

**USING EXPERT WITNESSES IN EMPLOYMENT
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USING EXPERT WITNESSES IN EMPLOYMENT LITIGATION

I. SCOPE OF ARTICLE

Over the last decade, employment litigation has become one of the hottest areas of legal practice. With the implementation of new and expanded statutory protections of the labor force, employee suits are on the rise. Whether you find your client in a traditional on-the-job injury case or battling a sexual harassment suit, the resolution of employment litigation frequently requires the kind of scientific or other specialized information that only experts can provide. It becomes necessary, therefore, as it has become increasingly crucial in all types of litigation,¹ to employ expert witnesses. This article addresses the standard for the admissibility of expert testimony and how to most effectively handle experts in the context of employment litigation.

II. THE ADMISSIBILITY OF EXPERT TESTIMONY

A. The *Daubert* and *Robinson* Opinions

Because both the United States Supreme Court and the Texas Supreme Court have rendered key opinions on the issue in recent years,² the admissibility of expert testimony has become a hot topic of discussion. Before these key opinions, evidentiary requirements unfortunately presented few obstacles even to non-meritorious expert testimony. The loosening of evidentiary rules for expert testimony gave rise to a cottage industry of professional experts who will testify in support of positions with little or no scientific foundation.³ The problem was exacerbated by court rulings based on a "relevance" theory: admitting any expert testimony if the expert has credentials and his opinions are relevant to the claims at issue.⁴ The United States Supreme Court first addressed this problem in Daubert v. Merrell Dow Pharmaceuticals, Inc. and rejected the relevance theory in favor of strict scrutiny by trial courts, who act as "gatekeepers" to

¹ See Bert Black, et al., *Science and the Law in the Wake of Daubert: A New Search for Scientific Knowledge*, 72 TEX. L. REV. 715, 801 (1994) (cited in E.I. du Pont de Nemours & Co. v. Robinson, 923 S.W.2d 549, 553 (Tex. 1995)).

² See Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993); E. I. du Pont de Nemours & Co. v. Robinson, 923 S.W.2d 549 (Tex. 1995).

³ See Jack B. Weinstein, *Improving Expert Testimony*, 20 U. RICH. L. REV. 473, 482 (1986) (experts may be found to testify even to frivolous theories).

⁴ See Ferebee v. Chevron Chem. Co., 552 F. Supp. 1293 (D.D.C. 1982), aff'd, 736 F.2d 1529, 1534 (D.C. Cir.), cert. denied, 469 U.S. 1062 (1984) ("[I]f experts are willing to testify that such a link exists, it is for the jury to decide whether to credit the testimony.").

admit only expert testimony founded on good science.⁵ The Texas Supreme Court followed suit and adopted the Daubert analysis in E. I. du Pont de Nemours & Co. v. Robinson.⁶

In Daubert, the United States Supreme Court refined the test for the admissibility of scientific expert testimony in federal courts to meet the requirements of Rule 702 of the Federal Rules of Civil Procedure. Before Daubert, the long-standing test for admissibility of scientific evidence was the "general acceptance" test of Frye v. United States.⁷ Under Frye, expert testimony based upon a scientific technique was admissible if the technique was "generally accepted" as reliable in the relevant scientific community. The Supreme Court found in Daubert that the Frye test was superseded by the adoption of the Federal Rules of Evidence, in particular, Rule 702.

The Supreme Court found a mandate for active review in the language of Federal Rule of Evidence 702, which contemplates that the subject of scientific expert testimony must be "scientific . . . knowledge" that "will assist the trier of fact." Rule 702's reference to "scientific knowledge" requires that an expert's claims be validated by the accepted standards of the relevant field, and the "will assist" standard requires that the evidence be based on scientifically recognized and defensible methods. For scientific evidence, Rule 702 requires that an expert's opinion be "reliable" and "scientifically valid." The scientific validity standard requires trial courts to review whether expert testimony is founded on "good science" and proper scientific principles. The Court patterned the test under Rule 702 on the way science is actually done by scientists: scientific testimony should be based on reasoning that has been subject to analysis or peer review in the relevant scientific community, has been tested, and has gained acceptance in that scientific community.

Following the United States Supreme Court reasoning in Daubert, the Texas Supreme Court in Robinson held that "scientific knowledge," which will "assist the trier of fact," must be both relevant and reliable. E.I. du Pont de Nemours & Co. v. Robinson, 923 S.W.2d at 557; Daubert, 509 U.S. 579, 587-88 (1993). Expert testimony is relevant only if it is, "sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute." Id. at 556 (citing United States v. Downing, 753 F.2d 1224, 1242 (3d Cir. 1985)). To be reliable, the expert's scientific technique or principle must be: "grounded in the methods and procedures of science." Id. at 557.

The most important result of Daubert and Robinson is to emphasize the "gatekeeper" role of the trial court in policing expert testimony and to provide judges with factors to consider in

⁵ Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). Daubert addresses only science, but its logic extends to other fields.

⁶ 923 S.W.2d 549 (Tex. 1995). Robinson also relies upon the Texas Court of Criminal Appeals' analysis of Rule 702 of the Texas Rules of Criminal Evidence in Kelly v. State, 824 S.W.2d 568 (Tex. Crim. App. 1992).

⁷ 293 F. 1013, 1014 (D.C. Cir. 1923).

such a gatekeeping analysis.⁸ The opinions are a victory for practicing lawyers and commentators who have supported the role of the trial court in carefully scrutinizing the bases of scientific expert testimony to ensure that such testimony has scientific validity and is not "junk science" supported primarily by the credentials of the proponent. Arcane causal theories, never published and scientifically implausible, therefore, should not be inadmissible.

B. The *Daubert* Test for Admissibility Under Federal Rule 702

The United States Supreme Court set forth four factors to be utilized by trial judges in evaluating whether the science behind expert testimony constitutes "scientific knowledge" that "will assist the trier of fact"⁹ pursuant to Rule 702: (1) falsifiability, whether the expert theory can be and has been tested; (2) peer review and publication, whether other scientists in the field have analyzed and critiqued the expert's theory; (3) the error rate resulting from the application of the expert's methodology or technique; and (4) general acceptance, whether the theory after review has gained widespread acceptance in the relevant scientific community. Aside from these factors, the Court in Daubert indicated that other criteria might be relevant to the "scientific knowledge" inquiry envisioned by Rule 702. In a footnote to its opinion, the Court referred to a number of authorities that have developed various factors for determining the evidentiary reliability of expert testimony. Many of the factors overlap but may be distilled to the following: (1) the qualifications and professional stature of the testifying expert; (2) the nature and breadth of the inference adduced;¹⁰ (3) the strengths of opposing views and the standing of experts who express them; (4) the non-judicial uses to which the scientific technique has been put;¹¹ (5) the extent to which the expert is prepared to discuss uncertainties in the conclusions and in the techniques used to prepare the evidence; (6) the extent to which expert testimony has been offered in earlier cases to support or dispute the merits of a particular scientific procedure; (7) the

⁸ See, generally, Suzanne B. Baker, "Gatekeeping" in Texas: *The Practical Impact of Full Implementation of the Texas Rules of Evidence Regarding Experts*, 27 ST. MARY'S L. J. 237 (1996).

⁹ Expert testimony can be admissible on mixed questions of law and fact if it is helpful to the trier of fact. See Linda L. Addison, *Annual Survey - Civil Evidence*, 49 SMU L. REV. 755, 769 (1996) (citing Lyondell Petrochemical Co. v. Fluor Daniel, Inc., 888 S.W.2d 547, 554 (Tex. App. -- Houston [1st Dist.] 1994, writ denied) (expert testimony that contractor violated OSHA regulation regarding employee training admissible even though language of regulation was straightforward). See also Texas Dep't of Human Servs. v. Green, 855 S.W.2d 136, 150 (Tex. App. -- Austin 1993, writ denied) (expert testimony that public employer's acts constituted retaliation under state whistleblower act).

¹⁰ Polygraph analysis, for example, requires the examiner not just to analyze purely physical characteristics measured by a machine (objective criteria), but to extrapolate a judgment of something not capable of direct measurement -- i.e., the credibility of the person examined (subjective criteria). The validity of a scientific technique that purports to make such a subjective judgment with any significant degree of accuracy is, to say the least, questionable. The United States District Court in Connecticut denied the admission of testimony from an expert in the administration and interpretation of polygraphs offered by the plaintiff in a Title VII sexual harassment case. Meyers v. Arcudi, 947 F. Supp. 581 (D. Conn. 1996).

