confer with the parties' experts . . . and to 'tell [the court] who's right'").

21.   *See infra* Parts II.A-B, IV.

22.   *See* Total Care Physicians, P.A. v. O'Hara, 798 A.2d 1043 (Del. Super. Ct. 2001).

335

information to assist him in soliciting TCP's patients to his new practice.[23] After the court narrowed the claims on cross-motions for summary judgment, the parties agreed to a bench trial.[24]

With the parties' consent, the court bifurcated the trial so that the first phase only would address the issues of trade secret status and misappropriation.[25] The second phase, if needed, would address the issues of causation and damages.[26] The court also ordered bifurcated discovery to track the trial phases.[27] The court limited the first phase of discovery to exploring whether trade secret protection applied to the patient information that Dr. O'Hara allegedly copied and whether Dr. O'Hara misappropriated the information. Causation and damages discovery would follow only if the plaintiff prevailed in the first phase of the trial.[28]

After a three-day bench trial, the court found that Dr. O'Hara copied confidential patient information worthy of trade secret protection, including TCP rolodexes and proprietary patient insurance information.[29] Dr. O'Hara then used the patient information to construct a letter to his patients notifying them that he was leaving TCP and advising them of his new practice's location.[30] Since TCP had refused to notify its patients of Dr. O'Hara's departure, the court concluded that Dr. O'Hara's letter informing his patients that he was leaving TCP was not a misappropriation of the TCP trade secrets; because ethics rules obligated him to provide such notification.[31]

The letter, however, went further than notification. In addition to notifying patients, Dr. O'Hara also solicited them to his new practice by touting the additional services he could provide at his new facility in addition to other conveniences and benefits he could offer that were not available at TCP.[32] The notification and solicitation appeared in the same letter mailed nearly to one thousand TCP patients.[33] The court concluded that the patient notification was proper, but the patient solicitation was not.[34]

---

23. *See id.* at 1050.
24. *See id.* at 1046.
25. *See* Total Care Physicians, P.A. v. O'Hara, No. CIV.A.99C-11-201JRS, 2002 WL 31667901, at *1 & n.3 (Del. Super. Ct. Oct. 29, 2002).
26. *See id.*
27. *See id.*
28. *See id.*
29. *See Total Care Physicians*, 2002 WL 31667901, at * 4-9.
30. *See id.* at *3.
31. *See id.* at *5-7 (notification required to avoid patient abandonment issues).
32. *See id.* at *8.
33. *See Total Care Physicians*, 2002 WL 31667901, at *3.
34. *See id.*

336

Consequently, the court found in favor of TCP on the misappropriation of trade secrets claim.[35]

With phase one of the trial complete, the parties and the court turned their attention to phase two–causation and damages.[36] Dr. O'Hara argued that the court's finding that his patient notification was proper dramatically affected TCP's causation case. Specifically, Dr. O'Hara contended that TCP must present evidence from the more than six hundred patients that it claimed left TCP to join Dr. O'Hara's new practice, so the court could determine whether the patients left TCP as a result of the proper notification or the improper solicitation.[37] Given the impossibility of either funding or coordinating such a presentation, TCP strongly disagreed that this evidence was necessary to carry its *prima facie* burden to prove causation at trial.

The parties sought the court's guidance on the causation issue before phase two discovery began to allow them to focus their discovery efforts.[38] The court agreed to address the issue *in limine* and issued a pretrial decision in which it concluded that TCP had to prove that the lost patients for which it sought damages would not have left TCP "but for" the improper solicitation in Dr. O'Hara's letter.[39] The court also ruled, however, that TCP could carry its burden on this issue without parading all six hundred or more patients into the courtroom to testify regarding their reasons for leaving TCP.[40] The court noted that TCP could employ other approaches to prove the point including, *inter alia*, a statistical analysis.[41]

B. The Rule 706 Expert

The court's decision on the causation and damages issues marked the third written opinion in the case.[42] The litigation was nearly two years old, and the parties had not yet commenced phase two discovery in earnest. The court anticipated that the parties would continue to hotly contest the litigation and engage experts, perhaps several experts, to address the phase

---

35. *See id.* at *9-10.

