

Resolving Legal Questions With Psychological Data

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Psychologists are ever finding new legal arenas for their psychological data and concepts. Findings about the character and operation of stereotyping have been introduced in sex discrimination litigation in the United States. Findings about conformity, obedience to authority, and bystander apathy have been introduced into death penalty cases in South Africa. These concrete and detailed applications of psychological science demonstrate the expanding role that psychology is playing in the legal world.

Where have all the social psychologists gone? They've gone to legal arenas everywhere. Some have found receptive audiences, audiences that appreciated parts—even if they did not appreciate all—of what they had to say. Others have not been allowed to enter the arena at all. Two articles, published in this issue of the *American Psychologist* (Colman, 1991; Fiske, Bersoff, Borgida, Deaux, & Heilman, 1991), illuminate the rewards and problems associated with new legal applications of traditional research findings and concepts. These articles stimulate discussion of how psychologists can better inform the law through empirical data (Saks, 1989) and, also, of the proper role for an expert to play (Wagenaar, 1988).

For years, clinically oriented psychologists have swum in legal waters, as they offered opinions on the mental competence of a particular defendant to stand trial, or the likelihood of a defendant's insanity at the time a crime was committed. Although some interesting controversy surrounds the use of clinical testimony designed to present the forensic assessment of persons whose mental status is a factual issue (Matarazzo, 1990), this type of expert testimony is not the subject of present concern. A decade ago, the *American Psychologist* focused on another type of psychological contribution to the legal system (Loftus & Monahan, 1980)—the introduction of psychological findings and data into legal proceedings. The main examples developed were factors that affect the reliability of eyewitness accounts (see also Loftus & Ketcham, 1991) and research on statistical predictions of violent behavior (see also Hiday, 1990; Monahan, 1988). In commenting on Loftus and Monahan's article, Sokal (1981) pointed out that such testimony has a long history in psychology, dating back at least to the experiences of German and French psychologists who testified as expert witnesses as early as 1896 (Hale, 1980). Today, this type

of contribution would be called *social framework data* (Monahan & Walker, 1988). The term denotes the use of general conclusions from social science research in determining factual issues in a specific case. Presentation of social framework data, whether through expert testimony, jury instructions, appellate brief, or some other means, has become more and more common (Acker, 1990; Melton, 1987); new examples provide the experiences that help psychologists get better at it.

Those who might wonder about the mechanics and the perils that are routinely faced by psychologists who bring social framework data into legal proceedings will find much of interest in the articles by Fiske et al. (1991) and Colman (1991). Both articles describe efforts to bring information from the world of social psychology to legal decision makers, albeit in entirely different types of cases and, for that matter, in entirely different countries.

Psychological Ideas in Two Legal Cases

Fiske et al. (1991) took psychological findings about the character and operation of stereotyping into sex discrimination litigation. The case, well-known in legal circles, involved the employment of Ann Hopkins at Price Waterhouse (a leading accounting firm). Hopkins was, by virtually all accounts, a competent, committed, hard-working, and effective professional. Although successful in her job, Hopkins was denied partnership, and she promptly filed a complaint in federal court. Social psychologist Susan Fiske testified on her behalf, primarily citing research findings on stereotyping, conditions that encourage it, indicators that reveal it, consequences of it, and remedies to prevent it. The judge ruled in Hopkins's favor, and Price Waterhouse, not surprisingly, appealed. After Hopkins's appellate victory, the case eventually was reviewed by the U.S. Supreme Court. Although research on sex stereotyping had been introduced in other legal proceedings (e.g., Goodman & Croyle, 1989), review by the Supreme Court made this case unique. It was the first case to examine psychological research on sex stereotyping. The American Psychological Association entered with an *amicus curiae* brief, expanding psychology's

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involvement. The result, possibly attributable in part to psychology's role, was victory for Hopkins.

Andrew Colman (1991) takes us to a legal system halfway around the world and gives us a rare glimpse into the legal workings of South Africa. Before a 1990 change in the law of that country, defendants convicted of murder received the death penalty unless they could prove that there were extenuating circumstances. Even defendants convicted as a result of mounting unrest in Black townships, with its concomitant mob violence, could be sentenced to death if they were simply part of a mob and had not personally taken part in killing. With mounting executions and the fervor around them, how could a convicted defendant hope to show the required extenuating circumstances?