¹¹ The Robinson court listed this factor, citing Daubert on remand, 43 F.3d 1311, 1317 (9th Cir.), cert. denied, _____ U.S. _____, 116 S. Ct. 189 (1995).

"novelty" of the technique and its relationship to more established modes of scientific analysis; (8) the clarity and simplicity with which the technique can be described and its results explained; (9) the extent to which the basic data are verifiable by the court and jury; (10) the availability of other experts to test and evaluate the technique; and (11) the probative significance of the evidence in the circumstances of the case.¹²

The Court also mentioned Federal Rule of Evidence 703 as a guideline for the gatekeeping function. Rule 703 governs the factual bases of opinion testimony by experts. It provides that an expert may base an "opinion or inference" on "facts or data" not admissible in evidence, but only if such "facts or data" are "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject."¹³ The purpose of this rule is to assure, first, that the underlying facts or data are of the type that experts in the field in fact rely upon and, second, that reliance on such facts or data is reasonable in relation to the subject of the expert testimony. Rule 703 has been most often cited as a rule against expert opinions based on erroneous or inaccurate data.¹⁴

The data or facts may be perfectly accurate, however, and still fail the Rule 703 test. A medical report, for example, may be accurate in the sense that nothing contained in the report is erroneous. But where every third entry has been inexplicably deleted, or where the report lacks information critical to the physician's medical diagnosis, reliance on such information as the basis for an expert's opinion may not be appropriate. Similarly, reliance on the results of admittedly accurate animal studies as the exclusive basis for an expert opinion on causation would not likely satisfy the threshold requirement of the rule. While scientists routinely rely on the results of such studies for some purposes, this data standing alone is not reasonably relied upon by experts in forming opinions on causation in humans.

Although under Daubert, Rules 702 and 703 serve different purposes, the analysis under Rules 702 and 703 obviously coalesces to some extent. Reliance upon certain types of facts or

¹² All of these factors may in one respect or another bear on the admissibility of expert testimony. But not all of them are relevant to the scientific validity of the underlying principles on which the expert relies. Such factors as the parties' access to scientific authorities, the complexity of the scientific theory, and the extent to which the theory can be understood by the judge and jury do not fit the "scientific knowledge" mold. While these factors may be useful in assuring that the jury will not be misled or confused by the evidence, and hence relevant to a Rule 403 analysis, they have nothing to do with whether the theory or technique upon which the expert bases his opinion is scientifically valid. And as the Court in Daubert was careful to point out, the factors related to the "scientific knowledge" prong of Rule 702 must specifically "focus on the reliability of evidence as ensured by the scientific validity of its underlying principles." 509 U.S. at 595, n.12.

¹³ Fed. R. Evid. 703.

¹⁴ In Slaughter v. Southern Talc Co., for example, an asbestos case, the plaintiffs' experts based their causation opinions on examination reports that were "replete with obvious errors" and contradicted workplace questionnaires filled out by the workers themselves. 919 F.2d 304, 307 (5th Cir. 1990). Because the data that formed the basis of the expert's opinion simply was inaccurate, the court excluded the expert's testimony under Rule 703. Id. at 307-08.

data may raise questions about both the expert's methodology and the data relied upon. Expert testimony based on facts or data not reasonably relied upon by experts in the field will often fail to satisfy the standards of either rule. The bases for exclusion, however, are by no means coextensive. Whereas Rule 702 addresses the scientific basis of the expert's testimony, Rule 703 is concerned only with the factual basis of the expert's testimony. Rule 703, however, contemplates more than the exclusion of expert testimony based on inaccurate data. It extends to otherwise accurate facts or data that experts in the field would not reasonably rely upon in forming an opinion on the particular subject.

C. The *Robinson* Test for Admissibility Under Texas Rule 702

The Texas Supreme Court recently enunciated the appropriate standard for the admission of scientific expert testimony under Rule 702 of the Texas Rules of Civil Evidence in E.I. du Pont de Nemours & Co. v. Robinson, 923 S.W.2d 549 (Tex. 1995). Rule 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

Tex. R. Civ. Evid. 702. As a threshold matter, the trial court must determine if the expert testimony satisfies the three requirements of Rule 702: (1) the expert witness must be qualified; (2) the proposed testimony must be "scientific, technical, or other specialized knowledge;" and (3) the expert's testimony must "assist the trier of fact to understand the evidence or to determine a fact in issue." Robinson, 923 S.W.2d at 556.¹⁵

Robinson sets forth a nonexclusive list of factors, which a trial court may consider in determining whether the expert testimony meets the standard for reliability under Rule 702:

- (1) the extent to which the theory has been or can be tested;
- (2) the extent to which the technique relies upon the subjective interpretation of the expert [citation omitted];
- (3) whether the theory has been subjected to peer review and/or publication;
- (4) the technique's potential rate of error;
- (5) whether the underlying theory or technique has been generally accepted as valid by the relevant scientific community; and

¹⁵ The court cited Rule 104(a) in holding, "[t]he trial court is responsible for making the preliminary determination of whether the proffered testimony meets the standards set forth today." Id.

- (6) the non-judicial uses which have been made of the theory or technique.

Id. at 557.¹⁶ The court noted that the factors to be considered will vary with each particular case. Id.

Once the admissibility of the expert witness is called into question, the proffering party bears the burden of proof that the witness meets the Rule 702 standard. See Robinson, 923 S.W.2d at 556. The Plaintiff, therefore, has the burden to show: (1) that the expert is qualified as an expert witness, (2) that his testimony is relevant to the issues in the case, and (3) that his testimony is based upon a reliable foundation. Id. The proffering party, however, is still subject to a Rule 403 objection after meeting the fundamental elements of relevance and reliability.

Rule 403 provides: "Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, or needless presentation of cumulative evidence." Tex. R. Civ. Evid. 403. The Robinson court pointed out that the trial court must determine admissibility under Rule 403 after establishing that the expert testimony is relevant and reliable. 923 S.W.2d at 557 (citing Daubert, 509 U.S. at 596-97). The United States Supreme Court noted in Daubert that the trial court exercises more control over expert witnesses than lay witnesses in applying Rule 403.¹⁷

D. Scientific Validity as a Guard Against "Bad Science"

Ideally, of course, the best protection against unreliable scientific opinions in the courtroom is an approach that admits only what is "known" to a certainty. But there are no immutable truths in science. The spirit of science is skepticism. It is a creative and empirical process committed to searching for theoretical explanations of phenomena. Typically, scientists make educated guesses about a causal relationship between two or more variables based on practical experience and previously recognized theory. These "hypotheses" are then subjected to constant testing and refinement in an attempt to measure their internal consistency and accuracy in predicting observed outcomes.

Testing and corroboration may elevate a hypothesis to the status of a "theory" or a scientific "law", but these labels merely reflect the level of confidence that scientists place in the predictions that a particular proposition provides. No amount of testing can establish that a scientific theory is "true" in every conceivable circumstance. But to the extent they have survived repeated attempts at disproof, and, therefore, become accepted by the scientific

¹⁶ Factors 1 and 3-5 are the Daubert factors.

¹⁷ Daubert, 509 U.S. 596-97. See Notes, *A Dose of Daubert to Alleviate "Junk Service" in Texas Courtrooms: Texas Adopts the Federal Standard for Determining the Admissibility of Scientific Expert Testimony*, 27 TEXAS TECH L. REV. 293, 313.

community, such propositions generally are thought to be "scientifically valid." This is what scientists mean by "scientific knowledge" -- not what is absolutely verifiable, but what is corroborated through the continual process of testing and replication.

This concept is critical to legal judgments about the validity and reliability of expert scientific testimony. The inability of science to put forth irrefutable certitudes necessarily means that the evidentiary reliability of purported scientific testimony cannot be determined by a process of truth certification; for science, this is a complete non sequitur. But if scientific theories are mutable, scientists can and do distinguish between "good science" and "bad science." They go about this principally by assessing the extent to which the theory or technique has survived the rigors of testing and replication by other scientists.

Where a particular technique is involved, scientists consider the technique's potential rate of error to determine if the prediction of observed outcomes is higher than what ordinarily would be expected from the operation of chance alone. Scientists also measure the validity of theories and techniques by whether they have been published in reputable scientific journals or otherwise been subject to peer review. Similarly, they consider the extent to which the theory or technique is accepted by others in the relevant scientific community. In short, it is how conclusions are reached, not what the conclusions are, that makes them "good science." The give-and-take process of testing, review, criticism and, ultimately, acceptance, is the scientific method, and it is how scientists distinguish unsupported propositions from valid scientific theories.

