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A Judges' Guide to Using Social Science*

John Monahan & Laurens Walker

Since the first glimmerings of legal realism early in this century, American courts have been remarkably open to using social science research when that research could help resolve empirical issues that arise in litigation. Increasingly in recent decades, courts have sought out research data on their own when the parties have failed to provide them. Social scientists, for their part, are investigating questions of judicial interest at an accelerating pace. In this article, we examine the three principal uses that courts have found for social science research.¹ For each use, we review early and current approaches to dealing with social science in court. We conclude by offering judges a step-by-step guide to incorporating social science research in cases that call for a determination of empirical issues.

Social science research was first urged upon an American court in 1908 by Louis Brandeis in *Muller v. Oregon*,² a landmark case dealing with the constitutionality of social welfare legislation limiting the work day of any female employed in a factory or laundry to ten hours. Brandeis assembled a substantial body of medical and social science research tending to show the debilitating effect on women and girls of working long hours, and presented this material to the United States Supreme Court in a brief defending Oregon's limits on the number of hours females could be employed. In the opinion in *Muller* upholding the legislation, after referring to the social science materials in a lengthy footnote, the Court stated that although they "may not be, technically speaking, authorities,"³ the studies would nonetheless receive "judicial cognizance."⁴

Although the use of what came to be known as "Brandeis briefs" became common in the years after *Muller*, legal commentators were hard pressed to explain an apparent anomaly: How was it that Brandeis could present research to an appellate court in a written brief, when "facts" were supposed to be introduced at the trial level by the oral testimony of witnesses? This conundrum persisted until the late Kenneth Culp Davis, in a seminal article published in 1942, distinguished two types

of "fact."⁵ The first type, *legislative fact*, referred to facts that were used by courts to help decide broad questions of law or policy, as Brandeis had used research to help decide the constitutionality of social welfare legislation. The second type, *adjudicative fact*, referred to facts that were used to decide questions of interest only to the specific parties to a lawsuit, such as whether a particular traffic light was red or green.

Davis's distinction soon became widely accepted and now forms the traditional scheme used by courts and commentators to describe the judicial uses of social science.⁶ As the following sections make clear, Davis's concepts have been severely criticized in recent years and may well have outlived their usefulness as tools for managing the introduction of empirical information in contemporary American law.

USING SOCIAL SCIENCE TO MAKE LAW

Early Approaches

Professor Davis defined *legislative facts* as follows:

"When an agency [or court] wrestles with a question of law or policy, it is acting legislatively, [and] the facts which inform its legislative judgment may conveniently be denominated legislative facts."⁷

Legislative facts, in other words, are facts that courts use when they make law (or "legislate"), rather than simply apply settled doctrine to resolve a dispute between particular parties to a case. Whereas the determination of adjudicative facts affects only the litigants before the court, the determination of legislative facts influences the content of legal doctrine itself and, therefore, affects many parties in addition to those who brought the case. It was Professor Davis's position that "the rules of evidence for finding facts which form the basis for creation of law and determination of policy should differ from the rules for finding facts which concern only the parties to a particular case."⁸ In this manner Davis justified the Supreme Court's practice in *Muller* of disregarding the rules of evidence by accepting "facts" on appeal and in a brief. The rules of evi-

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Footnotes

1. Many of the cases discussed here can be found in JOHN MONAHAN & LAURENS WALKER, *SOCIAL SCIENCE IN LAW: CASES AND MATERIALS* (6th ed. 2006) [hereinafter *SOCIAL SCIENCE IN LAW*].
2. 208 U.S. 412 (1908).
3. *Id.* at 420.
4. *Id.* at 421.