36. *See id.* at *10.

37. *See* Total Care Physicians, P.A. v. O'Hara, No. CIV.A.99C-11-201JRS, 2003 WL 21733023, at *3 (Del. Super. Ct. July 10, 2003) (pretrial decision regarding causation and damages).

38. *See id.* at *1.

39. *See id.* at *1-2.

40. *See id.* at *3. The verified number of patients involved was later determined to be 566.

41. *See Total Care Physicians*, 2003 WL 21733023, at *3.

42. *Total Care Physicians*, 2003 WL 21733023, at *1 (third written opinion); 2002 WL 31667901, at *1 (second written opinion); 798 A.2d at 1043 (first written opinion).

337

two issues. While the damages were potentially extensive, it became clear to the court that the "litigation was consuming the controversy."

During several conferences with the court early in the litigation, the parties discussed the possibility jointly of retaining an expert to assist them in working through the damages issues, so both parties could gain a better understanding of the realistic range of damages in the case. As the litigation wore on, the parties became more entrenched in their positions; and the likelihood of concerted action diminished. The parties attempted mediation and failed. The court decided to take a chance and, during a phase two discovery conference, suggested that a court-appointed expert could address the causation issue and, if appropriate, take the next step of evaluating damages.

Despite the court's prior ruling on causation, Dr. O'Hara continued to believe that TCP would have difficulty proving causation at trial. Neither party had engaged an expert, and the looming expense clearly was a concern to both parties. The court emphasized that the expert could guide the court and the parties in determining the threshold question of whether TCP could prove proximate cause under the unique circumstances of the case. Moreover, the court-appointed expert could provide an objective, realistic preview of the potential damages.

Under the court's proposal, the expert first would disclose his proposed methodology. If the methodology was acceptable, the parties would agree to allow the expert to conduct the analysis. At the end of the process, the parties could adopt the expert's findings or engage their own expert or experts. The court made it clear that the court-appointed expert's conclusions would become a part of the phase two trial record.

Alternative dispute resolution, while always a consideration, was not a primary goal of the court's proposal because the failed mediation efforts suggested that settlement was unlikely. After consultation with their respective clients, counsel agreed to the court's proposal and also agreed to fund it. The understanding was that the parties would "stand down" while the court's expert performed his analysis.

The next step was to select the expert. Mark G. Haug, Ph.D., J.D. was on the faculty at the National Judicial College in Reno, Nevada. Dr. Haug's post graduate training was in law and statistics. He appeared to be custom-made for the assignment. He could understand the nuances of the proximate cause dilemma that the court's distinction between proper patient notification and improper patient solicitation created.[43] He could also determine if a statistical analysis was an appropriate means by which to address the issue. And he could provide the parties with the objective

---

43. *See supra* notes 19-26 and accompanying notes.

338

damages overview they needed to decide, among other issues, how hard to litigate the case. After the court fully briefed him on the history and status of the litigation and the remaining issues in the case, Dr. Haug graciously agreed to accept the appointment.

III. THE EXPERT'S TALE

The prospect of serving as a "706 expert" is quite appealing. Scientists welcome the objectivity appropriate to such a project. Although scientists conduct investigations in the pursuit of science, they often struggle with their own biases and the role which biases may play in their academic work.[44] Even more so, parties, who retain a scientist as an expert in litigation to "assist the trier of fact," typically engage the scientist to find data or analyses to assist the trier of fact to *see things the way the party sees things*.[45] As a 706 expert, however, a scientist can approach a problem with textbook objectivity, without any *a priori* expectations, and enjoy the pleasures of plying his discipline for the sole purpose of discovering the reality that resolves the problem.[46]

In the present case, Dr. Haug found at least two ways to estimate damages: a financial approach and a statistical approach. A financial approach looks at the big picture by examining financial information before-and-after an event.[47] If there is a difference, then that difference may be attributed to the event.[48] The obvious advantages to this approach are its ease (although financial information can sometimes be difficult to interpret) and clarity. This approach, however, ignores the details, positions, and interests that usually are important to each or both of the parties. The statistical approach is an analysis addressing all of the details in a disciplined

---

44. *See* Thomas M. Crowley, *Help Me Mr. Wizard! Can We Really Have "Neutral" Rule 706 Experts?*, 1998 DETROIT C.L. MICH. ST. U. L. REV. 927, 961-66 (discussing the value judgments that form the basis of all scientific work).