It makes sense, therefore, that the courts would place primary emphasis on, error rate, peer review and publication, general acceptance, and falsification in determining whether proffered expert testimony satisfies Rule 702's "scientific knowledge" requirement.¹⁸ "Knowledge," after all, implies more than subjective opinion or guesswork. It refers to facts, or ideas inferred from facts, that are "accepted as truths on good grounds."¹⁹ Similarly, the term "scientific" indicates a grounding in the "methods and procedures of science" because this is what distinguishes science from other forms of "knowledge." Thus, expert scientific testimony qualifies as "scientific knowledge" under Rule 702 only if the reasoning or methodology that supports the testimony satisfies the standards for validation used by scientists.

In addition to the requirement that expert testimony be based on "scientific knowledge," a further condition of Rule 702 is that the testimony must "assist the trier of fact to understand the evidence or to determine a fact in issue."²⁰ This consideration relates primarily to relevance since expert testimony unrelated to any issue in the case, however reliable, is not relevant and therefore not "helpful" to the jury. Daubert defined this concept as one of "fit."²¹ The "will

¹⁸ Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 597-98 (1993); see also Robinson, 923 S.W.2d at 557.

¹⁹ Id. (quoting WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1252 (1986)).

²⁰ Fed. R. Evid. 702.

²¹ Id. at 591-92.

assist" or helpfulness standard necessarily assumes that evidence is based on methods scientifically recognized for the particular purpose in question. Evidence that does not meet this standard will not assist the jury in its task of reaching a verdict based on evidence that has a reliable scientific foundation.

III. USING AND OPPOSING THE EXPERT WITNESS²²

A. Preparing Your Expert

Preparation of your expert begins with selecting the right witness. Expert testimony from a pioneer in the relevant field of scientific inquiry, for example, is more likely to be based on scientifically valid principles than is the testimony of a professional litigation consultant.²³ This is so because such experts are less likely to be swayed in their work and opinions than are those experts who make their living by hiring themselves out to litigants. Qualifications and the professional stature of the proffered expert, as well as those of opposing experts, are therefore important to the validity of theories underlying the expert's testimony. As the Court pointed out in Daubert, the overarching subject of the scientific knowledge inquiry envisioned by Rule 702 "is the scientific validity -- and thus the evidentiary relevance and reliability -- of the principles that underlie a proposed submission."²⁴

The lawyer must be prepared in order to adequately prepare the expert. As one noted state district court judge has pointed out (the Honorable John McClellan Marshall of the 14th District Court in Dallas County), it is important for the lawyer, "to become as highly informed on the subject of the expert testimony as possible."²⁵ It is helpful to obtain an independent validation of the expert's methodology.²⁶ If a published source is unavailable, "it may be necessary to engage a separate validating expert."²⁷ The expert should also document their

²² Discovery issues regarding expert witnesses are beyond the scope of this article. See Fed. R. Civ. P. 26(a)(2) and (b)(4), and Tex. R. Civ. P. 166b(2)(e).

²³ See, e.g., In re Air Crash Disaster at New Orleans, LA., 795 F.2d 1230, 1234 (5th Cir. 1986).

²⁴ 509 U.S. 594-95.

²⁵ John McClellan Marshall, *This Is An Expert????????????*, 13 THE DICTA, Nos. 1 and 2, (Jan., Feb. 1996). Judge Marshall of the 14th Judicial District Court in Dallas suggests talking with the witness, "at some length before declaring him or her as a testifying expert."

²⁶ Daubert v. Merrell Dow Pharmaceuticals, Inc., 43 F.3d 1311, 1316 (9th Cir.) (expert findings must be based on sound science and independently validated), cert. denied, _____ U.S. _____, 116 S. Ct. 189 (1995).

²⁷ Suzanne B. Baker, *"Gatekeeping in Texas: The Practical Impact of Full Implementation of the Texas Rules of Civil Evidence Regarding Experts*, 27 ST. MARY'S L. J. 237, 274 (1996).

adherence to the selected methodology.²⁸ If at all possible, alternative causes should be ruled out.²⁹

In preparing the witness to testify, the first item to cover is qualification as an expert. Oftentimes opposing counsel will offer to stipulate that the expert is qualified. You may want to not agree to the stipulation because the court or jury, as appropriate, can hear exactly why the expert is qualified to give an expert opinion, thus bolstering the witness' credibility.

Establish the relevancy of the opinion by having the expert describe the facts related to the case for which the opinion is based. Next have the expert establish reliability by describing the methodology utilized. Then ask the witness if they have formed an opinion as to the particular issue, and have the witness state the opinion.

After the opinion is stated, establish further scientific reliability by having the expert give the reasons for the opinion. Be sure to include an explanation of how any facts relied upon that are not admissible are reasonably relied upon by experts in the field. Address the applicable factors set forth in Robinson and Daubert that are favorable to the opinion, e.g., the rate of error, peer review, etc.

B. Attacking The Opposing Expert

In theory, a defendant can usually get by without any expert witnesses in litigation.³⁰ After all, the plaintiff has the burden to prove liability. In practice, however, employing a good expert properly grounded in the relevant field is essential. If the plaintiff has hired experts to testify, the defendant should employ expert witnesses to rebut the plaintiffs' theories.

The function of the defense expert, however, is not to simply counter opposing testimony, but to show why the opposing expert opinion is not supported by good, quality science and fails the factors of the Daubert/Robinson test. Many times the outcome of a case depends upon the admission or exclusion of expert evidence, and not merely the credibility of the competing expert witnesses at trial, which may be demeanor, and not science. The attack is two-pronged. First, the defense expert can give testimony that challenges the qualifications of the plaintiff's expert to give the propounded opinion. Second, the defense expert can challenge the scientific validity of the plaintiff's expert opinion.

²⁸ Id.

²⁹ Id. (citing Wendy Fleishman & Russell Jackson, *Challenges to the Admissibility of Expert Testimony: What Works After Daubert?* in Proving or Defending Repetitive Stress Injury, Medical Device, Lead, Pharmaceutical, and Closed Head Trauma Cases: A Satellite Program (PLI Commercial Law and Practice Course Handbook Series No. A-723, 1995)).

³⁰ This is true unless the defendant needs expert testimony to prove an affirmative defense.

The best use of an expert witness is to avoid the expense of trial by winning the case on a motion for summary judgment.³¹ The Supreme Court in Daubert approved the summary disposition of scientific evidence questions. A motion for summary judgment disposes of the case based upon evidence submitted in the form of affidavits, deposition transcripts, and discovery responses to interrogatories and requests for admission. The expert can be used in a summary judgment motion to show the defects in the opponent's expert evidence and highlight the flaws in the expert's methodology or reasoning. As the plaintiff must have expert evidence to support a claim of liability, the defendant can obtain judgment without the further cost and uncertainty of trial by excluding the expert's testimony.

Procedurally attacking unqualified or unfounded expert testimony well in advance of trial more often gains strategic advantage in obtaining a prompt resolution.³² As Judge Marshall of the 14th District Court recommends, ". . . the earlier, the better, because it will help you verify the accuracy of your perception of your case and, at the same time, keep your opponent busy finding replacement experts if you should be successful. Conversely, if you should not be successful at striking the opponent's expert, then perhaps your own preparation needs to be reevaluated, but at least you would have time before trial to regroup."³³

The downside of the early approach is that the challenge may alert opponents to defects in their expert evidence, allowing them to supplement their case with additional experts, perhaps better qualified or better prepared to deal with scientific problems in their theories. On the eve of trial, a party may move to exclude the testimony by motion in limine. The advantage of the delay in attacking the expert is that it leaves little time for the proponent of the evidence to respond, but the court also has little time to consider what may well be a complex presentation and may be less inclined to consider arguments for exclusion after the parties have fully prepared the case and are on the eve of trial.

Waiting until trial to move to exclude the opposing expert, however, may result in waiver of the challenge.³⁴ As Judge Marshall has stated:

Planning to have the hearing in the midst of trial when the expert is first offered probably is not a good idea. The reason is very simple: waiver of the challenge may well have occurred. The trial judge may not be too thrilled with the idea of interrupting the smooth flow of the evidence to have a potentially lengthy hearing with the jury cooling its heels and getting angry. The image of OJ Simpson is alive and well, and the result could be that a marginal "expert" is

³¹ It is important to seek discovery regarding experts as soon as possible to allow sufficient time to pursue summary judgment.

³² A sample motion to exclude is attached to this article.

³³ John McClellan Marshall, *This Is An Expert???????????*, 13 THE DICTA Nos. 1 and 2, (Jan., Feb. 1996).

³⁴ John McClellan Marshall, *This Is An Expert???????????*, 13 THE DICTA Nos. 1 and 2, (Jan., Feb. 1996).

allowed to testify in the interest of judicial economy. In short, there is no such thing as "lying behind the log" in this particular context.