5. Kenneth C. Davis, *An Approach to Problems of Evidence in the Administrative Process*, 55 HARV. L. REV. 364 (1942) [hereinafter Davis, *An Approach to Problems of Evidence*]. Davis's concepts were originally advanced in the context of administrative law, but they were rapidly generalized to other areas of the law.
6. The concept of legislative fact "has been widely accepted in the federal appellate courts." Broz v. Schweiker, 677 F.2d 1351, 1357 (11th Cir. 1982). The United States Supreme Court has invoked the term on numerous occasions, e.g., Lockhart v. McCree, 476 U.S. 162, 169 n. 3 (1986); Concerned Citizens v. Pine Creek Conservancy Dist., 429 U.S. 651, 656-57 (1977);
7. Davis, *An Approach to Problems of Evidence*, *supra* note 5, at 402.
8. *Id.* at 364.

dence did not apply to Brandeis's social science materials: They were "legislative" facts.

Judicial acceptance of social science research as a form of legislative fact became commonplace throughout the law after *Brown v. Board of Education*.⁹ In that case, the United States Supreme Court cited the published research of numerous social scientists to support its empirical assertion that the segregation of public schools instills in an African-American child "a sense of inferiority [that] affects the motivation of a child to learn."¹⁰ In the decades since *Brown*, research has frequently been invoked by courts to demonstrate the validity of empirical assumptions made in the process of modifying existing law or creating new law.¹¹ In *Roper v. Simmons*,¹² for example, the Supreme Court considered the question of whether the Eighth and Fourteenth Amendments permitted the execution of offenders who were under the age of 18 at the time they committed a capital crime. The Court held that the Constitution prohibited such executions. In arriving at this conclusion, the Court noted that "as the scientific and sociological studies respondent and his *amici* cite tend to confirm, '[a] lack of maturity and an underdeveloped sense of responsibility are found in youth more often than in adults and are more understandable among the young. These qualities often result in impetuous and ill-considered actions and decisions.'"¹³ Numerous social science studies were brought to bear on this and other conclusions reached by the Court regarding empirically demonstrated developmental differences between adolescents and adults.

The Federal Rules of Evidence do not address Davis's concept of legislative fact. Rather, the Advisory Committee that wrote the Rules stated that it could construct "no rule"¹⁴ to address how courts should deal with legislative facts. It appears from the Committee's commentary to the Rules that legislative facts can (a) be presented by the parties in briefs on appeal; (b) be presented by the parties at trial by the testimony of expert witnesses; (c) be found by the court through *sua sponte* library research; or (d) be obtained by an appellate court remanding a case back to the trial court "for the taking of evidence."¹⁵

Current Approaches

Criticism of the concept of legislative fact has focused on three topics: How should social science research used to create or modify law be *obtained*? Once obtained, how should it be *evaluated*? And once evaluated, how should a court's conclusions about research be *established* so as to affect subsequent courts that address the same empirical issue?¹⁶

On the first issue, the acknowledgement of the Advisory Committee to the Federal Rules of Evidence that there was "no rule" that addressed legislative facts has been taken by many to

illustrate the "total failure"¹⁷ of the notion of legislative fact to provide guidance to courts regarding how to obtain social science research for the purpose of creating or modifying law.

After social science research has been obtained by some unspecified procedure, the court must evaluate it. Social science research varies enormously in quality, and the risk of basing a legal rule on flawed research is significant. Yet neither Davis nor the Federal Rules that rely on his concept address this issue at all.

Likewise, if one court draws conclusions from social science research about an empirical assumption underlying a legal rule, the concept of legislative fact gives no guidance to the next judge who confronts the same empirical question. The options for an appellate court, for example, range from deferring to the trial court's evaluation of the research under a "clearly erroneous" standard of review to performing a "de novo" evaluation of the studies.

It is difficult, therefore, to gainsay the conclusion of a leading text on evidence that "a viable formulation of rules . . . with regard to legislative facts has not proved feasible."¹⁸ Improvements in the manner that courts use social science information to create rules of law may be possible only by abandoning the notion of legislative fact entirely and developing a new concept that fundamentally alters the ways in which courts view social science materials. *Social authority* has been proposed as one alternative to legislative fact as an organizing principle for courts' use of social science to create or modify a rule of law. Under this rubric, courts would treat social science research relevant to creating or modifying a rule of law as a source of authority rather than a source of facts. More specifically, courts would treat social science research much as they treat legal precedent under the common law.