45. *See* KAYE, *supra* note 11, at § 1.2, at 5.

46. 1 FAIGMAN ET AL., SCIENCE IN THE LAW § 1-3.9, 61 (2002).

47. *See, e.g.*, Harley & Lund Corp. v. Murray Rubber Co., 31 F.2d 932, 933 (2d Cir. 1929) (suggesting a measurement of damages from trade secret misappropriation as the difference between the plaintiff's profits at the misappropriation and his projected profits had the tort not occurred). A financial approach might consider, "the difference between the plaintiff's position after the defendants [committed the tort] . . . and before." *Id.*

48. *See id.*

339

method, such as a survey.[49] A well-constructed statistical analysis provides estimates as well as measures of the uncertainty in the estimates.[50] An immediate benefit of the statistics approach—as in the present case—is that it can address the parties' questions and positions through an objective procedure and, thereby, facilitate a quicker resolution.[51]

A court-appointed expert's report should provide proper disclosure of the expert's methods.[52] The report also should detail whatever options, if any, the expert may choose in his research.[53] In the present case, a survey was the ideal method for collecting the data relevant to the questions presented in these facts.

Upon completion of the initial draft of the survey, the court passed it along to both parties.[54] Following a teleconference with the court and both parties, Dr. Haug prepared the following report outlining the methods and the final draft of the survey.

---

49. *See, e.g.*, KAYE, *supra* note 11, at § 11.62, at 393-97 (describing the disciplined approach of choosing an appropriate survey sample or framework).

50. *See id.* at § 11.6.5, at 399-404.

51. Although good statistical practice identifies the primary issues of concern—and proceeds with methods to obtain evidence illuminating those concerns—the method itself can include addenda and procedures that also illuminate other concerns. Good statistical practice can also respect partisan privacy concerns with sensitive questions (e.g., unethical conduct, abortion, etc.) while obtaining data for the primary issue. *See, e.g.*, RICHARD L. SCHEAFFER ET AL., *How to Ask Sensitive Questions, in* ACTIVITY-BASED STATISTICS 186 (2d ed. 2004). With artful exercise of this latitude, a practitioner may facilitate quicker resolution by collecting objective data clarifying partisan positions. Obviously, this is best achieved through collaboration in the method design. *See, e.g.*, ROGER FISHER ET AL., *Insist on Using Objective Criteria, in* GETTING TO YES: NEGOTIATING AGREEMENT WITHOUT GIVING IN 81-94 (2d ed., Houghton Mifflin 1991) (discussing the importance of negotiating "on the basis of objective criteria").

52. *See* KAYE, *supra* note 11, at § 11.5 (describing the need to know the design of a statistical study to properly evaluate it).

53. *See id.*

54. "[A]ttorney involvement in the survey design is necessary to ensure that relevant questions are directed to a relevant population." FEDERAL JUDICIAL CENTER REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 237-38 (2d ed. 2000) (for any expert, and perhaps even more relevant to, court-appointed experts).

340

A. Determination of an Appropriate Random Sample Size

Dr. Haug recommended a random sample size of one hundred patients.[55] He based this determination upon the need to have a reliable sample to achieve a 95% "confidence" and the superior need to minimize bias in the estimate of the actual proportion of patients who relied on the solicitation language. Larger sample sizes produce greater reliability.[56] In survey methods, however, there is potential for several methodological biases—most notable, non-response bias.[57] The cost to correct these biases increases with the sample size.[58] A random sample size of one hundred was ideal; it would achieve reasonable reliability while affording the possibility of minimizing or eliminating biases inherent in survey methods.[59]

In this case, the parties identified 566 patients. Two options existed at this stage—to either attempt to survey all 566 patients (a census) or survey a fraction of the 566 patients through a random sample.[60] The census is more