The desire to ambush one's opponent by springing an expert is already not feasible, due to the need to declare the expert not less than 30 days prior to trial. In fact, the cases would seem to indicate that the more crucial or better known the expert, the farther in advance of the trial there needs to be a declaration. The reason is obvious: the sooner that one knows who the experts will be, the sooner the case can be realistically mediated. "Lying behind the log" is counter to the policy that encourages settlement.

John McClellan Marshall, *This Is An Expert????????????*, 13 THE DICTA Nos. 1 and 2, (Jan., Feb. 1996).

As for the actual conduct of the evidentiary hearing challenging the expert, Judge Marshall recommends beginning with the experts' credentials: "[a]t the very least, the curriculum vitae details should be verified. Such things as mail order doctorates are not unknown, and the cumulative negative impact of that type of credential on the trier of fact as to the validity of the theory being presented could be significant." *Id.* Keep in mind, however, that in investigating your opponent's expert, you may not contact that expert without opposing counsel's consent.³⁵

The scientific validity of the expert's theory does not need to be detailed at great length. As Judge Marshall further points out:

The problem of the depth of the expertise involved in the testimony tends to become most acute in terms of the details of the theory itself. It is in this area that the skills of the attorney-as-teacher could be most critical, because the education of the judge is the objective of the exercise. Because the attention span of the trier of fact could be rather brief, a successful challenge probably could consist of no more than cross-examination of the proffered witness and one rebutting witness. *Robinson* implies that there is no bolstering in this hearing, and that is probably correct. In as short a time as possible, the attorney who is sponsoring the witness must present a coherent picture of the witness as expert and the theory as substantial. The challenger has the task of taking that picture apart, again in a very short time. In this context the sponsor of the expert is at a

³⁵ Texas Disciplinary Rules of Professional Conduct, 4.02(b), comment 3 states:

3. Paragraph (b) of this Rule provides that unless authorized by law, experts employed or retained by a lawyer for a particular matter should not be contacted by opposing counsel regarding that matter without the consent of the lawyer who retained him. However, certain governmental agents or employees such as police may be contacted due to their obligations to the public at large.

distinct disadvantage because the proffered expert probably must stand or fall alone.

I would suggest that the elements listed in *Robinson* will serve in both state and federal court very well as a "check list" and outline for your own expert to test the theory of the opponent's proffered expert. That is, after all, what the judge is supposed to do. If the list is used properly, it will tend to focus both the hearing and the trial itself in terms of the corpus of the expert testimony that will be offered. More importantly, it will be the easiest way to outline a potentially highly technical topic for a trier of fact whose main skills may be quoting Shakespeare. Remember that you are trying to have the "gatekeeper" swing the gate in your direction.

John McClellan Marshall, *This Is An Expert????????????*, 13 THE DICTA Nos. 1 and 2, (Jan., Feb. 1996).

If the opposing expert testimony is admitted, the trial may become the classic "battle of the experts" in which arcane science and technical jargon is debated before lay jurors who may have little training or experience to address or consider the issues.³⁶ In that case, an effective cross-examination must be conducted. But a party may still attack the scientific sufficiency of the expert testimony by moving for a directed verdict or a judgment notwithstanding the verdict.³⁷ In *Scales v. George Washington University*, however, the District Court for the District of Columbia granted judgment pursuant to Rule 52(c) at the close of the plaintiff's evidence finding no proof of discrimination based upon expert statistics or comparative evidence. No. 89-0796-LFO, 1993 WL 304016 (D.D.C. July 27, 1993), aff'd, 44 F.3d 1031 (D.C. Cir. 1994) (per curiam), cert. denied, 515 U.S. 1104 (1995). The court cited Daubert and held that the expert's testimony was unreliable and failed to consider the relevant labor market.

C. Ethical Considerations

How far can the expert go in presenting an opinion on a litigant's behalf? Of course, the concern for letting the expert go too far was part of the objective of Daubert and Robinson. The factors for the trial court's considerations are designed to keep the expert within the realm of scientific reality.

³⁶ "[J]uries are asked to resolve these questions, upon which even our brightest medical minds disagree, in order to resolve the case at hand and decide whether the plaintiff is entitled to recovery, and in so doing must necessarily resort to speculation." *Brock v. Merrell Dow Pharmaceuticals, Inc.*, 874 F.2d 307, 309, modified, 884 F.2d 166 (5th Cir. 1989), cert. denied, 494 U.S. 1046 (1990).

³⁷ See *Ealy v. Richardson-Merrell, Inc.*, 897 F.2d 1159, 1160, 1164 (D.C. Cir.) (overturning \$95,000,000 jury verdict because plaintiff's epidemiological evidence insufficient to support conclusion that Bendectin caused plaintiff's birth defects), cert. denied, 498 U.S. 950 (1990).

The situation may arise, however, where the questionable expert gets past the "gatekeeper." When the questionable expert is the opponent, a well-prepared cross-examination will serve to persuade the fact finder that the credibility and weight of the testimony is debatable. When the questionable witness has been retained to testify on behalf of your client, however, the client should wonder why his attorney let the witness get that far.

To avoid this situation, counsel may follow these rules:

1. "achieve an independent assessment of the subject matter;"
2. "fully inform the expert of all the facts;" and
3. "pose the question, not the answer. An expert who would accept an opinion simply because an attorney wants it to be so, is not an expert one should employ."

Terry O'Reilly, *Ethics and Experts*, 59 J. AIR L. & COM. 113, 128 (1993).³⁸

Ethical concerns may arise in the context of the basis of the expert's opinion.³⁹ Rule 703 expressly allows experts to rely on data that may "not be admissible in evidence" "[i]f of a type reasonably relied upon by experts in the particular field" Fed. R. Evid. 702; Tex. R. Civ. Evid. 702. Whether the information is, "reasonably relied upon by experts in the particular field," therefore, has become a crucial issue.

In Janopoulos v. Harvey L. Walner & Associates, Limited, the District Court for the Northern District of Illinois allowed the testimony of an ink chemist in a sexual harassment case who was challenged under Rule 703. 866 F. Supp. 1086, 1097 (N.D. Ill. 1994).⁴⁰ The plaintiff objected to the defendant's expert because his conclusions were based in part on analysis performed by another expert. The court noted that the plaintiff had proffered sufficient evidence to establish that the analyses relied upon by the expert are reasonably relied upon by experts in the field. Id. at 1095. The plaintiff also objected to the testimony on the grounds that the expert "does not know the potential error rate of [the underlying expert's analysis] or the specific nature of the [underlying expert's] calculations." Id. at 1097. Citing Daubert, the court pointed out that the analyses of the underlying expert were generally accepted in the field and that rate of error was only one factor for consideration in the admissibility of expert testimony. Id.

³⁸ Mr. O'Reilly cites another "rule": "[n]o lesson seems to be so deeply inculcated by the experience of life as that you never should trust experts. If you believe the doctors, nothing is wholesome. If you believe the theologians, nothing is innocent. If you believe the soldiers, nothing is safe. They all require to have their strong wine diluted by a very large admixture of insipid common sense." (citing Letter from Robert, Marquis of Salisbury, to Lord Lytton (June 15, 1877)). Terry O'Reilly, *Ethics and Experts*, 59 J. AIR L. & COM. 113, 113 n.1 (1993).

³⁹ "One of the grayest ethical areas must be the casual manner in which inadmissible and hearsay evidence is pumped into the basis for an expert's opinion." Terry O'Reilly, *Ethics and Experts*, 59 J. AIR L. & COM. 113, 125 (1993).

⁴⁰ The expert was offered to testify that ink used to make a doctor's entry was not available until well after the alleged date of entry. Id. at 1095.

IV. EXPERT ISSUES IN THE EMPLOYMENT ARENA

The most obvious employment case that requires scientific testimony is the traditional workplace exposure suit. Daubert and Robinson, in fact, were both toxic tort cases involving expert testimony regarding causation, a critical issue in many workplace cases. For example, in claims brought for chemical exposure under the Federal Employers Liability Act ("FELA"), 45 U.S.C. § § 51-60, "expert testimony is necessary to establish even that small quantum of causation required by FELA." Claar v. Burlington N. R.R., 29 F.3d 499, 504 (9th Cir. 1994). Expert testimony is also required in other types of employment cases that do not necessarily involve traditional "science." Courts, however, have not always agreed on the application of Daubert outside the context of science.

