Ten Years in the Life of an Expert Witness

Elizabeth F. Loftus*

American Courts are experiencing increased use of expert testimony based upon psychological research. Ten years ago, I began testifying about my own research on human perception, recollection, and eyewitness accounts. The growing acceptance of this testimony precipitated a backlash from some psychologists. This essay describes the chronology of these events, and their relevance for the more general use of psychological research as evidence in court.

April 24, 1980
Dear Dr. Loftus,

. . . I've written eons of letters to many different people trying to get somekind of assistance, but all to no avail. I've been in prison now for seven years fighting a case that I nor my brother knew nothing about. We were given life sentences for a crime that we didn't commit. And we were convicted mainly on shady identification. There is a law library here at the prison, but it's not equiped with the correct legal material. . . . It would be greatly appreciated if you would take or may I say find a small portion of time and send me some recent Federal Law pertaining to this matter.

Sincerely,
Brent Boswell #121657
Jackson State Prison
Jackson, Michigan

June 15, 1980
Dear. Dr. Loftus:

. . . I am perhaps a classic victim of mistaken testimony by a purported eyewitness. . . . I would appreciate hearing from you and any information you might care to share with me on the subject of eyewitness identification and testimony most certainly would be helpful.

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1 This article is based upon the Division 41 Presidential Address delivered at the 1985 meeting of the American Psychological Association in Los Angeles. The author's research has been supported by grants from the National Science Foundation and the National Institute of Mental Health. Wallace Loh, Jonathan Schooler, and Geoff Loftus provided valuable insights at many points in the preparation of this manuscript. Many of the arguments are directly traceable to numerous conversations with these colleagues.
Very truly yours,
Edward D. Jacks, Jr.
Michigan City, Indiana

May 30, 1980
Dear Professor Loftus

My husband, Dominic Carreira, has been sentenced to 15 years for a crime he did not commit. Its so incredible, and it is a chain of events that could only be construed in a movie. . . .

Well, so much for now. Thank you for listening. And if you can help, we will be forever indebted.

Sandra Carreira
Pasadena, Texas

June 7, 1980
Dear Professor Loftus,

My son has been "positively" identified by a rape victim as the rapist. He is innocent, and was even home at the time. . . . Can you PLEASE send us any information you have regarding the "mistaken positive identification?" Thank you so much.

Sincerely,
Mrs. Virginia Hargrove
Union City, Tennessee

[sic: all spelling and grammar preserved]

INTRODUCTION

In his influential presidential address to the American Psychological Association, George Miller (1969) suggested that the best way to advance psychology is by giving it away. By "giving it away," Miller meant to suggest that psychologists should win allies by making every effort to share their knowledge and their perspective with colleagues in other professions and with ordinary people. After 1969, some psychological scholars picked up on Miller's theme, and extolled the virtues of the long-neglected outpost of applied psychology. About ten years ago, I ventured into that sleepy outpost, and now find myself faced with serious professional skirmishing.

To understand why I entered this arena and why I now continue to battle against a growing horde of scalpel-wielding opponents, one only needs to examine the foot-high stack of letters I've received over the years, some samples of which I have already given. While each of these letters nags at me long after I have answered it, I know intellectually that I must keep in mind that many convicted prisoners are guilty but maintain that they are innocent. Even the most dedicated defense attorneys have acknowledged that the vast majority of defendants are in fact guilty of the crimes with which they are charged (Dershowitz, 1982). Yet some convicted prisoners are in fact innocent. Over the years large numbers of cases have been compiled (Borchard, 1932; Rattner, 1983; Gross, 1984). How many are there? There is no way to know. A 1983 Ohio State Univer-
sity Doctoral Dissertation put the number of wrongful convictions in the United States at 8500 per year, and estimated that over half were due to faulty eyewitness testimony (Rattner, 1983). Of course there is another error that we must simultaneously worry about, namely the acquittal of the guilty. Yet our society has chosen to follow the principle enunciated by the eminent jurist William Blackstone (1723–1780), that it is better to acquit 10 guilty persons than to convict one innocent person (Blackstone, 1765–69/1962). Although we must keep both errors in mind, adherence to this principle demands that we concentrate on the tragedy of the innocently accused citizens. It seems a natural place to think about whether psychology might play some useful role, and if so, to give some psychology away. More specifically, we might try to use psychological research to reduce one type of error, without unduly increasing the other.