---

55. The recommendation is based upon the following calculation of n, the sample size:

$$n = \frac{z_{\alpha/2}^2 \cdot \hat{\pi} \cdot (1 - \hat{\pi})}{E^2}$$ where $z_{\alpha/2} = 1.96$. The value, 1.96, insures that 95% of all similarly

constructed "confidence" intervals contain the true value—*i.e.*, the actual proportion who relied on the solicitation language. The interval is correct as long as the sample is random. A $\hat{\pi} = 0.50$ insures that the calculation of n guarantees that the actual value of E will be less than or equal to the chosen value of E. E is a subjective "tolerable" width for the 95% confidence interval. Using E = 0.07: $$n = \frac{z_{\alpha/2}^2 \cdot \hat{\pi} \cdot (1 - \hat{\pi})}{E^2} = \frac{1.96 \cdot 0.50 \cdot 0.50}{0.07^2} = 100.$$ This calculation omits the fact that the population size, N, is finite (566 patients involved). Such an omission necessarily inflates—although insignificantly—the calculated value of n. Similar to the choice of $\hat{\pi} = 0.50$, the omission of N in the sample size calculation inflates the calculated value of n. Therefore the final estimate of the actual proportion who relied on the solicitation language (and its accompanying interval) will be a 95% confidence interval that is narrower (*i.e.*, more precise) than other 95% confidence intervals based upon sample size calculations that include the N and/or other values for $\hat{\pi}$.

56. *See* KAYE, *supra* note 11, at § 11.6.4, at 403-04.

57. *See id.* at § 11.6.3, at 397-99.

58. *See id.* at § 11.6.4, at 403-04.

59. *See id.* at § 11.6.2, at 395 ("Selection [of a sample] according to a table of random digits or the like leaves no room for selection bias.")

60. Random sampling overcomes all methodological biases (*e.g.*, selection bias) by virtue of the randomness. *See id.* There are, however, biases other than methodological biases in survey research that require additional effort to cure (*e.g.*, non-response bias) and some that may never be

341

reliable,[61] but in practice it may be less valid[62] due to non-response bias.[63] Non-response bias occurs if the patients who do not respond to the survey are different than the responders.[64] The best way to cure the potential bias for this particular case—a small population with relatively high stakes—was to have an aggressive procedure of repeated mailings and telephone follow-up with the intent of converting *all* non-responders into responders, a procedure that might have become cost prohibitive within a larger census.[65]

---

completely cured (*e.g.*, recall bias—the ability to recall historical events accurately). *See* DAVID S. MOORE, STATISTICS: CONCEPTS AND CONTROVERSIES 52-55 (5th ed. 2001).

61. Reliability refers to reproducibility of results. *See* FEDERAL JUDICIAL CENTER, *supra* note 54, at 102-03. Another term for reliability is consistency. *See* KAYE, *supra* note 11, at § 11.7, at 405. The quantum of information determines the scientific reliability. *See id.* In statistics, the quantum of data is the sample size. *See id.* A marksman will be a highly reliable shooter and evidence a tight cluster of marks on the target. More marks in the cluster provide greater evidence of his reliability. The term confidence (as in confidence interval) is synonymous (mathematically and conceptually) with reliability; more marks in the cluster give us greater confidence of his marksmanship. *See* MOORE, *supra* note 60, at 35.

62. Validity refers to accuracy. *See* FEDERAL JUDICIAL CENTER, *supra* note 54, at 102-03. Validity goes to the question of whether the results are on point with the question. *See* KAYE, *supra* note 11, at 405. Consider the marksman in the prior footnote. Suppose his tight cluster of marks is on the bull's-eye. If this is the case, the marksman is reliable and accurate. If the same tight cluster of marks is to the right and slightly above the bull's-eye, he is still reliable, but he is not accurate. The absence of validity (or accuracy) is bias. *See* MOORE, *supra* note 60, at 35. The marksman (or the gun) is biased if the cluster of marks is not centered over the bull's-eye. *See id.*; *see also* Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579 (1993). In this case, the Court apparently accepts Starrs' remark that "'the difference between accuracy, validity, and reliability may be such that each is distinct from the other by no more than a hen's kick.'" *Id.* at 590 n.9 (quoting James E. Starrs, Fry v. United States *Restructured and Revitalized: A Proposal to Amend Federal Evidence Rule 702*, 26 JURIMETRICS J. 249, 256 (1986)). This unfortunate dictum perpetuates the blurriness between these two distinct and unrelated sources of potential error in scientific reasoning. *Id.* In adversarial proceedings concerning epidemiology, validity and reliability often are the battleground for each side. Consider the expert for the plaintiff who correctly argues that a case-control study demonstrated a statistically significant elevated likelihood of disease X for people exposed to Y. (Statistical Significance addresses reliability but not validity.) The defense then correctly argues that the case-control study does not represent the plaintiff's characteristics. (Non-representation addresses validity but not reliability.)