Although Daubert and Robinson are limited to "scientific" expert testimony,⁴¹ their analysis should apply more broadly to other fields of expertise. The logic of Daubert leaves little doubt that any expert should be held to the standards of his or her field of expertise, and for the most part, courts have not hesitated to extend it to a wide variety of fields. The criteria used to evaluate science may not always apply, but there are other criteria for other fields; and in some cases the scientific method can in fact be used to establish the reliability or unreliability even of testimony that is not science. In Hopkins v. NCR Corp., for example, the court held that Daubert is not limited to science, and that the criteria for determining scientific validity could be applied to non-scientific testimony that was testable and subject to peer review.⁴²

The major exception to the broad application of Daubert has been the Second Circuit, in Iacobelli Construction, Inc. v. County of Monroe,⁴³ in which the court held that foundation engineering was not within the scope of Daubert. There also have been cases from the circuit indicating the contrary, however.⁴⁴ The Ninth Circuit has also suggested that Daubert may be limited to science, but there are a number of contrary decisions from and within the circuit.⁴⁵ Other cases in which the scope of Daubert has been limited are listed in the margin.⁴⁶

⁴¹ "Rule 702 applies to 'technical, or other specialized knowledge.' Our discussion is limited to the scientific context because that is the nature of the expertise offered here." Daubert, 509 U.S. 590 n.8; "Rule 702 contains three requirements . . . (2) the proposed testimony must be 'scientific . . . knowledge';" Robinson, 923 S.W.2d at 556.

⁴² No. Civ. A. 93-188-B-M2, 1994 WL 757510 (M.D. La. 1994), aff'd, 53 F.3d 1281 (5th Cir. 1995) (unpublished).

⁴³ 32 F.3d 19 (2d Cir. 1994).

⁴⁴ See Federal Deposit Ins. Corp. v. Suna Assocs., 80 F.3d 681 (2d Cir. 1996) (finding that methodology used by an appraiser satisfied Daubert); Morse/Diesel, Inc. v. Trinity Indus., Inc., 67 F.3d 435 (2d Cir. 1995) (apparently accepting the district court's application of Daubert in excluding testimony of an accountant).

⁴⁵ Thomas v. Newton Int'l Enters., 42 F.3d 1266 (9th Cir. 1994) (human factors evidence not within scope of Daubert); Bell Atl. Business Sys. Servs., Inc. v. Hitachi Data Sys. Corp., No. C93-20079-JW, 1995 WL 798932 (N.D. Cal. Sept. 28, 1995) (unpublished) (economics not covered by Daubert). But see United States v. Rincon, 28 F.3d 921 (9th Cir. 1994) (reliability of eyewitness identification); United States v. Van Damme, 48 F.3d 461 (9th Cir. 1995) (testimony about how low a helicopter had flown during

In most jurisdictions Daubert has not been confined to science. Examples of other fields to which it has been applied include engineering,⁴⁷ economics,⁴⁸ and accounting.⁴⁹ Other examples are accident reconstruction,⁵⁰ appraisal,⁵¹ insurance,⁵² survey evidence,⁵³ and ergonomics.⁵⁴

surveillance); United States v. Quinn, 18 F.3d 1461 (9th Cir.) (photogrammetry), cert. denied, 512 U.S. 1242 (1994); Wetlaufer v. Mount Hood R.R., 77 F.3d 491 (9th Cir. 1996) (unpublished) (biomechanical engineering); United States v. Singleton, 82 F.3d 424 (9th Cir. 1996) (unpublished) (racism in law enforcement); Diviero v. Uniroyal Goodrich Tire Co., 919 F. Supp. 1353 (D. Ariz. 1996) (engineering), aff'd, 114 F.3d 851 (9th Cir. 1997); Livingston v. Isuzu Motors, Ltd., 910 F. Supp. 1473 (D. Mont. 1995) (engineering and accident reconstruction).

⁴⁶ In Edwards v. ATRO SpA, 891 F. Supp. 1074 (E.D.N.C. 1995), and in Freeman v. Case Corp., 924 F. Supp. 1456 (W.D. Va. 1996), rev'd on other grounds, No. 96-1626, 1997 WL 371005 (4th Cir. July 8, 1997), Daubert was held inapplicable to engineering testimony (on appeal in Freeman, the 4th Circuit held that Daubert did not apply because only the expert's ultimate conclusion was challenged, and not his "reasoning or methodology," stating: "where an expert relies on his experience and training and not a particular methodology to reach his conclusions, 'application of the Daubert [analysis] is unwarranted,'" citing Compton v. Subaru of America, Inc., 82 F.3d 1513, 1518 (10th Cir.), cert. denied, 117 S. Ct. 611 (1996); see also United States v. Jones, 107 F.3d 1147, 1158 (6th Cir. 1997) (holding Daubert inapplicable to testimony based on experience or training); United States v. 14.38 Acres of Lane, More or Less Situated in LeFlore County, 80 F.3d 1074, 1078-79 (5th Cir. 1996) (same); Iacobelli Constr., Inc. v. County of Monroe, 32 F.3d 19, 25 (2d Cir. 1994) (same). But see Buckman v. Bombardier Corp., 893 F. Supp. 547 (E.D.N.C. 1995) (applying Daubert to engineering and accident reconstruction testimony); Collier v. Varco-Pruden Bldgs., 911 F. Supp. 189 (D. S.C. 1995) (engineering testimony); Anderson v. National R.R. Passenger Corp., 866 F. Supp. 937 (E.D. Va. 1994), aff'd, 74 F.3d 1230 (4th Cir. 1996) (engineering and premises security). In Hawthorne Partners v. AT&T Technologies, Inc., No. 91C-7167, 1993 WL 311916 (N.D. Ill. Aug. 11, 1993), Daubert was held inapplicable to evidence about the marketability of contaminated property. But see Frymire-Brinati v. KPMG Peat Marwick, 2 F.3d 183 (7th Cir. 1993) (engineering); Pries v. Honda Motor Co., 31 F.3d 543 (7th Cir. 1994) (engineering); Buckner v. Sam's Club, Inc., 75 F.3d 290 (7th Cir. 1996) (safety management); TRW Title Ins. Co. v. Security Union Title Ins. Co., 890 F. Supp. 756 (N.D. Ill. 1995) (accounting); Stanczyk v. Black & Decker, Inc., 836 F. Supp. 565 (N.D. Ill. 1993) (engineering). In Officer v. Teledyne Republic/Sprague, 870 F. Supp. 408 (D. Mass. 1994), it was held inapplicable to engineering testimony. But see Kearney v. Philip Morris, Inc., 916 F. Supp. 61 (D. Mass. 1996) (Daubert applied in excluding testimony regarding propensity of cigarettes to ignite upholstered furniture); MacCleery v. Royce Union Bicycle, Inc., No. Civ. 93-419-JD, 1996 WL 442707 (D. N.H. Jun. 11, 1996) (unpublished) (applied to engineering testimony).

⁴⁷ Frosty v. Textron, Inc., 891 F. Supp. 551 (D. Or. 1995); Pestel v. Vermeer Mfg. Co., 64 F.3d 382 (8th Cir. 1995); Duffee v. Murray Ohio Mfg. Co., 879 F. Supp. 1078 (D. Kan. 1995), aff'd, 91 F.3d 1410 (10th Cir. 1996); Williams v. General Motors Corp., 639 So.2d 275 (La. Ct. App. 1994); Pries v. Honda Motor Co., 31 F.3d 543 (7th Cir. 1994); Buckman v. Bombardier Corp., 893 F. Supp. 547 (E.D.N.C. 1995); Bammerlin v. Navistar Int'l Transp. Corp., 30 F.3d 898 (7th Cir. 1994); Cummins v. Lyle Indus., 93 F.3d 362 (7th Cir. 1996); Cook v. American S.S. Co., 53 F.3d 733 (6th Cir. 1995)

⁴⁸ In re Aluminum Phosphide Antitrust Litig., 893 F. Supp. 1497 (D. Kan. 1995); Henry v. Hess Oil V.I. Corp., 163 F.R.D. 237 (D. V.I. 1995); Hein v. Merck & Co., 868 F. Supp. 230 (M.D. Tenn. 1994); Ventura v. Titan Sports, Inc., 65 F.2d 725 (8th Cir. 1995); Joy v. Bell Helicopter Textron, Inc., 999 F.2d 549 (D.C. Cir. 1993); Marcel v. Placid Oil Co., 11 F.3d 563 (5th Cir. 1994); Kurnecz v. Honda N. Am., Inc., 166 F.R.D. 386 (W.D. Mich. 1996).