If faulty eyewitness testimony is a major cause of wrongful conviction (or erroneous verdicts more generally), perhaps the study of eyewitness testimony, with an aim towards eventually improving that testimony, could lead to a reduction in errors. With this thought in mind, I began to conduct experiments on eyewitness reliability. After several years of experimentation, I received requests to testify occasionally as an expert witness about the research. The testimony was intended to educate the jury about relevant studies on eyewitness accounts so that they would presumably reach more informed judgements. This was my way to give psychology away. I was unprepared for the resistance this effort would meet, and for the ferocity with which a few highly respected colleagues would proclaim that it was wrong to be giving it away.

My purpose here is to trace the history of this one type of expert testimony, namely, testimony on the reliability of eyewitness accounts. The issues surrounding the use of this testimony are similar to those that arise with many other types of “research” testimony routinely being sought from psychologists. By research testimony, I refer not to instances in which psychologists provide a clinical evaluation of witnesses or defendants or other parties involved in the case. Rather, I refer to instances in which a psychologist is called to offer empirical information of a general sort derived from psychological research. In such cases, the contribution of the expert consists of informing the judge and jury of facts that relate to the behavior of people in general but of which they may be unaware. The testimony concerns the behavior of a particular party not directly, as would a clinical evaluation, but rather indirectly in the sense that a particular party is viewed as a specific instance of generally observed findings.

I will focus on one type of expert testimony—namely, testimony about the reliability of eyewitness accounts. However, in thinking about the issues that are raised by the use of this expert testimony, one should keep in mind that psychologists have provided research-oriented expert testimony on a variety of topics, for example: (1) the typical pattern of behavior of abused women and children, (2) the effects of bilingualism in children, (3) the impact of television on behavior, (4) the typical behavioral pattern of a rape victim, (5) the effects of warnings on behavior (see Perlin, 1977, for other examples). Common questions apply to these seemingly unrelated areas, for example: (1) Is the content of the testimony accurate? (2) Does the jury already know about the content of the testimony? (3) Will
the jury be confused, prejudiced, or overawed by the testimony? (4) Will it involve too much court time?

The early 1970s saw its own collection of cases of mistaken identification. One of the best known at the time, since it was memorialized in an article in Scientific American (Buckhout, 1974), was the case of two innocent men, Lawrence Berson accused of several rapes and George Morales, accused of robbery. Both men were picked out of police lineups by victims of the crimes. Berson was cleared when another man, Richard Carbone, was arrested and implicated in the rapes. Carbone was convicted. Later he confessed to the robbery, clearing Morales. Unfortunately even cases that receive a high degree of publicity are all too quickly forgotten by the general public. In one study three months was sufficient time for the impact of widespread publicity about a case of mistaken identification to disappear (Greene & Loftus, 1984).

In the wake of these cases, Robert Buckhout, a psychologist who was then at California State University at Hayward, began to do some simple experiments on eyewitness testimony, and to offer expert testimony on behalf of criminal defendants. His testimony was offered in one highly publicized case, People of California versus Angela Davis (1972), a trial that arose out of the allegations that Ms. Davis was involved in a courtroom shoot-out that occurred in Marin County, Calif. A key eyewitness purportedly saw Ms. Davis in a rented van used in the shoot-out. The eyewitness testified to seeing red tinges in the hair of the woman with the van. And yet the witness was color blind. The eyewitness had been tested by the use of one set of nine pictures which included three photos showing Davis speaking at an outdoor rally, two mug shots of other women with different names, and one photo of a 55 year old woman. Buckhout testified about the psychological factors that could have produced problems for accurate identification in general, and problems inherent in using such a biased test. Later, Buckhout would elaborate upon his view that such a test is meaningless and should be considered tainted as an item of evidence in court. (Ellison & Buckhout, 1981).

Angela Davis was acquitted. The publicity surrounding her case meant that other lawyers soon learned about this “new” type of expert evidence. Soon a small coterie of experts sprung up around the nation. Even if an attorney was not personally acquainted with one of these testifying psychologists, it was possible to find out who they were because their names periodically surfaced in published legal cases.2

It was these same published legal cases that let psychology know that not all of the legal profession was embracing this new expert testimony. To understand the various positions of the legal profession, it is necessary to view this expert testimony in the context of evidence more generally.