63. *See, e.g.*, FEDERAL JUDICIAL CENTER, *supra* note 54, at 245.

64. *See* KAYE, *supra* note 11, at § 11.6.3, at 397-99. It is noteworthy that, in an adversarial setting, this issue alone could considerably delay the process. A party may demand an entire census arguing that 566 is superior to 100, because it leaves no doubt as to the other 466. This argument is persuasive, because it appeals to our notion of due process. In reality, however, non-response bias and the economics of such an approach make it markedly inferior to the random sampling approach that achieves fairness at less expense and delay.

65. There are costs for materials such as stationary and postage, for data collection and entry, and most significantly, for analysis to cure the non-response bias.

342

B. Calculated Degree of Certainty

Based upon the random sample of one hundred patients and the proposed methods to cure any biases, the final estimate of the proportion of patients who relied on the solicitation language was targeted to be within 7% of the actual proportion of patients who relied on the solicitation language with a 95% degree of certainty (confidence level).[66] Furthermore, and perhaps more importantly, Dr. Haug expected that the methods proposed in the report would eliminate selection bias and minimize or eliminate non-response bias.

C. Random Selection Method and Results

Structuring the survey to reflect the perceptions of 566 patients—the number that counsel for both parties agreed upon—Dr. Haug randomly selected one hundred patients. He assigned each patient a random number and selected and reported those patients with the one hundred smallest random values to the court and counsel.[67]

D. Final Draft of the Survey Questionnaire

The final draft of the survey included the portions in italics below with drafting or researching comments after each survey question.

Instructions — Every survey or other data collection method should provide clear instructions on what is expected of the participant. In this case, the survey instructions asked each patient to answer each question to the best of his ability.

1. Our records indicate that you transferred your care from Total Care Physicians in 1996 to Dr. Kevin O'Hara's new practice. Is this correct? (If this is not correct, please continue with the survey and answer only

---

66. The issue of "within X%" and "Y% degree of certainty" is fertile ground for experts serving on one side or the other to either confuse the court or to attack X or Y on the grounds it is insufficient or incorrect. *See, e.g.,* KAYE, *supra* note 11, at § 11.8.4(f), at 425-28 (recording the great room for debate over whether courts should accept statistical evidence with confidence intervals of less than 95%).

67. Microsoft® Excel generated pseudo-random numbers for the selection. Pseudo-random numbers generally are accepted among statisticians as a sufficient basis for random sampling. *See* MOORE, *supra* note 60, at 23.

343

questions that may apply to you.) — Dr. Haug designed this question to provide a verification of the data.

2. On a scale from 1 to 5, how well do you recall your transfer? (1 = no recollection, 5 = full recollection) — Dr. Haug designed questions 2, 4, 5, 6, 9, 10, and 11 to assess the degree of recall bias,[68] if any, and the extent of measurement error,[69] if any.

3. Please tell us why (your reasons) you transferred care from Total Care Physicians to Dr. O'Hara's new practice. — Although providing the participants with a list of possible reasons is a common survey technique,[70] it is better to determine each patient's motivation in their own words. A listing of reasons would have provided Dr. Haug with some operational and analytical ease, but these conveniences come at the cost of substance.[71] Many surveyors prefer to provide the participants with a list because of the enormous amount of data or questions that must be compiled.[72] In this case, however, there was a relatively small survey and sample and sufficient time to both code the narrative response and to clarify the narrative through follow-up phone calls.