⁴⁹ Frymire-Brinati v. KPMG Peat Marwick, 2 F.3d 183 (7th Cir. 1993); Sanchez v. KPMG Peat Marwick, No. Civ. 93-0406 JP/LFG, 1996 WL 104259 (D.N.M. Jan. 5, 1996) (unpublished); TRW Title Ins. Co. v.

A. Sexual Harassment⁵⁵

1. Stereotyping.

Expert evidence regarding sex stereotyping was held inadmissible in Johnson v. County of Los Angeles Fire Department, 865 F. Supp. 1430 (C.D. Cal. 1994). In Johnson, the court struck down a firehouse policy banning sexually-oriented magazines on First Amendment grounds. The court noted that even if the defendants could regulate reading material to prevent stereotyping of female fire fighters, the plaintiffs failed to meet their burden of proof of causation (that reading Playboy leads to stereotyping and that sex-role stereotyping leads to a harassing environment). Id. at 1441. The court pointed out that the plaintiff's expert based his opinions on studies that were inconclusive and ambiguous, and that, "the connection between Playboy and "sexual stereotyping" is not a scientific probability, much less a scientific certainty." Id. at 1442.⁵⁶

Security Union Title Ins. Co., 890 F. Supp. 756 (N.D. Ill. 1995); L&M Beverage Co. v. Guinness Import Co., No. Civ. A. 94-4492, 1996 WL 368327 (E.D. Pa. June 24, 1996) (unpublished).

⁵⁰ Fowler v. Bauman, 663 So.2d 438 (La. Ct. App. 1995); Habecker v. Clark Equip. Co., 36 F.3d 278 (3d Cir. 1994), cert. denied, 514 U.S. 1003 (1995); Robinson v. Missouri Pac. R.R., 16 F.3d 1083 (10th Cir. 1994); Buckman v. Bombardier Corp., 893 F. Supp. 547 (E.D.N.C. 1995); Gardner v. Chrysler Corp., No. 91-1496-PFK, 1995 U.S. Dist. LEXIS 18015 (D. Kan. Nov. 1, 1995), aff'd, 89 F.3d 729 (10th Cir. 1996); Cook v. American S.S. Co., 53 F.3d 733 (6th Cir. 1995); Rosado v. Deters, 5 F.3d 119 (5th Cir. 1993).

⁵¹ Abramson v. Florida Gas Transmission Co., 909 F. Supp. 410 (E.D. La. 1995); United States v. 14.38 Acres of Land, 80 F.3d 1074 (5th Cir. 1996).

⁵² Thompson v. State Farm Fire & Cas. Co., 34 F.3d 932 (10th Cir. 1994); Reedy v. White Consol. Indus., Inc., 890 F. Supp. 1417 (N.D. Iowa 1995).

⁵³ Winning Ways, Inc. v. Holloway Sportswear, Inc., 913 F. Supp. 1454 (D. Kan. 1996); Ventura v. Titan Sports, Inc., 65 F.2d 725 (8th Cir. 1995).

⁵⁴ Dennis v. Pertec Computer Corp., 927 F. Supp. 156 (D. N.J. 1996); Bennett v. PRC Public Sector, Inc., 931 F. Supp. 484 (S.D. Tex. 1996).

⁵⁵ See generally, Richard G. Moon & Janet P. Judge, *Evolving Areas of "Expertise" in Sexual Harassment Cases*, in Avoiding and Litigating Sexual Harassment Claims 1996 (PLI Litigation and Administrative Practice Course Handbook Series No. H-543, 1996), and Kathleen Mulligan & Monica A. Fennell, *Recent Developments on Evidentiary Issues in Sex Harassment Cases*, in New Frontiers of Sexual Harassment Litigation (PLI Litigation and Administrative Practice Course Handbook Series No. H-533, 1995).

⁵⁶ In Flavel v. Svedala Industries, Inc., however, the court permitted an industrial psychologist to testify regarding age stereotyping because stereotyping was "a recognized area of scientific study." 875 F. Supp. 550, 558 (E.D. Wis. 1994).

2. Emotional State.

In Martin v. Cavalier Hotel Corp., the court allowed expert testimony that the plaintiff's psychological symptoms and personality traits were consistent with someone who had been sexually assaulted. 48 F.3d 1343 (4th Cir. 1995). In Karibian v. Columbia University, the court upheld the allowance of testimony from a clinical social worker who counsels victims of sexual abuse on the issue of treatment of the plaintiff and the issue of damages, but also upheld the bar of testimony regarding the reluctance of people to make complaints about sexual harassment. 930 F. Supp. 134, 144 (S.D.N.Y. 1996).⁵⁷ The court pointed out that the purported basis for the barred testimony was an excuse for a clinical corroboration to explain conflicts in the plaintiff's testimony. The court held that the testimony of: "trying to explain what [plaintiff] said or didn't say on the basis of opinion about her emotional state, was not necessary nor would it have been helpful for the jury, and indeed would have been unduly prejudicial." 930 F. Supp. at 144.

3. Causation of Psychological Trauma.

Although expert testimony regarding psychological or physical damage is not required under Title VII, it can be admissible. Harris v. Forklift Sys., Inc., 510 U.S. 17 (1993). In Webb v. Hyman, the court relied upon Daubert in denying a motion to strike the plaintiff's psychological expert testimony, noting that the expert clearly had scientific knowledge regarding the issues of degree of psychological trauma and its relationship to the defendant's behavior. 861 F. Supp. 1094, 1113 (D.D.C. 1994). In Sullivan v. United States Gypsum Co., however, the court excluded an economist's testimony regarding loss of enjoyment of life damages because it was not scientifically valid and would not assist the trier of fact. 862 F. Supp. 317, 320-21 (D. Kan. 1994).

B. Discrimination.

1. ADA.⁵⁸

The Fifth Circuit Court of Appeals recently considered expert testimony in an Americans with Disabilities Act case where the court reversed a summary judgment for the employer. Riel

⁵⁷ Pre-Daubert courts have allowed testimony explaining failure to complain. See Snider v. Consol. Coal Co., 973 F.2d 555 (7th Cir. 1992), cert. denied, 506 U.S. 1054 (1993), and Shrout v. Black Clawson Co., 689 F. Supp. 774, 777, 779 (S.D. Ohio 1988). In Shrout, the plaintiff hired a human resources consultant to testify regarding the inadequacy of the employer's corporate sexual harassment policy. This "employment practices expert" testified that the fact that the employer's policy was an open door policy where any employee could contact the male president regarding any matter, was intimidating to harassed women who could "reasonably fail to complain." Id. at 777. For a discussion of the use of the "employment practices expert," see Richard G. Moon & Janet P. Judge, *Evolving Areas of "Expertise" in Sexual Harassment Cases*, in Avoiding and Litigating Sexual Harassment Claims 1996 (PLI Litigation and Administrative Practice Course Handbook Series, No. H-543, 1996).

⁵⁸ Expert testimony can be helpful in the ADA context for human factors witnesses, e.g., safety engineers or occupational therapists, regarding reasonable accommodation.

v. Electronic Data Sys. Corp., 99 F.3d 678 (5th Cir. 1996). The plaintiff was a diabetic who as a result, suffered vision and renal-system problems. The plaintiff alleged that as a result, he suffered severe fatigue, which periodically interfered with his job performance. The court pointed out that the plaintiff had to prove that he has a physical impairment that substantially limits a major life activity: that his condition of renal failure caused his fatigue. Because the plaintiff offered medical testimony that fatigue was a symptom of his renal condition,⁵⁹ summary judgment was improper.

2. ADEA and Title VII.

a. Disparate Impact⁶⁰

Disparate impact discrimination claims under the Age Discrimination in Employment Act ("ADEA") require statistical proof of disparate impact.⁶¹ In Diehl v. Xerox Corp., the court allowed the testimony of the plaintiff's labor economist regarding statistical analyses she performed, and her conclusion that redeployment and reduction-in-force policies disparately impacted employees in the information management function of the corporate strategic services and U.S. customer operations groups.⁶² The court held that the testimony was clearly relevant and that her methodology was not so flawed as to be inadmissible under Daubert. Id. Although finding admissibility, the court, however, held that the expert testimony failed to establish the causation necessary for a prima facie case. Id. at 1169. Relying upon the opposing expert's testimony, the court noted that the plaintiff's expert's methodology and conclusions were flawed and insufficient. Id. at 1167-69.

⁵⁹ In Flores v. Puerto Rico Tel. Co., the court allowed an ophthalmologist to testify regarding the plaintiff's eye impairment from glaucoma even though he was not a glaucoma sub-specialist. No. Civ. 89-1697 (HL) (JA), 1994 WL 52570 (D. Puerto Rico Jan. 19, 1994). The court relied upon Daubert and noted that the expert's testimony would "assist in determining plaintiff's status as a physically handicapped person protected under [the ADA]." Id. at *2.