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Reactions of the Legal Profession

The purpose of any piece of evidence offered at trial, including expert testimony, is to supply knowledge that will aid the judge or jury in reaching a final determination. Experts are distinguished from nonexpert witnesses by the expert’s ability to render an opinion or to draw inferences at trial. The ordinary nonexpert witness generally testifies to personal knowledge of the facts; any testimony in the form of opinions or inferences is limited to those opinions or inferences that are either rationally based upon the perception of the witness, or that would be helpful to a clear understanding of the testimony (see Federal rules of Evidence, 1975; Mauer, 1984).

Despite the leeway inherent in the rules guiding legal procedure, the use of expert testimony on eyewitness reliability remained controversial. There were a variety of arguments for excluding the testimony (Bullard, 1983). A few courts excluded the testimony on the grounds that the expert was not qualified, but other reasons were more commonly given. One commonly given reason was that the proposed testimony was within the common knowledge of the jury and was therefore not a proper subject matter.3

Other courts worried that the expert testimony would invade the province of the jury. It is up to the jury to decide whether a particular witness was in a position to see or hear what is being claimed. Another concern was that the testimony of the expert was not generally accepted in the relevant scientific community. Yet another view was that cross-examination was sufficient to reveal weaknesses in an eyewitness account and therefore expert testimony is not needed.

Some courts were concerned that the expert testimony would have undue or prejudicial influence on the jury. The worry here is that despite the uncertainties in the empirical evidence, a highly reputable university professor might be perceived by the jury as having an “aura of special reliability and trustworthiness” (U.S. v. Fosher, 1979).4

Why were these courts so reluctant to admit the expert testimony? In some instances, the stated reasons for excluding the testimony (invading the province of the jury, all within the common knowledge of the jury) were apparently not the real reasons. An experience with a judge in the District of Columbia convinced

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3 “It is something everyone knows about, the problems of identification. . . . Everyone knows those things happen” (People v. Guzman, 1975, p384/p72).
4 “We believe it is within the common knowledge of the jury that a person being attacked and beaten undergoes stress that might cloud a subsequent identification of the assailant by the victim” (Nelson v. State of Florida, 1978).
“Knowledge by the jury that conditions of stress affect perception by the observer would add little, if anything, to what lay persons already know” (Taylor, 1980).
4 In one case, the expert testimony was excluded because it was not considered probative or relevant. Said differently, the court concluded that there was little relationship between the psychological testimony and the facts sought to be proven at trial:
“‘To admit such testimony in effect would permit the proponent’s witness to comment on the weight and credibility of opponents’ witnesses and open the door to a barrage of marginally relevant psychological evidence.’” (United States v. Thevis, 1982, p. 641).
me of this. Throughout the 1970s, Washington, D.C. had been an area that was particularly resistant to the use of eyewitness experts. Defense lawyers would try to introduce it, and judges routinely excluded it on the grounds that the to-be-provided information was all within the common knowledge of the average juror. In 1979, I published data on the issue of what people in general, and jurors in particular, know about the factors that affect eyewitness accounts (Loftus, 1979). The subjects were over five hundred registered voters in the State of Washington, and thus eligible for jury duty. The research showed that the common beliefs held by people regarding eyewitness ability did not always conform to the findings from psychological research. For example, many people believed that a witness would remember the details of a violent event better than the details of a nonviolent event, when the research showed the opposite.

The next time an appropriate case arose in Washington, D.C., I came armed with the newly collected data. When the judge began to talk about excluding the expert testimony on the grounds that it was all within the common knowledge of the average juror, we introduced the data to show that it was not. The judge's response was to this effect: "Well, our jurors here in the District of Columbia are more sophisticated than the people out in Washington State."

To face this new challenge, a study was conducted involving citizens of Washington, D.C., many of whom were approached in the jurors' lounge or while leaving the courthouse after a two-week tour of duty. (See Deffenbacher & Loftus, 1982, for a more detailed description of the study). These subjects too were queried about their common beliefs about eyewitness testimony. The most consistent difference between the D.C. results and those previously obtained was one of decidedly lower accuracy on the part of the D.C. citizens. Demographics (such as education and socioeconomic status) were hypothesized to account, at least in part, for the lower performance.