*4. On a scale from 1 to 5, how well do you recall **your reason** for transfer? (1 = no recollection, 5 = full recollection)* — Dr. Haug designed questions 2, 4, 5, 6, 9, 10, and 11 to assess the degree of recall bias, if any, and the extent of measurement error, if any.

---

68. *See* MOORE, *supra* note 60, at 52-55. Recall bias concerns the bias associated with poor recollection *and* the effect of poor recollection on a response. *See id.* As a bias, it tends toward one response rather than another. Recall bias is especially important when considering case-control studies that question past conduct that does not fit with cultural norms (*e.g.,* breast implant case-control studies questioning cases and controls on past sexual practices). *See* Shari Seidman Diamond, *Reference Guide on Survey Research, in* FEDERAL JUDICIAL CENTER, *supra* note 54, at 229, 251-53. Also, recall bias most likely would favor the defendant in the present case. Recall bias is similar to fact witness recollection. If a patient has transferred his care to the defendant, it is possible he will not remember either the solicitation language or the reason for his transfer. Therefore, failure to recall—even if only a small percentage of patients—will favor the defendant. It is likely that an expert for the defense would avoid the subject of recall bias.

69. *See* KAYE, *supra* note 11, at § 11.7, at 404-07. Measurement error occurs when data does not mirror reality. *See id.* Measurement error in this context concerns poor recollection.

70. In the present case, a list of reasons possibly would lead the patient, but it is difficult to ascertain whether this would favor the plaintiff or the defendant. In some respects it may favor the plaintiff—to prompt the patient on the solicitation language. In other respects, it may favor the defendant, if the defendant has discussed the case with his patients.

71. By providing options in this survey, the survey instrument would either lead the patient's response or narrow the patient's options, likely producing measurement error.

72. This is primarily an economics matter; these surveyors chose to forego the benefits of open-ended questions for the cost savings associated with computer scoring and compiling. *See* FEDERAL JUDICIAL CENTER, *supra* note 54, at 252 (describing the benefits of surveying with open-ended questions).

344

5. You have told us why you transferred care in Question #3. Please tell us where and how you obtained the information you used to arrive at your reason(s). — This question addressed what motivated the transfer. This question also provided each patient additional opportunity to explain his answer to question 4.

6. Please review your answers to Nos. 1 through 5. If you are satisfied with your answers, please continue to #7. If not, please make any changes before you continue on to #7. Your answers to #1 through #5 should not be changed once you proceed to #7. — This was an important instruction to assess the impact of recall bias, measurement error, and the effect of O'Hara's letter and the "cure letter" by TCP.

7. Please open the enclosed envelope and read its contents. — The contents contained O'Hara's letter and TCP's "cure letter."

8. Our records indicate that you received these letters. Is this correct? (If this is not correct, please continue with the survey and answer only questions that may apply to you.) — Dr. Haug designed this question to provide a verification of the data.

9. On a scale from 1 to 5, how well do you recall this letter? (1 = no recollection, 5 = full recollection) — Dr. Haug designed questions 2, 4, 5, 6, 9, 10, and 11 to assess the degree of recall bias, if any, and the extent of measurement error, if any.

10. In question #3 you told us why you transferred care from Total Care Physicians to Dr. O'Hara's new practice. Please leave question #3 as is, and tell us any other reasons you may recall after reading the letter. — Dr. Haug designed questions 2, 4, 5, 6, 9, 10 and 11 to assess the degree of recall bias, if any, and the extent of measurement error, if any.

11. If you have had any difficulty answering these questions or would like to provide additional comments, please write them here:

12. Please provide us with your name and phone number.

E. *Administration of Survey Questionnaire*

Dr. Haug planned the administration of the survey questionnaire as follows: (a) identifying one hundred randomly selected patients, (b) identifying and matching patient contact information, (c) mailing survey questionnaire to one hundred patients, (d) following-up with a survey questionnaire to non-responders, (e) following-up again with a survey

345

questionnaire to non-responders, and (f) following-up a third time with a survey questionnaire to non-responders.[73]

The mailing in 'c' would have included a short letter of introduction, the survey questionnaire, Dr. O'Hara's letter to the patients, TCP's "cure letter," and properly prepared return mailing materials. Dr. Haug prepared the letters of introduction and the return materials on court stationary.