⁶⁰ Disparate impact "involve[s] employment practices that are facially neutral in their treatment of different groups but that in fact fall more harshly on one group than another and cannot be justified by business necessity." Hazen Paper Co. v. Biggins, 507 U.S. 604, 609 (1993). Proof of discriminatory motive is not required. Griggs v. Duke Power Co., 401 U.S. 424 (1971).

⁶¹ See, e.g., Diehl v. Xerox Corp., 933 F. Supp. 1157, 1166 (W.D.N.Y. 1996).

⁶² 933 F. Supp. 1157, 1167 (W.D.N.Y. 1996). The testimony was allowed in support of age and gender disparate impact claims. Id.

b. Disparate Treatment⁶³

In Dunn v. Hercules, Inc., the court denied the defendant's motion to exclude the plaintiff's statistical analysis expert. No. Civ. A. 93-4175, 1995 WL 66828 (E.D. Pa. Feb. 15, 1995). Based upon Rule 403, the Defendant argued that the probative value of statistical testimony regarding the promotion of high-level management employees was substantially outweighed by the danger of unfair prejudice.⁶⁴ Id. at *1. In particular, the defendant argued that the expert based his analysis on a small sample size and that he, "failed to properly base his analysis on minimally qualified candidate pools." Id. at *2. The court pointed out that the expert's construction of each pool included all high-level executives in the pool because the defendant's interrogatory answers stated that high-level executives were generally considered for promotion and the defendant's data indicated high mobility among those jobs. Id. at *2. The defendant's assertion that it provided the plaintiff with lists of persons who were actually minimally qualified for each position did not diminish the probity of the expert report.⁶⁵ The court held that the expert's technique for identifying minimally qualified candidates was not, "so obviously flawed," and that the alleged flaw in the size of the sample, did not, "so diminish[es] the probativeness of [the expert's] report and testimony," that it violated Rule 403. Id. at *3.⁶⁶

In a more recent opinion, Wyche v. Marine Midland Bank, the court granted the plaintiff's motion to exclude the defendant's expert regarding the proportional hazards model, also known as survivor analysis. No. 94 Civ. 4022 (DC), 1997 WL 109564 (S.D.N.Y. Mar 11, 1997).⁶⁷ The court held that the testimony, which considers, "the continuum of age and the possibility of increasing discrimination as age progresses," would not assist the trier of fact and was not generally accepted in the relevant scientific community. Id. at *1. The court based its

⁶³ Disparate treatment discrimination is present when, "[t]he employer . . . treats some people less favorably than others because of their race, color, religion, [or other protected characteristics]." Hazen Paper Co. v. Biggins, 507 U.S. 604, 609 (1993). "Proof of discriminatory motive is critical although it can in some situations be inferred from the mere fact of difference in treatment." Id.

⁶⁴ For scientific evidence to meet the Rule 403 threshold, there "must be something particularly confusing about the scientific evidence at issue -- something other than the general complexity of scientific evidence." In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 742-43 (3d Cir. 1994), cert. denied, 513 U.S. 1190 (1995).

⁶⁵ Id. (citing Dothard v. Rawlinson, 433 U.S. 321 (1977)).

⁶⁶ The court withheld ruling on the admissibility of the expert's statistical analysis for the plaintiff's disparate impact claim. Id. at *4. The court stated that it would be admissible if the plaintiff proved at trial that the defendant, "utilized a single employment practice for promoting high-level management employees," relying on Anderson v. Douglas & Lomason Co., 26 F.3d 1277 (5th Cir. 1994), cert. denied, 513 U.S. 1149 (1995) (plaintiff must identify specific employment policy instead of launching attack on cumulative effects of different employment practices).

⁶⁷ The court denied the defendant's motion to preclude the plaintiff's expert from using disparate impact analysis. Although disparate impact was not a theory of liability upon which the plaintiff could rely, the court allowed the plaintiff to rely on statistical disparate impact analysis to support his claim of disparate treatment.

ruling on evidence that proponents of the model agreed that it was difficult for juries to understand, and that the defendants could not cite a case that had utilized the model. *Id.* Furthermore, a Northern District of Illinois opinion had criticized the model for its failure to take into account the employee's prior disciplinary record, absenteeism, and job performance. *Id.*

The court denied the plaintiff's motion to exclude the defendant's expert testimony regarding continuous analysis of age versus a dichotomous analysis. 1997 WL 109564, *2. Relying on opinions construing the ADEA, the plaintiff argued that a dichotomous analysis, which compares employees under the age of forty and over the age of forty, should apply. *Id.* The court noted, however, that the applicable law was the New York Human Rights Law, which contains no specification for protection of employees over the age of forty. *Id.* The court pointed out that the plaintiff could cross-examine the defendant's expert on this issue. *Id.*

c. Pattern or Practice

In Flavel v. Svedala Industries, Inc., the court held that the plaintiff's expert testimony from an economics professor regarding statistical evidence of pattern or practice discrimination met the Daubert test. 875 F. Supp. 550, 556 (E.D. Wis. 1994). The defendant moved to bar the expert's testimony because, inter alia, the expert's methodology combined two geographical units of the defendant into a "single sample base in assessing allegedly discriminatory decision-making."⁶⁸ The court stated: "[w]hile this procedure may be inappropriate in a non-pattern or practice context, it is clearly proper where, as here, the plaintiffs charge that the defendant effectuated a company-wide discriminatory policy on the basis of age. Presumably, company-wide preferences for below-40 employees would be reflected throughout its operating facilities." *Id.* at 556. The court pointed out that the defendant's arguments that the expert, "'assumes his desired conclusion' and 'artificially inflates his findings' by using employee ages as of [1988 and not 1991, the year of plaintiff termination through reduction-in-force procedures], . . . go to the weight, rather than the admissibility, of [the expert's] testimony, and are properly raised on cross-examination or during rebuttal." *Id.* at 557.

3. Economic Damages.

Proving economic damages under the Civil Rights Act sometimes requires the use of an economist or an accountant. An economist is most beneficial to testify regarding broad, industry-wide practices and theories whereas an accountant is more experienced in hands-on, specific information that relates to a particular business. One authority provides the following guidelines for choosing an economist or an accountant - an economist is best for calculation based upon the following:

1. Governmental policies;
2. International competition;

⁶⁸ *Id.* Seven of the plaintiffs worked at one unit while nine worked at the other. 875 F. Supp. at 552.

3. A projection of future rates of inflation;
4. A projection of future interest rates;
5. Global trends in the employer's industry;
6. Projected trends in the global or national economy, including business cycles;
7. The economics of banking and credit; and
8. Trends as to work life expectancy.

An accountant is best for calculations based upon:

1. The employer's competitive position in its own market;
2. Policies of the employer;
3. Compensation trends and policies in the employer's industry and geographical region;
4. When an examination is required of the employer's books and records to determine:
 - a. Salary levels;
 - b. Rates and trends in the company;
 - c. Profitability;
 - d. Cash flow of the company;
 - e. Rate of growth of the company;
 - f. The employer's financial strength;
 - g. Employment policies and practices;
 - h. The employee's success based on an examination of his/her personnel file;
 - i. Salary levels of others with the same job as the Plaintiff;

- j. Career progress of others with the same job description as the Plaintiff;
 - k. Career progress of others with the same job description as the Plaintiff;
 - l. Collective bargaining agreements;
 - m. Marketing plans;
 - n. Corporate strategic plans;
 - o. Cost of capital;
 - p. Bonus policies;
 - q. Commission or incentive compensation policies;
 - r. Pension or profit sharing or other retirement plans;
 - s. Employee benefit plans; and
 - t. Vacation and sick pay policies.
5. Examination of such data as trade association surveys, 10-k and 10-q reports filed by comparable public companies with the Securities and Exchange Commission, or published financial data such as Robert Morris Associates Surveys that would provide information to help in analysis of the employer's financial position and profitability.⁶⁹

The Civil Rights Act of 1991 provides for limited compensatory and punitive damages.⁷⁰ The limitation of compensatory damages⁷¹ provides:

⁶⁹ Edward N. Tucker & Steven R. Freeman, *Techniques of Proving Economic Damages Under the Civil Rights Act of 1991 - Use of the Certified Public Accountant*, Litigating the Employment Tort, 1996 [hereinafter "Tucker & Freeman"].

⁷⁰ The provision applies to intentional discrimination claims under the Civil Rights Act or the ADEA and, therefore, expressly excludes disparate impact claims. 42 U.S.C. §§ 1981a(1)(2).