The same D.C. judge was now faced, in a new case, with a defense request to admit expert testimony. This time, the defense introduced the new empirical evidence showing that even the D.C. jurors held common misconceptions about eyewitness accounts, and in fact to a greater degree than that shown in other samples. The judge listened intently, but concluded that he was not going to let the testimony in anyway. This experience taught me a lesson that lawyers had known for some time, namely that judges will often offer a convenient rationale for a decision, although the stated rationale may not be the the true basis for the decision (Frank, 1930).^5

The question still remains, then, about the real reasons for the courts’ reluctance to admit expert testimony on eyewitness reliability. One lawyer (Frazzini, 1981, p. xx) speculates that it was because of a "fear of the novel." (a form of judicial xenophobia). Reluctance also arose because of fear that such testimony

^5 Frank (1930) recognized this years ago when he said, "The judge really decides by feeling and not by judgment, by hunching and not by ratiocination, such ratiocination appearing only in the opinion. The vital motivating impulse for the decision is an intuitive sense of what is right or wrong in the particular case . . ." (pp. 103, 104). Loh (1984) agrees that one of the chief uses of legal rules is to enable judges to justify the conclusions that they otherwise reach.
would complicate a trial or lead to the release of the guilty as well as the innocent. Frazzini blamed the crowded court dockets and a clamoring public that wants convictions. Despite the vagaries of eyewitness testimony, it is a proven formula for conviction, and few people want to interfere with such a success rate.

Given this feeling about expert testimony, it should not have been a surprise that higher courts would routinely uphold convictions of defendants despite the trial judge’s refusal to permit expert testimony. Until as late as 1983, cases reaching the state appellate courts of other higher courts decided that the judge had the broad discretion to refuse expert testimony. At first glance it might have seemed as if all courts were against the use of this expert testimony since all the published opinions were decided in the same way, namely, the trial judge refused the testimony and the higher court affirmed the conviction. However, there is an obvious reason for this apparent one-sidedness. Defendants only appeal their cases on this issue when the expert testimony has been excluded and the defendant has been convicted. If the trial judge admits the expert testimony and the defendant is convicted anyhow, no basis exists for an appeal on this issue. If the defendant is found not guilty, there is no appeal. Thus the higher courts have always been handed cases in which the testimony has been excluded and the defendant convicted. This tended to bias the posture of reported cases on the issue of expert psychological testimony. Thus, as Loh (1984) has noted, appellate decisions were an unreliable indicator of the frequency of admission in the trial courts.6

A Change in the 1980s

A turning point occurred in 1983, with the decision of State of Arizona v. Chapple (1983). At his trial, Dolan Chapple had been convicted of three counts of murder and two drug-trafficking charges, chiefly on the testimony of two witnesses who identified him at the trial. Earlier they had selected him from photographs shown them by the police more than a year after the crime.

Chapple’s lawyer tried to introduce expert psychological testimony on the accuracy of such identification. The judge refused to permit it on the grounds that the testimony would pertain only to matters “within the common experience” of jurors: “I do not find anything that’s been presented . . . that isn’t within the common experience of the people of the jury?” (p. 1220). The Arizona Supreme Court disagreed, maintaining that expert testimony would have provided scientific data on such pertinent matters as the accuracy of delayed identification, the effects of stress on perception, and the relationship between confidence and accuracy. The court judged the expert testimony in light of two criteria: Would the probative value of the testimony outweigh its possible prejudicial effect? Was the testimony a proper subject matter? “We cannot assume,” the court concluded, “that the average juror would be aware of the variables concerning identification

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6 These considerations point to the unreasobleness of one Court’s refusal to admit expert testimony because “Defendant has been unable to cite a published opinion which endorses the use of expert identification opinion evidence in a case such as this” (State of Kansas v. Reed, 1979, p. 522).
and memory about which the expert would have testified.’” Chapple’s conviction was reversed and he was granted a new trial.7

A year later, the California Supreme Court gave a clear message and direction to judges in favor of admissibility of the expert testimony. The case was People v. McDonald (1984). Eddy Bobby McDonald was convicted of the 1979 murder of a Long Beach, Calif. restaurant worker during a robbery. At his trial, seven prosecution witnesses identified McDonald as the shooter, although one witness said he was not. This was the only evidence that the prosecution offered linking McDonald to the crime. McDonald offered six alibi witnesses who said he was visiting his grandfather in Alabama on the day of the shooting.