Precisely this question was asked by defendants convicted of murdering a number of workers who had refused to join a strike. Several had not actually committed the killings but were found guilty by virtue of "common purpose." In the postconviction extenuation phase of this trial, and one other, Colman (1991), described to the court such basic social psychological phenomena as conformity, obedience to authority, deindividuation, bystander apathy, and the fundamental attribution error. Research findings in these domains, and their application to the specifics of the case, were at the heart of his expert testimony. The result, possibly attributable in part to this testimony, was that several defendants were ultimately spared the death penalty.

What the Cases Tell Us

These two, entirely different cases, both involving the introduction of psychological concepts and research, raise issues for the primary psychologists who were involved, as well as for psychologists in general who may be wondering about this particular means of giving psychology away. For example, how did the judges and other legal players who heard the testimony react to it? Should the psychologist's expert testimony have been admitted in court? What are the benefits to psychology of involvement in legal cases?

Reactions to the Expert Testimony

Fiske et al. (1991) report that the judge was impatient with jargon and overly critical of lengthy theoretical discussions. It is not surprising that he wanted the rules of evidence, not the scientific discourse that the attorney and expert had originally planned, to control the expert's testimony. His aggressive questioning left the expert feeling uneasy about the judge's reaction to the testimony and his likely verdict in the case. But in the end the judge accepted the cited literature as confirmation of the problem of sex stereotyping. One lesson that this example teaches is that the way scientific information gets across in the legal world is often very different from the way it gets across in lectures, publications, or other scientific outlets.

The defendant, Price Waterhouse, appealed the de-

cision. Despite the court's apparent appreciation of the research literature, Price Waterhouse did not hold back in expressing its hostility to the psychological testimony: "Sheer speculation!" The expert was criticized because she had never met the plaintiff, but had testified only on the basis of research findings. A forensic clinician who routinely treats or examines a party in the litigation would likely not encounter this sort of criticism, but it is commonly leveled against experts who provide social framework data or who are there to present the research literature in a particular field.

Colman (1991) also had to explain that he was in court to present the research literature. He experienced, on cross-examination, something that may seem odd to researchers who never step into a court of law. Colman was attacked because he had "no first-hand experience of research in some of the areas" that he touched on in his testimony. He had worked on obedience, for example, but not on some of the other topics in his testimony. His cross-examiners suggested that he had no privileged standpoint from which to evaluate the literature. This is not the first time that challengers have tried to claim that an expert should not be allowed to testify about work published by others—it is hearsay, they suggest. But rules of law that exclude hearsay evidence do not apply to expert testimony about published scientific evidence.

Admissibility of Psychological Expert Testimony

Keep in mind, when reading these rich examples of psychological research that have made their way into courts of law, that not all courts are so receptive. Several recent examples of scientific expertise being excluded from court altogether show the somewhat capricious nature of the acceptance of this form of knowledge. For example, several experts, leaders in the field, were rejected when they tried to testify on behalf of the defense in an obscenity trial (Blackman, 1991). Other psychologists were excluded when they tried to testify at the trial of Joseph Hazelwood over the Alaska oil spill of March 1989. A crucial question in that case was whether Hazelwood was intoxicated when his tanker, the Exxon Valdez, ran aground. Prosecutors sought the testimony of psycholinguist David Pisoni, who had analyzed tapes of voice recordings of Hazelwood before, during, and after the accident. The analysis produced data that "were consistent with intoxication" (Tanford, Pisoni, & Johnson, 1991, p. 3); Pisoni had based his analysis on a fairly novel application of speech science techniques (Pisoni & Martin, 1989). In analyzing the court's rejection of the testimony, Tanford et al. commented on the admissibility of expert testimony in ways that bear on our appreciation of the examples provided by Fiske et al. (1991) and Colman (1991).

Should their testimony have been admitted? In the past, courts have used the "general acceptance" test (*Frye v. United States*, 1923), which prohibits the use of scientific evidence until it has gained general acceptance in its scientific field. Before investing the time to ask and answer whether the testimony proffered by Fiske and by Colman meets this standard, it is worth mentioning that

this screening device has come under serious attack. Its language is vague; it fails to help judges distinguish between reliable and unreliable scientific evidence; and it requires judges to make decisions for which they are untrained, uneducated, and ill equipped. Because of these difficulties, legal scholars have suggested that the Frye standard be either modified or rejected. Scholars have suggested a basic relevancy test (e.g., Tanford et al., 1991). Under this standard, relevant scientific evidence supported by a qualified expert would be admitted. The primary protection against unreliable science would be the admission of contradictory evidence.