In outline, the argument for this theory is that although there is a clear conceptual analogy between social science research and fact (both are "positive" in the sense that they concern the way the world is, with no necessary implications for the way the world ought to be), there is an equally clear conceptual analogy between social science research and law (both are "general" in that they produce principles applicable beyond particular instances). It is, therefore, plausible to classify social science research either as fact or as law. The criterion for classification—whether to give priority to the fact analogy or to the law analogy—should depend on the quality of the judicial procedures that flow from it.

A number of coherent procedures for obtaining, evaluating, and establishing social science research flow from conceiving of it as social authority rather than as legislative fact. Making the heuristic presumption that courts should treat social science data the same way they treat legal precedent produces two

9. 347 U.S. 483 (1954).

10. *Id.* at 494.

11. See SOCIAL SCIENCE IN LAW, *supra* note 1, at 185-382.

12. 543 U.S. 551 (2005).

13. *Id.* at 560 (citing *Johnson v. Texas*, 509 U.S. 350, 367 (1993)).

14. Advisory Committee Note to Fed. R. Evid. 201(a).

15. *Id.*

16. See John Monahan & Laurens Walker, *Social Authority: Obtaining,*

Evaluating, and Establishing Social Science in Law, 134 U. PA. L. REV. 477 (1986).

17. STEPHEN SALTZBURG & KENNETH REDDEN, FEDERAL RULES OF EVIDENCE MANUAL 43 (3d ed. 1982).

18. JOHN STRONG, KENNETH BROWN, GEORGE DIX, EDWARD IMWINKELRIED, D. KAYE, ROBERT MOSTELLER & E. ROBERTS, MCCORMICK ON EVIDENCE 503 (5th ed. 1999). Strong, et al. summarize our approach at 499.

corollary ideas about how a court should obtain empirical research: The parties should present empirical research to the court in written briefs, and judges may find social science research by searching for it themselves. This is the way that courts obtain the law. Oral testimony of expert witnesses and remanding cases to the trial court to obtain evidence would be disallowed. Likewise, under this view, the way that courts should evaluate empirical data can be found in the way they evaluate legal precedent. Courts should evaluate scientific research studies along four dimensions analogous to those used to evaluate case precedent:¹⁹ Courts should place confidence in social science research to the extent that the research (a) has survived the critical review of the scientific community, (b) has used valid research methods, (c) is generalizable to the legal question at issue, and (d) is supported by a body of other research. Finally, because legal rules make clear that appellate courts are not bound by trial courts' conclusions about law, appellate courts should also not be bound by trial courts' conclusions about empirical research: De novo review is the appropriate standard.²⁰

USING SOCIAL SCIENCE TO DETERMINE FACTS

Early Approaches

Professor Davis defined *adjudicative facts* as follows:

"When an agency [or court] finds facts concerning immediate parties—what the parties did, what the circumstances were, what the background conditions were—the agency [or court] is performing an adjudicative function, and the facts may conveniently be called adjudicative facts."²¹

Adjudicative facts, in other words, are facts that apply only to the particular parties before the court. They are used to determine (or "adjudicate") what happened in a specific case, and not for some larger purpose, such as to argue that the law should be changed. What Davis called an adjudicative fact has been referred to by other commentators as a "case fact"²² and by one court as "a plain, garden-variety fact."²³