The trial judge denied the defense request to allow a psychologist to testify about the problems with eyewitness identification. McDonald’s jurors believed the eyewitnesses over the alibi witnesses, and convicted. The California Supreme Court took exception to the decision to exclude expert testimony, ruling that such an exclusion may be an abuse of discretion, and thus reversible error, when a case rests almost entirely on eyewitness identification. The Justices went on to say that if the identification is “substantially corroborated” by independent evidence, trial courts still have discretion to exclude the expert.

As might be expected, the legal community expressed varied reactions to these decisions. Justice Hays, who dissented from the Arizona Supreme Court’s finding in the Chapple case, said “I have great reluctance to permit academia to take over the fact-finding function of the jury” (State v. Chapple, 1983, p. 300/1227). And indeed, the Arizona Supreme Court clarified its limited acceptance of eyewitness experts in State v. Poland (1985). The Poland case arose out of a robbery of a Purolator van containing over $300,000 in cash. Two guards were killed. Patrick Poland was convicted and sentenced to death. He appealed on the grounds that the trial judge abused its discretion in not allowing expert testimony. The Arizona Supreme Court, just two years after Chapple, ruled that under the facts of this new case, the trial court did not abuse its discretion. A major fact seemed to be that the question of guilt did not hinge solely on the testimony of eyewitnesses.

In the McDonald case, no justices dissented. But many others had comments to make. In an interview with the National Law Journal after that case, the defense attorney who represented McDonald applauded the fact that jurors would now “be able to make an informed decision” (Galante, 1984, p. 8). On the other hand, the prosecutor who argued the government’s position before the California justices was dismayed: “I think a very persuasive argument can be made that jurors should give zero weight to such (expert) testimony” (p. 8).

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7 Although Chapple got a new trial, the Arizona Supreme Court was still guarded in its opinion, as can be seen in its conclusion: “...we do not intend to ‘open the gates’ to a flood of expert evidence on the subject. We reach the conclusion that Dr. Loftus should have been permitted to testify on the particular facts of this case and have no quarrel with the result reached in the vast majority of cases...The rule in Arizona will continue to be that in the usual case we will support the trial court’s discretionary ruling on admissibility of expert testimony on eyewitness identification” (p. 1224).
Reactions of Psychologists

As the Arizona and California Supreme Courts were opening the doors to increased use of psychological expert testimony, two highly respectable experimental psychologists were adamantly suggesting that we close those doors. McCloskey and Egeth (1983) presented their position in May, 1983 to one of the largest possible audiences: readers of the American Psychologist. Although their arguments are aimed at eyewitness experts, their reasoning is pertinent to many other forms of psychological testimony, such as testimony that a battered wife can fear her husband but not be able to leave him (Ibn-Tamas v. U.S., 1979) or that a driver approaching a grade crossing would not see a train under certain circumstances. (Southern Pac. Transp Co v. Lueck, 1975).

McCloskey and Egeth begin their controversial article with the basic premise that any intervention in the operation of the justice system should not be undertaken lightly. Then they develop two major themes. First, they argue that empirical evidence documenting the need for expert psychological testimony is weak, at best. In particular, they claim that no evidence exists to support the claim that jurors are overly willing to believe eyewitness testimony. Perhaps jurors are appropriately skeptical and expert testimony would make them too skeptical. Even if we assume that jurors are overbelieving or otherwise fallible in their decisions, it has not been shown that psychological testimony can remedy this problem. Perhaps expert testimony actually decreases the ability of jurors to discriminate accurate from inaccurate witnesses. Thus premature intrusion into court proceedings may do more harm than good. What is needed is “additional research” (p. 558).

McCloskey and Egeth’s second theme concerns factors alleged by experts to have potentially affected the accuracy of the particular eyewitness account. They claim that most of these factors are either not well documented by research studies or are obvious to jurors. For example, they claim that effects of exposure duration, the wording of questions, and the cross-racial identification problem are already obvious to jurors. Thus, there is no need for expert testimony on these matters. They claim that there is little if any empirical support for the importance of factors of stress and weapon focus. Thus, it is misleading to provide expert testimony. Their arguments are summarized in a shrewdly constructed mock cross-examination in which the expert witness is made to look extremely awkward.