Not all experts will agree with the statements made by these particular experts. Experts will be found who disagree with the conclusions drawn about the basic research, or with the applications of that research. Some experts might agree with the basic research findings on stereotyping, for example, but not agree with Fiske's confidently expressed opinion that stereotyping played a role in the decision about Ann Hopkins, specifically. Despite these potential disagreements, it seems clear that the psychological science provided by Fiske and also by Colman was admissible under the emerging relevancy test for scientific evidence.

Benefits to Psychology of Involvement in Legal Cases

Ask not what psychology can do for the legal system, without also asking what involvement in the legal system can do for psychology. Fiske et al. (1991) provide a partial list. A key item on that list is that the cases provoke important methodological issues and stimulate significant research questions with which psychology can next grapple. The cases make it patently clear that our work is never done. *Price Waterhouse v. Hopkins* (1988), for example, raised the critical issue of how to minimize the use of stereotypes. The research literature provided ample data showing how pervasive stereotypes are and how resistant they can be to contradictory information. However, relatively little could be found on strategies to deter stereotyping, or on whether proposed strategies have actually persisted over time.

The value of a psychological study or theory should not be measured as much by whether it turns out to be "right" as by whether it stimulates further research. Judging psychological involvement in the legal system by this standard reminds us of the two-way street. Psychologists cannot only give psychology away, but they also take something back. It is tempting to speculate about

what psychology will next say to the legal system and what psychology will next learn from it, as we enter the 21st century and the centuries beyond. When Hazelwood's granddaughter's space ship runs aground in Mars, where will psychology be?

REFERENCES

- Acker, J. R. (1990). Social science in Supreme Court criminal cases and briefs: The actual and potential contribution of social scientists as amici curiae. *Law and Human Behavior, 14*, 25-42.
- Blackman, J. (1991, March). Judicial notebook. *APA Monitor*, p. 32.
- Colman, A. M. (1991). Crowd psychology in South African murder trials. *American Psychologist, 46*, 1049-1057.
- Fiske, S. T., Bersoff, D. N., Borgida, E., Deaux, K., & Heilman, M. E. (1991). Social science research on trial: The use of sex stereotyping research in *Price Waterhouse v. Hopkins*. *American Psychologist, 46*, 1058-1069.
- Frye, v. United States, 293 F. Supp. 1013 (D.C. Cir. 1923).
- Goodman, J., & Croyle, R. T. (1989). Social framework testimony in employment discrimination cases. *Behavioral Sciences and the Law, 7*, 227-241.
- Hale, M., Jr. (1980). *Human science and social order: Hugo Munsterberg and the origins of applied psychology*. Philadelphia, PA: Temple University Press.
- Hiday, V. A. (1990). Dangerousness of civil commitment candidates. *Law and Human Behavior, 14*, 551-567.
- Loftus, E. F., & Ketcham, K. (1991). *Witness for the defense: The accused, the eyewitness, and the expert who puts memory on trial*. New York: St. Martin's Press.
- Loftus, E. F., & Monahan, J. (1980). Trial by data: Psychological research as legal evidence. *American Psychologist, 35*, 270-283.
- Matarazzo, J. D. (1990). Psychological assessment versus psychological testing: Validation from Binet to the school, clinic, and courtroom. *American Psychologist, 45*, 999-1017.
- Melton, G. B. (1987). Bringing psychology to the legal system: Opportunities, obstacles, and efficacy. *American Psychologist, 42*, 488-495.
- Monahan, J. (1988). Risk assessment of violence among the mentally disordered: Generating useful knowledge. *International Journal of Law and Psychiatry, 11*, 249-257.
- Monahan, J., & Walker, L. (1988). Social science research in law: A new paradigm. *American Psychologist, 43*, 465-472.
- Pisoni, D. B., & Martin, C. S. (1989). Effects of alcohol on the acoustic-phonetic properties of speech: Perceptual and acoustic analysis. *Alcoholism: Clinical and Experimental Research, 13*, 577-587.
- Price Waterhouse v. Hopkins*, 825 F.2d 458 (DC Cir. 1987), cert. granted, 108 S. Ct. 1106 (1988).
- Saks, M. J. (1989). Legal policy analysis and evaluation. *American Psychologist, 44*, 1110-1117.
- Sokal, M. M. (1981). The psychologist as expert witness: A correction. *American Psychologist, 36*, 316.
- Tanford, J. A., Pisoni, D. B., & Johnson, K. (1991). *Novel scientific evidence of intoxication: Acoustic analysis of voice recordings from the Exxon Valdez*. Unpublished manuscript, Indiana University.
- Wagenaar, W. (1988). The proper seat: A Bayesian discussion of the position of expert witnesses. *Law and Human Behavior, 12*, 499-510.