One of the most frequent uses of social science research as adjudicative or case-specific facts involves trademarks. The Lanham Trademark Act of 1946, as amended by the Trademark Law Revision Act of 1988,²⁴ states that the Patent and Trademark Office will refuse to register a new trademark if it so resembles a trademark already registered to another person "as to be likely . . . to cause confusion."²⁵ A person who sells a

product that is likely to cause confusion with an already trademarked product is liable for trademark infringement. Social science research in the form of surveys of consumers or potential consumers to ascertain the degree of confusion between products has been admitted in American courts at least since 1940.²⁶ Initially, such evidence was often successfully challenged as contravening the prohibition against hearsay, since the respondents to the surveys were not present in court to testify. In *Zippo Manufacturing Co. v. Rogers Imports*,²⁷ however, the hearsay objection was definitively laid to rest:

"The weight of case authority, the consensus of legal writers, and reasoned policy considerations all indicate that the hearsay rule should not bar the admission of properly conducted public surveys."²⁸

A wide variety of methodologies are now routinely used by both plaintiffs and defendants in trademark cases to determine the presence of consumer confusion.²⁹ In *Kis v. Foto Fantasy*,³⁰ for example, the plaintiff and the defendant both owned photo booths that were placed inside shopping malls throughout the United States. Foto Fantasy, the defendant, placed a sketch of the actor Tom Cruise outside its booths, with a sign reading "Scan in Your Favorite Celebrities." Kis, the plaintiff, sued Foto Fantasy for violating the Lanham Act by creating confusion as to the association of Tom Cruise with defendant's photo booths, leading consumers to patronize Foto Fantasy booths rather than Kis booths. To demonstrate consumer confusion, Kis introduced as an expert witness a social scientist who conducted an experiment in a shopping mall. In this experiment, several hundred potential consumers (demographically matched to the typical consumers of photo booths) were given pictures of a photo booth. A random half of these potential consumers were given pictures that included a sketch of Tom Cruise, and a random half were given pictures of photo booths without such a sketch. Of the subjects in the former group, 56 percent believed that the actor was associated with Foto Fantasy booths, a view shared by only 7 percent of the subjects in the later group. The court denied the defendant's motion to exclude the social science expert, and held that any alleged methodological defects of the experiment went to the weight, and not to the admissibility, of the evidence. The use of survey research in consumer-confusion trademark cases like *Kis* has become so routine that the failure of a trademark owner to conduct a survey may now give rise to an adverse inference.³¹

19. *Id.* at 498: "At least four indices of precedential persuasiveness can easily be abstracted from the jurisprudential literature: (1) cases decided by courts higher in the appellate structure have more weight than lower court decisions; (2) better reasoned cases have more weight than poorly reasoned cases; (3) cases involving facts closely analogous to those in the case at issue have more weight than cases involving easily distinguished facts; and (4) cases followed by other courts have more weight than isolated cases."

20. For a discussion of how these dimensions can be made operational by courts, see *Social Authority*, *supra* note 16, at 498-508. What trial or appellate courts should do when confronted with an empirical question underlying a rule of law for which no research, or only inadequate research, is available is discussed in John Monahan & Laurens Walker, *Empirical Questions Without Empirical Answers*, 1991 WISCONSIN L. REV. 569.

21. Davis, *An Approach to Problems of Evidence*, *supra* note 5, at 402.

22. E.g., THOMAS MARVELL, *APPELLATE COURTS AND LAWYERS* (1978).

23. *Bowling v. Department of Ins.*, 394 So.2d 165, 174 (Fla. Dist. Ct. App. 1981).

24. The Lanham Act is found at 15 U.S.C. § 1051 *et seq.* The 1988 amendments are scattered throughout the Act.

25. 15 U.S.C. §1052(d).

26. *Oneida v. National Silver*, 25 N.Y.S.2d 271 (N.Y. Sup. Ct. 1940).

27. 216 F. Supp. 670 (S.D.N.Y. 1963).

28. *Id.* at 682.

29. See *SOCIAL SCIENCE IN LAW*, *supra* note 1, at 95-130.

30. 204 F. Supp. 2d 968 (N.D. Tex. 2001).