⁷¹ § 1981a expressly provides that backpay and other relief by the Civil Rights Act of 1964 is not included in the definition of compensatory damages, and, therefore, are not subject to its limitations. 42 U.S.C. § 1981a(b)(2).

The sum of the amount of compensatory damages awarded under this section for future pecuniary losses, emotional pain, suffering, inconvenience, mental anguish, loss of enjoyment of life, and other nonpecuniary losses, and the amount of punitive damages awarded under this section, shall not exceed, for each complaining party —

(A) in the case of a respondent who has more than 14 and fewer than 101 employees in each of 20 or more calendar weeks in the current or preceding calendar year, \$50,000;

(B) in the case of a respondent who has more than 100 and fewer than 201 employees in each of 20 or more calendar weeks in the current or preceding calendar year, \$100,000; and

(C) in the case of a respondent who has more than 200 and fewer than 501 employees in each of 20 or more calendar weeks in the current or preceding calendar year, \$200,000; and

(D) in the case of a respondent who has more than 500 employees in each of 20 or more calendar weeks in the current or preceding calendar year, \$300,000.

42 U.S.C. § 1981a(b)(3).

Lost future earnings may be proved by using a financial model in the form of a spreadsheet.⁷² Typical column headings would include:

1. The year;
2. Plaintiff's age;
3. Plaintiff's years of service;
4. Projected lost salary;
5. Projected lost benefits;
6. Projected lost pension contributions;
7. Projected future earnings (mitigation); and
8. Net lost earnings.

Tucker & Freeman at 92-93.⁷³

⁷² Tucker & Freeman at 92.

The expert can be instrumental in seeking punitive damages, as well.⁷⁴ The expert may evaluate the financial health of the defendant for purposes of determining what amount of damages would deter it from engaging in intentional discrimination in the future. Factors for the expert to consider include:

- a. The amount of liquid assets the employer has on hand and the fair market value of those assets, and other factors related to the Defendant's value;
- b. The maximum amount of cash that Defendant could pay in a lump sum, considering its ability to leverage its balance sheet to the limit of responsible credit; and,
- c. The maximum that the Defendant could pay periodically in compliance with a structured scheduled.⁷⁵

Tucker & Freeman explain that:

the starting point for the calculation that serves as a basis for the opinion is the C.P.A.'s familiar ground - the historical financial statements of the employer. The C.P.A. would prepare the following:

- A. A schedule of comparative balance sheets at the end of each of the three most recent fiscal years. Calculations would be made of the following statistics:

1. Solvency ratios:

Quick Ratio - Cash and Accounts Receivable/Current Liabilities

Current Ratio - Current Assets/Current Liabilities

Working Capital Turnover - Sales/Average Working Expense

⁷³ Net lost earnings must be brought to present value as of the date of event of damage or the date of trial. *Id.* at 93-94.

⁷⁴ Punitive damages are not available against a "government, government agency or political subdivision." 42 U.S.C. § 1981a(b)(1).

⁷⁵ Tucker & Freeman at 97.

Working Capital to Total Assets - Working Capital/Total Assets

Current Liabilities to Net Worth - Current Liabilities/Net Worth

Total Liabilities to Net Worth - Total Liabilities/Net Worth

- B. A schedule of comparative income statements for each of the three most recent fiscal years. If the Defendant corporation is closely held, an examination should be made to determine if any pro-forma adjustments should be made to the income statement. An example of such an adjustment would be the amount of excessive compensation paid to the stockholder-employee. Calculations would be made of the following statistics.

Operation Ratios:

Gross Profit Percentage - Gross Profit/Sales

Return on Sales - Net Profit before Tax/Sales

Returns on Assets - Net Profit before Tax/Total Assets

Return on Equity - Net Profit/Stockholders Equity

Earnings before Interest, Depreciation or Taxes

- C. A schedule of comparative statements of cash flow for each of the last three fiscal years.

Tucker & Freeman, 98-99.

Tucker & Freeman further explain: "the C.P.A. would then prepare models of financial statements of the Defendant company, assuming different amounts paid as punitive damages. The statistics and ratios would be calculated for each of the models. The art would be to determine the maximum amount paid as punitive damages without crippling the Defendant. The models would be compared to the comparable companies to determine if the maximum payment model would leave the Defendant in a weak position against its competition." Tucker & Freeman at 100.

To avoid the argument that an exceptionally high award of punitive damages could jeopardize the existence of the Defendant, the expert:

would analyze the ratios computed on the maximum payment model so as to be able to express an opinion that the Defendant would not be in an undue position of

this risk. Two recognized bankruptcy predictors could be used to develop confidence in such an opinion. Professor Edward I. Altman of New York University, in 1968, developed an index using discrimination analysis that is helpful in predicting, in the short-term, when a company is headed for bankruptcy. This index is commonly referred to as the Altman Z-Score.⁷⁶ Professor Jerrod W. Wilcox of the Massachusetts Institute of Technology developed a formula which is useful in predicting ultimate future bankruptcies. This formula is designed around financial analyses that include ten or more years.⁷⁷

Tucker & Freeman, 100-101.

C. Texas Workers' Compensation Act.

The El Paso Court of Appeals recently upheld the exclusion of testimony from the plaintiff's treating mental health worker, offered in support of mental anguish in a retaliatory termination case brought under the Texas Workers' Compensation Statute. See America West Airlines, Inc. v. Tope, 935 S.W.2d 908 (Tex. App. -- El Paso 1996). Although the court found that the clinical social worker was qualified to testify as an expert, it found that her opinion, "did not rise to the level of reliability necessary under the Robinson test." Id. at *10. The court listed the Robinson factors and noted the expert's deficiencies:

"Her diagnosis was subjective, based upon Tope's statements, and could be tested only by asking him again about his symptoms. Peer review of Gibson's method was limited, and she offered no examples of publication of her work. The potential rate of error for her diagnosis was wholly unexplored."

Id. at *10.

In another retaliatory discharge case, the Tyler Court of Appeals recently upheld the admission of testimony from a licensed insurance agent specializing in employer/employee insurance needs. Western Atlas Int'l, Inc. v. Wilson, 930 S.W.2d 782 (Tex. App. -- Tyler, 1996, writ denied). In meeting his burden to establish a causal link between his discharge and his pursuit of workers' compensation benefits, the plaintiff offered the expert testimony that the employer's workers' compensation premium rates increase based upon, "the number and frequency of compensation claims filed," and that "the continued employment of an individual who has previously filed a claim increases the compensation rates charged by insurance companies because statistical data shows that if an employer has one claim, there is a higher probability of his filing subsequent claims." Id. at 785-86. The court held: "[the expert's] experience in advising employees about managing their [workers'] compensation premium rates

⁷⁶ See, E. Blocher and J. Willingham, Analytical Review A Guide to Evaluating Financial Statements, (1985).

⁷⁷ J. Wilcox, A Simple Theory of Financial Ratios as Predictions of Future Failure, J. of Acct. Res., Autumn 1971.

was an area of expertise that could assist the jury in understanding the factors that determine compensation insurance premium rates." Id. at 787.

Similarly, the district court for the Northern District of Iowa allowed the testimony of experts regarding claims adjusting procedure in a case alleging retaliatory discharge for filing a workers' compensation claim and bad faith termination of workers' compensation benefits.⁷⁸ Reedy v. White Consol. Indus., Inc., 890 F. Supp. 1417 (N.D. Iowa 1995). The defendant moved to strike the experts on the grounds that they were not qualified to give expert opinions on the issues in the case because they "lack[ed] sufficient formal training or adequate experience related to the issues on which they are likely to testify." Id. at 1445. Relying on Daubert, the court concluded that the experts had sufficient practical experience, "in a field unfamiliar to most jurors," and that the opinions, "would be of assistance to a jury in considering whether [the defendant's] claims processing procedure was usual or appropriate." Id. at 1448.

V. CONCLUSION

The array of claims brought in courtrooms today has increased the complexity of labor disputes. Expert scientific witnesses often must provide the evidence for such disputes, and because their testimony may be far removed from lay experience, they may propound theories or conclusions that are difficult for judges, lawyers and jurors to analyze. That is the challenge for labor and legal professionals: to bring science into the courtroom to educate fact-finders on labor claims. The parties must set out in their courtroom presentations through expert testimony the specific scientific claims and the specific scientific evidence that support or rebut the claims. Then the court can apply the Daubert and Robinson factors in a gatekeeping role to admit those claims based on good, plausible science and deny those derived from speculation.

⁷⁸ The plaintiff also asserted a claim for intentional infliction of emotional distress.