

The Scientist in the Courtroom: A Heady Experience with Many Dangers

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Social sciences information has become increasingly important to lawyers throughout this century.¹ Therefore, it is not surprising that social scientists themselves have become involved in the legal process through their professional assistance to attorneys. Scientists from many other disciplines as well are called upon to act as expert witnesses in cases dealing with such diverse issues as environmental pollution, computer crime, trademark litigation and medical malpractice.

Conducting research for an attorney or giving expert testimony can be an ego-building experience for a scientist. It can also satisfy a desire to contribute to the public good. However, euphoria may be shortlived when the expert witness is attacked by the opposing attorney. And scientists, trained to seek truth, may find themselves uncomfortable cooperating with attorneys who, in adversary situations, are more interested in proving their clients' cases than in obtaining a scientific analysis or expert opinion which is unbiased.

Over the past decade in the US, social scientists have stirred controversy by aiding lawyers in jury selection. For example, a team of five social scientists worked with the defense in the "Harrisburg Seven" trial, in which seven anti-war activists were charged with conspiring to destroy draft records, kidnap presidential advisor Henry Kissinger, and blow up heating tunnels in Washington, D.C.

The trial took place in Harrisburg, Pennsylvania, a small, politically conservative city. The social scientists conducted a survey of people in the area from which jurors would be drawn, and obtained demographic data on the type of person most likely to be sympathetic to the defendants. From these data they developed five characteristics for a good *defense juror*:

1. Under 30; the closer to 18, the better.
2. Black.
3. Possessing elements of a counter-culture style of life.

4. Showing opposition to the Vietnam war.
5. Having a close male relative who was of or near to draft age.²

Of the 12 jurors, the defense team was able to pick seven with one or more of these characteristics. Potential jurors with any were so few that the defense had to choose five who had none of these characteristics.

The jury convicted two of the defendants on minor charges, but deadlocked on the conspiracy charges. Ten jurors voted for acquittal. The two who voted for conviction were "second-choice" jurors. "The jury's decision was more favorable to the defendants than almost anyone would have predicted," the social scientists stated.² The government dropped charges instead of asking for a new trial.

Social scientists have also aided the defense in other highly-publicized "political" trials. Sociologist Jeffry M. Paige conducted a telephone survey to provide evidence that the Angela Davis trial should be moved to another district. Also, four psychologists evaluated prospective jurors in that case. Davis was acquitted of the conspiracy charges against her.³

Psychologist June L. Tapp helped the defense select jurors in the 1975 trial of two leaders of the American Indian Movement (AIM) involved in the 71-day seizure of Wounded Knee, South Dakota in 1973. The trial ended in a hung jury. Social scientists also helped select jurors

in the trial of Watergate figures John Mitchell and Maurice Stans, who were accused of obstructing justice in return for a large political contribution. Both men were acquitted.³

However, social scientists' jury-selecting activities raised some ethical questions. It is normal for a lawyer to be an advocate, but the role is an unusual one for a scientist. Some of the social scientists involved in court cases found that to some extent they had to compromise their professional code of conduct to serve the client.

The scientists involved in the Harrisburg case did not tell the people questioned in their surveys that the information given might be used to help the defendants, "since we feared that to do so would seriously bias our results."² Instead they told respondents that the survey was being made simply because Harrisburg was to be the site of an important trial. "This...clearly violated the principle that research subjects should know the uses to which their data will be put," the team admitted. "We went ahead with the deception only after we had concluded that it was extremely unlikely that our procedure could harm the respondents."²

The efforts of social scientists to help impanel "friendly" juries may be detrimental to the cause of justice. This may be especially true if only one side has the resources to employ them.

Lawyers are finding many other uses for social science techniques. In Britain "a growing band of

specialists who call themselves forensic psychologists...are carrying out experiments to see whether evidence presented in a court case is credible or not." So says Arthur Smith, science reporter for the London *Daily Mirror* writing in *Science Forum*. Lionel Haward of Surrey University, for example, has conducted experiments to determine the validity of testimony in the courtroom.⁴

In one case, a policeman testified that he took down the license number of a speeding motorcycle. Haward, working for the defense, conducted a study using 100 trained observers who tried to duplicate the sighting. None could do it. This does not mean the policeman lied, Haward said, but that he genuinely *thought* he saw what he *said* he saw.

Another case, a civil suit, involved a dispute between two competing manufacturers. The plaintiff claimed that a new label on the competitor's product was copied from the plaintiff's label, and that customers in supermarkets were mistaking the defendant's product for the plaintiff's. Haward's team observed supermarket customers' reactions to the labels and later asked them which they thought they had purchased. In most cases like this, Smith notes, the jury would have had to decide if customers *could* be misled. Haward's results showed that they actually *were* being misled. His work helped the plaintiff win the case.