31. *Pharmacia Corp. v. Alcon Laboratories*, 201 F. Supp.2d 335 (D.N.J. 2002).

The party with the burden of proving an adjudicative fact such as consumer confusion will be severely disadvantaged by a failure to provide the fact-finder with the best possible evidence.

The key to understanding how courts deal with social science research used to determine an adjudicative or case-specific fact is that, unlike legislative facts, adjudicative facts are susceptible to proof by the usual rules of evidence. Under the Federal Rules of Evidence and similar state codes, the admissibility of social science evidence of a case-specific fact turns on the issue of “relevance.” According to Rule 401:

“Relevant evidence’ means evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.”

There are two components to this definition.³² First, to be relevant, evidence must bear on a fact that is “of consequence.” This means that even flawlessly executed research is inadmissible if the substantive law governing the case does not put in issue the fact that the research seeks to demonstrate. Second, evidence must make that fact “more probable or less probable” than it would otherwise be. This means that even if social science research directly addresses a fact of central concern to the substantive law, it will not be admitted unless the research data provide insight into the likelihood that the fact exists. The first of these components of relevance is often called *materiality* and the second *probative value*.

Note that under Rule 401 it is not necessary for social science evidence to be determinative of a fact at issue in a case, or even to make the existence of a fact, such as consumer confusion, “more likely than not,” for the evidence to be admitted. As long as the research has “any” tendency to be probative of the existence of material fact, the evidence is relevant and therefore presumptively admissible (that is, admissible unless some other rule, such as Rule 403, excluding evidence on the grounds of prejudice, confusion, or waste of time, is violated).

Obtaining social science research that bears on an adjudicative fact, therefore, is governed by the normal rules of evidence. Evaluating the research for the purpose of admissibility is limited to determining whether it is material, whether it has any probative value, and whether its admission violates any other evidentiary rule. The ultimate weight to be placed on the evidence is a matter for the fact-finder. As with any other adjudicative or case-specific fact, the standard of review an appellate court will apply to a trial court’s decisions regarding social science evidence is “clear error.”

Current Approaches

The law regarding social science research used to determine adjudicative facts (or what have been called “social facts”³³ to distinguish empirical research from historical case-specific facts such as who-hit-whom) is much more settled than that governing research used to determine legislative facts or social authority. Such evidence is now routinely admitted not only in trademark cases, but also in obscenity litigation,³⁴ and many other areas. Recently, social science research has come to play a decisive role in adjudicating damages in mass-tort cases.³⁵

One view of determining what is precedential about court decisions on social science evidence used to ascertain adjudicative facts requires that a fundamental distinction be made between the methodology of the research offered in evidence and the application of that methodology in a particular case.³⁶ *Methodology* refers to the broad research design employed to generate the data and the analytic procedures used to interpret them. *Application* refers to the concrete way that a particular study was carried out. Under this view, precedent attaches only to the generic methodology of studies—such as the use of a particular statistical test—in a given area.³⁷

USING SOCIAL SCIENCE TO PROVIDE CONTEXT

Early Approaches

Most of the judicial uses of social science fall into one of the two categories originally described by Davis. In recent years, however, courts have begun to confront uses of social science research that do not conform to the established classification. There are increasing indications that a new, third use of social science in law is emerging. Examples can be found in cases concerning eyewitness identification and sexual victimization.³⁸

In *Weatherred v. State*,³⁹ the state’s only direct evidence that the defendant had committed murder was the word of two eyewitnesses. At trial, the expert testimony of a research psychologist was offered by the defendant to counter the testimony of the eyewitnesses. In a proffer of the evidence, the psychologist described published studies on factors such as the speed with which memory decays over time and the relationship between the confidence of a witness and the accuracy of identification, both of which were issues in the case. The trial court excluded the expert. However, the Court of Criminal Appeals of Texas reversed and remanded the case for a new trial, stating that the testimony survived a *Daubert*⁴⁰ analysis and that “the trial court abused its discretion in refusing to admit said evidence before the jury.”⁴¹

32. Laurens Walker & John Monahan, *Social Facts: Scientific Methodology as Legal Precedent*, 76 CALIF. L. REV. 877, 882-85 (1988) [hereinafter *Social Facts*].