F. *Correction of Non-Response Bias*

As noted above, non-response bias is the inaccuracy that results from the differences between people who respond to surveys and those who fail to respond.[74] A classic case of non-response bias is the *Literary Digest* Poll of 1936 when, after 10 million people had been surveyed, "only" 2.3 million responded.[75] The 2.3 million chose Alf Landon over Franklin Delano Roosevelt for President by a 3-to-2 margin.[76] The popular analysis of this study is that the *Literary Digest* improperly selected the 10 million people (selection bias); this view has some merit.[77] The poll only selected people with telephones or autos or other "luxuries," and this sample was not representative of the voting population.[78] More important, however, was the fact that the 2.3 million responders were fundamentally different in their outlook than the 7.7 million non-responders.[79]

In the present report, Dr. Haug proposed three methods to correct non-response: imputation, follow-up, and follow-up with skip tracing.[80] Formal

---

73. *See* Maurice C. Bryson, *The Literary Digest Poll: Making of a Statistical Myth*, 30 AM. STATISTICIAN 184 (1976).

74. *See* KAYE, *supra* note 11, at § 11.6.3, at 397-99.

75. *See* Bryson, *supra* note 73, at 184.

76. *See id.*

77. *See id.*

78. *See id.*

79. *See* Bryson, *supra* note 73, at 185.

80. *See, e.g.*, Jason Wejnert, Note, *Utah v. Evans and Statistical Methodologies in Census Apportionment*, 43 JURIMETRICS J. 441, 444 (2003). The Census Bureau used follow up and imputation to complete the 2000 census. *See id.*

> The Bureau gets most of its information . . . [by sending] forms for survey results. If the information survey is not returned, or is confusing, the Bureau follows up with up to six visits to the dwelling. If the information is still not obtained, the Bureau will use imputation for three characteristics—status, occupancy, and household size. The Bureau 'imputes' the relevant information about a nonrespondent household by inferring that the address or unit in dispute has the same characteristics as those of a 'nearby sample or 'donor' address or unit.

Id. Skip tracing is a commercial term for locating people whose record addresses and telephone numbers are no longer valid. A helpful guide for understanding skip tracing is SOURCEBOOK TO PUBLIC RECORD INFORMATION: THE COMPREHENSIVE GUIDE TO COUNTY, STATE, & FEDERAL PUBLIC RECORDS SOURCES (Michael Sankey & Peter J. Weber eds., 6th ed. 2004).

346

imputation of data is cost prohibitive, because it would require substantial background information on the patients selected in the random sample. However, even if the data were available, the imputation would require substantial analysis; and there would still be some error in the final results.[81]

Follow-up surveying in this case was superior to formal imputation in cost, reliability (consistency), and most likely in validity (accuracy). Proper formalities—for example, court stationary, convenient response media, etc.—would likely have prompted many patients to respond the first time around. It is probable, however, that follow-up with a second and even a third mailing would have been necessary. Phone calls would have boosted the response even higher, perhaps to 100%, which would have eliminated the non-response bias through elimination of non-response.

Patients who were deceased or who the parties could no longer locate could have represented a portion of the actual proportion of patients who relied on the solicitation language, if any, that a pro-rata calculation would have extrapolated and possibly discounted.[82] Follow-up surveying with skip tracing was the third method, but this method included the additional cost of finding patients who the parties could not find through the credit bureaus' skip tracing techniques.[83] In the report, Dr. Haug recommended follow-up surveying without skip-tracing, which both parties accepted, based on the quality of data as well as cost to the parties.

G. Statistical Analysis of Data and Conclusions

In applying the results of this study to the present case, Dr. Haug would have applied the sample proportion from the one hundred sample patients who relied upon the solicitation language toward the patient population of 566. In addition to this "point" estimate was the customary interval

---

81. "Substituting a value for the missing one is called *imputation*." GARY L. TIETJEN, A TOPICAL DICTIONARY OF STATISTICS 147 (1986). Imputation is an educated guess using a variety of methods which incurs measurement error—the guess—along with costs—choosing and executing a suitable method. *See id.* For a thorough treatment on imputation, see DONALD B. RUBIN, MULTIPLE IMPUTATION FOR NONRESPONSE IN SURVEYS (2004).