Haward notes that "forensic psychologists" have usually helped private defense attorneys. He

thinks that the prosecution should also take advantage of "forensic psychology." But this is unlikely to happen in England, according to Smith, "because of the fear that the prosecution might be accused of being unfair if it set up elaborate and costly experiments to test defense evidence in advance."⁴

Perhaps that is just as well. Haward also advocates the use of voiceprints or hidden heartbeat-monitoring devices for determining if witnesses are telling the truth. It might have been interesting to test this method in cases like those of Sacco-Vanzetti or the Rosenbergs. However, using machines to extract the truth from people is reminiscent of Orwell's *1984*.

Besides forensic psychologists, there are many other forensic scientists—pathologists, toxicologists, chemists, psychiatrists, dentists—who run tests for lawyers or the courts. However, scientists in the US who testify in court need not be familiar with the law or judicial system. "Expert witnesses" need only to be qualified in their fields. As a result, the first-time expert witness may feel as though he or she has entered a mine field rather than a courtroom.

The scientist faces a serious communication problem in dealing with friendly as well as opposing attorneys. Trained to be objective, the scientist is careful to weigh all the complex facts. But he or she soon finds that neither lawyer wants to hear the whole story. As partisans, the attorneys want to avoid opinions which do not support their clients' positions. Both want unam-

Danner and Sagall use the analogy of "the straw that broke the camel's back." A physician will tend to say that the cumulative weight of all the straws on the overburdened camel broke its back. But a lawyer may try to prove that the last solitary straw was responsible for the damage done. The danger is that doctors and lawyers may misunderstand each other when talking about causation. Thus, Danner and Sagall note:

the cross-examination of any witness applies to the medical expert—that is, you can attack the witness, his story, or both the witness and his story. If you choose to attack the witness, you can show any possible bias, prejudice or interest.... Some lawyers may view this kind of attack with disdain as superficial and avoiding the issues. Maybe so, but I consider it the *best* kind of cross-examination and the kind that jurors understand. It is far more effective than an esoteric

analysis of medicine. Of course, the ideal is to couple this with the medical attack.⁶

Kramer's emphasis on attacks "that jurors understand" points out another pitfall of giving expert testimony. A scientist's appearance, manner of speaking, and coolness under fire can make as great an impression on jurors as the content of the testimony. Exeter F. Bell, Jr., superintendent of the Central State Psychiatric Hospital in Nashville, Tennessee, notes, "Unfortunately, *who* is testifying often is more important than what is said."⁷

Lawyers who call expert witnesses do not want them to fail on the stand, and usually discuss potential problems with them in advance. Morgan P. Ames, formerly an officer of the American Trial Lawyers Association, advises lawyers on the "care and feeding of the expert witness." According to Ames, the witness:

...should simply answer the questions put, clearly and firmly and not volunteer any extraneous matter.

Further, the lawyer might warn the prospective witness that his entire prior life, and especially all his earlier professional career, may be subjected to intense, outside investigation, and in-court interrogation, so that he should reveal to the attorney calling him any earlier associations or experiences that might be invoked in an effort to discredit him on the stand.

The witness should be reminded of Harry Truman's oft-quoted remark, "If you can't stand the

heat, stay out of the kitchen."

The witness stand is no place for the faint-hearted, however brilliant they may be, and however valid may be their opinions on the subject at hand.⁸

Some scientists may consider the pressures placed upon expert witnesses as good reason to avoid courtroom proceedings. Physicians and psychiatrists may also refuse to testify because it takes up a lot of time and energy that might be better (or more lucratively) spent in their own private practices. I think most scientists feel that if their knowledge can be useful in the court of law, it is their duty to society and to the individuals involved to testify.

As more scientific issues become legal problems, we can probably expect to see more scientists working closely with lawyers and judges. Undoubtedly, recombinant DNA technology will bring about "forensic biochemistry."

Dozens of other special aspects of forensic science may develop. Since the increased application of social science or science and technology is inevitable in certain types of cases, it is possible that the legal system may one day permit scientists to participate in a manner more compatible with their training and professional standard.

Presumably the legal system and science are ultimately (but in different ways) dedicated to the pursuit of truth. However, if lawyers and scientists are to cooperate in the emerging scientific-legal areas, both groups will have to learn more

about each other's work and attitudes. Certainly, better communication and more interdisciplinary knowledge will be necessary if the two professions are to work well together.

We can expect in the future that it will not be unusual for a scientist to take a law degree or for a lawyer

to specialize in one or more of the sciences.

Perhaps if some law students took pre-med instead of political science undergraduate training, we might develop some interesting legal talent. We already have scientists trained as patent lawyers. Why should it stop there?

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