33. *Id.*

34. See, e.g., *Kaplan v. California*, 413 U.S. 115 (1973); *Saliba v. State*, 475 N.E.2d 1181 (Ind. App. 1985). See generally SOCIAL SCIENCE IN LAW, *supra* note 1, at 130-57.

35. Laurens Walker & John Monahan, *Sampling Damages*, 83 IOWA L. REV. 545 (1998); Laurens Walker & John Monahan, *Sampling Liability*, 85 VA. L. REV. 329 (1999).

36. *Social Facts*, *supra* note 32, at 885-87.

37. The application of a particular methodology in a given case would be evaluated under the pertinent federal or state rules of evidence.

In federal courts, of course, this would mean an evaluation under Federal Rule of Evidence 702, incorporating *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579 (1993).

38. See generally SOCIAL SCIENCE IN LAW, *supra* note 1, at 383-605. Other examples discussed there include the battered-woman and rape-trauma syndromes.

39. 963 S.W.2d 115 (1998). See also John Brigham, Adina Wasserman, and Christian Meissner, *Disputed Eyewitness Identification Evidence: Important Legal and Scientific Issues*, COURT REVIEW, Summer 1999, at 12.

40. *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579 (1993).

41. *Id.* at 131.

The defendant in *State v. Kinney*⁴² was found guilty of aggravated sexual assault. The trial court had allowed the prosecution to introduce a social scientist as an expert witness to describe “the behavioral patterns of victims of sexual assault,” patterns that were also seen in the complainant (e.g., a delay in reporting the crime). The defense objected to this evidence at trial and appealed. The Supreme Court of Vermont upheld the conviction, however, stating that the testimony survived a *Daubert* analysis and that “expert evidence of rape trauma syndrome and the associated typical behavior of adult rape victims is admissible to assist the jury in evaluating the evidence, and frequently to respond to defense claims that the victim’s behavior after the alleged rape is inconsistent with the claim that the rape occurred.”⁴³

In neither of these cases was social science research being used to provide legislative facts. No creation or modification of a rule of law was sought. Rather, in both cases the parties offering the research accepted the applicable legal rules and sought to show that the research would help the jury to decide the specific factual issues being litigated. Yet in neither of these cases was social science research being used to provide adjudicative facts either. The parties to the cases were not involved in the research at all: The experts relied on “off-the-rack” research studies published before the events that gave rise to the litigation took place.

The way social science was used in *Weatherred* and *Kinney*, however, does reflect the defining characteristics of both legislative fact and adjudicative fact. In each case, the research used demonstrated the critical component of legislative fact—generality. Just as the research used in *Roper* focused on “juveniles’ diminished culpability in general,”⁴⁴ the research used in *Weatherred* focused on factors that “on average” affect eyewitnesses.⁴⁵ Similarly, the research in *Kinney* concerned symptoms that victims of rape “commonly experience.”⁴⁶ In each case, the research also possessed the critical component of adjudicative fact—specificity. Just as the research used in *Kis* spoke only to whether consumers were confused between two given products, the studies in *Weatherred* were used only to challenge the testimony of eyewitnesses to a particular crime, and the research in *Kinney* was used only to show that the named victim was, in fact, sexually assaulted.

The research used in these cases and many like them is thus neither wholly legislative nor wholly adjudicative fact but has the essential elements of both of the conventional categories. Therefore, a third category has been proposed, termed *social framework*,⁴⁷ to denote the use of general conclusions from

social science research to determine factual issues in a specific case.