82. For example, 90 of the 100 patients respond to the survey/follow-up, but 10 of the 100 patients cannot be found. Further assume, for the sake of this example, that 18 of the 90 (20%) suggested that they relied on the solicitation language, then 20% of the 10 remainder patients would be assumed to have relied on the solicitation language. Due to the passage of time, the longevity of a standard patient relationship, and the fact that these patients can no longer be found, the extrapolated damages may need to be discounted due to their terminal nature.

83. *See* SOURCEBOOK TO PUBLIC RECORD INFORMATION, *supra* note 80.

347

estimate—the 95% confidence interval—to assess the "range" of values.[84] Dr. Haug would have used the point estimate, however, to determine the final amount when he applied it to a profit-per-patient amount that the parties would have stipulated to.[85]

In the final analysis, the report also would have contained an opinion regarding the recall bias and measurement error associated with the memory recall issues elicited in the survey. Although the impact cannot be precisely quantified, Dr. Haug would have included a professional assessment of their impact in the final report.

IV. THE IMPACT OF THE EXPERT'S ANALYSIS

As indicated, the court did not intend that Dr. Haug's involvement in the case would prompt a negotiated settlement. The parties had aggressively litigated the case, and the court expected that they would continue to do so notwithstanding Dr. Haug's findings. The court was, therefore, delighted to hear from counsel within two weeks of Dr. Haug's first report that the parties had settled the case. At first, it was not clear how the expert's unfinished product could yield such a productive result. In subsequent discussions with counsel, however, it became clear that the parties simply

---

84. The Greek lower case pi, π, represents the true proportion of the 566 patients who relied upon the solicitation language. The symbol, $\hat{\pi}$, represents the sample proportion of the 100 patients who relied upon the solicitation language. A 95% confidence interval is calculated as follows:

$$\hat{\pi} - z_{0.025} \cdot \sigma_{\hat{\pi}} \quad \leq \quad \pi \quad \leq \quad \hat{\pi} + z_{0.025} \cdot \sigma_{\hat{\pi}}$$

$$\hat{\pi} - 1.96 \cdot \sqrt{\frac{\hat{\pi}(1-\hat{\pi})}{100} \left(\frac{N-n}{N-1}\right)} \quad \leq \quad \pi \quad \leq \quad \hat{\pi} + 1.96 \cdot \sqrt{\frac{\hat{\pi}(1-\hat{\pi})}{100} \left(\frac{N-n}{N-1}\right)}$$

$$\hat{\pi} - 1.96 \cdot \sqrt{\frac{\hat{\pi}(1-\hat{\pi})}{100} \left(\frac{566-100}{566-1}\right)} \quad \leq \quad \pi \quad \leq \quad \hat{\pi} + 1.96 \cdot \sqrt{\frac{\hat{\pi}(1-\hat{\pi})}{100} \left(\frac{566-100}{566-1}\right)}$$

$$\hat{\pi} - 0.178\sqrt{\hat{\pi}(1-\hat{\pi})} \quad \leq \quad \pi \quad \leq \quad \hat{\pi} + 0.178\sqrt{\hat{\pi}(1-\hat{\pi})}$$

86. To assess the dollar amount of damages for each patient found to be solicited, the parties agreed to consider stipulating to an amount that is reasonably relied upon in the profession as based upon a survey of the medical economics literature.

348

needed to be convinced that a reliable, expedient analysis of the issues was possible.

Once Dr. Haug demonstrated to both parties that he could employ a scientific process to provide a reliable answer to the question, "why did the patient leave TCP to join Dr. O'Hara's practice?," the parties became more willing to leave their previously entrenched settlement positions to come to a more realistic evaluation of the case. The experience of constructing the protocols by which the court-appointed expert would perform the work, getting the parties to "buy in" to the process, and then interacting with the expert as he performed the analysis was extraordinarily rewarding. The result, of course, was a "win/win" for all involved.

349

.