Current Approaches

Social science research used as a social framework is becoming common in American courts. It is now often introduced as if it were simply an adjudicative fact—by expert testimony before a jury, as it was in *Weatherred* and *Kinney*. Commentators have pointed out that treating social frameworks as adjudicative facts has two significant liabilities.⁴⁸ First, it is an inefficient use of court time. The same testimony about the same research studies must be heard in case after case whenever a framework for a given type of factual determination is sought. Second, introducing frameworks as social facts is expensive. The pool of expert witnesses is limited to a small group of basic researchers in each topical area and those researchers must be transported and paid to repeat their testimony in each new case. Access to expert testimony is therefore effectively precluded in a large number of cases in which the introduction of a social framework would seem justified.

An alternative to treating social frameworks as if they were simple adjudicative facts has been proposed that recognizes the similarity of social frameworks to both adjudicative fact and legislative fact as well.⁴⁹ The proposal is for a two-stage set of procedures for the judicial management of this use of social science in court. First, the generality that social frameworks share with research used as legislative fact or social authority suggests analogous procedures for obtaining, evaluating, and establishing social frameworks—obtain the research either in briefs or through the court’s own investigation, evaluate it as legal precedent is evaluated, and have one court’s decision on a social framework affect later courts as one court’s decision on a matter of law affects later courts. Second, the specificity that social frameworks share with research used as adjudicative or social fact suggests similar procedures for communicating the court’s conclusions to the jury: via instruction.⁵⁰ The jurors would then be in a position to apply the general social framework to the specific evidence produced at trial.

In *Dukes v. Wal-Mart*,⁵¹ the Ninth Circuit recently upheld the certification of the largest employment-discrimination class in history, with more than 1.5 million women employees seeking over \$1.5 billion in damages. A crucial piece of evidence supporting class certification came from a sociologist who testified that he performed a “social framework analysis” to evaluate Wal-Mart “against what social science research shows to be factors that create and sustain bias”⁵² and found

42. 762 A.2d 833 (Vt. 2000).

43. *Id.* at 842.

44. *Roper*, 543 U.S. at 572.

45. *Weatherred*, 963 S.W.2d at 127.

46. *Kinney*, 762 A.2d at 839.

47. Laurens Walker & John Monahan, *Social Frameworks: A New Use of Social Science in Law*, 73 VA. L. REV. 559, 570 (1987).

48. *Id.* at 583-584.

49. *Id.* at 587-98. For judicial discussions of this proposal, see *State v. Alger*, 764 P.2d 119 (Idaho 1988); *Skinner v. State*, 33 P.3d 758 (Wyo. 2001); Steve Leben & Megan Moriarty, *A Kansas Approach*

to *Custodial Parent Move-Away Cases*, 37 WASHBURN L. J. 497, 524-32 (1998).

50. On the use of jury instructions to convey empirical information, see *State v. Long*, 721 P.2d 483 (Utah 1986); *State v. Cromedy*, 727 A.2d 457 (N.J. 1999); *State v. Ledbetter*, 881 A.2d. 290 (Conn. 2005).

51. *Dukes v. Wal-Mart, Inc.*, 509 F.3d 1168 (9th Cir. 2007).

52. *Id.* at 1178. See Declaration of William T. Bielby, Ph.D. in Support of Plaintiffs’ Motion for Class Certification, at 5, *Dukes v. Wal-Mart Stores, Inc.*, Case No. C-01-2252 MJJ (N.D. Cal. Feb. 3, 2003).

MONAHAN AND WALKER'S GUIDE FOR USING SOCIAL SCIENCE INFORMATION IN COURT

In outline, our view is that courts should adhere to the following steps when addressing an empirical question concerning human behavior:

1. Determine whether the substantive law governing the case raises an empirical issue to which social science research may be pertinent.
2. If so, determine whether the empirical issue bears on an assumption underlying the choice of a legal rule that has general applicability, a factual dispute pertaining only to the parties before the court, or a mixture of the two in which general empirical information provides a context for determining a specific fact.
3. If the empirical issue concerns an assumption underlying the choice of a legal rule of general applicability:
 - a. Receive social science studies in briefs submitted by the parties or amici.
 - b. If the parties or amici do not submit social science studies, request such studies from the parties or amici, or obtain them from the court's own sua sponte investigation of published sources.
 - c. Evaluate any available research by determining whether the research has survived the critical review of the scientific community, has used valid research methods, is generalizable to the legal issue in question, and is supported by a body of related research.
 - d. If no acceptable research is available, candidly state this conclusion in the opinion. In common-law cases, rely upon the empirical assumption that appears to be the most plausible. In reviewing state action, rely upon the legally appropriate standard of review in determining where to place responsibility for resolving the empirical issue.
4. If the empirical issue concerns a factual dispute bearing only on the parties before the court:
 - a. Determine the party with the burden of proving the contested fact.
 - b. Determine whether the law governing the case makes empirical research an appropriate form of evidence for meeting this burden.
 - c. If empirical research does constitute an appropriate form of evidence, allow the admission of direct and rebuttal expert testimony subject to the applicable federal or state rules of evidence.
 - d. If the party with the burden of proof does not produce relevant expert testimony, weigh this omission in determining whether the burden has been met.
5. If the empirical issue concerns the provision of a general context within which to determine a fact pertaining only to the parties, then

EITHER:

 - a. Obtain and evaluate social science research as specified in 3a-3c above.
 - b. In cases tried before a jury, communicate the conclusions by means of jury instructions.

OR:

 - c. Allow the admission of direct and rebuttal expert testimony subject to the applicable federal or state rules of evidence.
 - d. However, do not allow the expert to link general research findings to a specific party before the court.

the company wanting. As authority for introducing this analysis, the expert—and the Ninth Circuit—relied on the work by Walker and Monahan, described above, introducing the concept of social framework.⁵³ In a recent article,⁵⁴ we reviewed and recast the procedures originally proposed for apprising juries of general research results to assist in resolving the case before them.

Experience over the past 20 years has shown that that courts will typically allow general contextual information from social science research to be conveyed to the jury by expert witnesses rather than via instructions, as originally envisioned. Where this occurs, we believe it essential that courts limit expert testimony to a description of the findings of relevant and reliable research and of the methodologies that produced those findings, and preclude the witness from linking the general research findings to alleged policies and practices of a specific firm. The landmark class action of *Dukes v. Wal-Mart* illustrates both the centrality of social framework evidence to modern employment litigation, as well as the need for courts to clarify and circumscribe the role of the experts who introduce them.

SUMMARY AND CONCLUSION

The exponential growth of social science research dealing with questions of relevance to the law and the increasing practice of courts in incorporating that research into legal decisions combine to make the development of a coherent scheme for the judicial management of social science information a priority for courts and scholars.⁵⁵ There is longstanding agreement that one legitimate use of social science is to assist in the creation and modification of legal rules of general applicability. Legislative fact has been the rubric that has subsumed this use of research for over 50 years. Given the elasticity and lack of direction inherent in this concept, it is unlikely to hold sway much longer. A second accepted use of social science is to provide adjudicative facts for resolving disputes specific to the parties before a court. The law here is much more settled. Finally, there is a trend rapidly gaining credibility in American courts to use social science in a third way, as a social framework providing a general empirical context within which to determine specific facts at issue in a case. Procedures for the judicial management of this new use of social science must blend existing or proposed procedures for the management of both the law-making and fact-finding uses of research.



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53. 509 F3d at 1178-80.

54. John Monahan, Laurens Walker & Gregory Mitchell, *Contextual Evidence of Gender Discrimination: The Ascendance of "Social Frameworks,"* VA. L. REV. (forthcoming).

55. David Faigman & John Monahan, *Psychological Evidence at the Dawn of the Law's Scientific Age*, 56 ANN. REV. PSYCH. 631 (2005).