I was given the chance to reply to McCloskey and Egeth in the same issue of the American Psychologist (Loftus, 1983). I agreed wholeheartedly that additional research is needed to reveal the form of expert testimony, if any, that might truly help jurors to be better judges of eyewitness testimony. But, as I claim later, we do not have the luxury of waiting until researchers get around to completing all the studies that would be desirable. In the meantime, it is my view that psychology does have, at the present time, something valuable to offer.

To the claim that jurors already know about eyewitness testimony and thus it is not a proper subject matter for expert testimony, I reviewed a number of survey-type studies designed to ascertain what is commonly known by indi-
viduals about eyewitness ability. These studies uniformly show that there are areas in which individuals do not understand how a particular psychological factor influences perception and recollection.8

I also responded to the claim that there is little empirical support for many of the factors that psychologists testify about. McCloskey and Egeth looked only at the literature involving experiments on recollection of realistic events. However, a psychologist’s knowledge of the factors that influence eyewitness accounts comes from a large literature in cognitive, perceptual, and social psychology as well as from experiments that attempt to mirror the eyewitness situation. We know from introductory perception textbooks that there are luminance and acuity levels that make accurate perception very difficult. Basic research in these areas has a long history and is continuing to this day (G. Loftus, 1985). We know that people are less accurate after a longer rather than shorter retention interval because of the vast collection of memory studies conducted over the last century that have shown this to be the case. It is possible to find an occasional study that does not show a drop in performance given the particular retention levels used (and McCloskey and Egeth are quick to make these known), but it would take much more than these for the field to completely revise its view about the importance of the retention interval. When a meta-analysis of eyewitness identification and facial recognition studies involving over 800 experimental conditions (Shapiro & Penrod, 1986) tells us that the retention interval is one of the most important variables influencing performance, why should we? Moreover, one could make a strong case that it is irresponsible for a researcher to stress the few studies that run counter to the overall pattern of results pertaining to a particular topic, unless there is some good theoretical reason to do so.

Scholars and forensic psychologists responded to McCloskey and Egeth in the Comment section of American Psychologist about a year or so later. The first comment came from Michael Roberts, a forensic clinician in Oxford, Mississippi (Roberts, 1984). Roberts characterized the debate as an “academic standoff” (p. 1064), and asked where it left the poor local psychologist who will receive the vast majority of attorney’s requests for expert testimony. Roberts concluded that each psychologist would have to become familiar with the research in the area of eyewitness testimony, and each could decide “if the data were convincing enough for us to take a stand on the stand” (p. 1064). In reality, it is likely that the forensic clinician who is not explicitly researching eyewitness testimony

8 Here are some commonly held misconceptions:

1. Witnesses remember the details of a violent crime better than those of a nonviolent one. Research shows just the opposite (Campbell, 1982; Christianson, 1984; Clifford & Scott, 1978; Loftus & Burns, 1982).

2. Witnesses are as likely to underestimate the duration of a crime as to overestimate it. In fact, witnesses almost invariably think a crime took longer than it did (Loftus et al., 1985).

3. The more confident a witness is, the more accurate the testimony is likely to be. Research suggests that there may be little relationship between confidence and accuracy, especially when viewing conditions are poor (Deffenbacher, 1980).

4. Police officers make better witnesses than ordinary citizens. Research shows that the testimony of law enforcement personnel is generally not more accurate than that of an ordinary citizen (Tickner & Poulton, 1975).
will not exhaustively read the literature; rather, he or she is more likely to rely on secondary source material summarizing what the literature shows. Poor Roberts is likely to continue feeling frustrated unless a uniform approach or guidelines to this problem are adopted. Yet a uniform approach may not be what is best for ensuring legal justice.

The next comment came from Gary Wells, a leading researcher in eyewitness testimony at the University of Alberta (Wells, 1984). Wells believes that the foundations of McCloskey and Egeth’s arguments are misleading. First, Wells claimed, McCloskey and Egeth are too concerned with outcome (Is the ratio of conviction of innocent to guilty unacceptably high?) rather than with process. If a lie detector were proven to be unreliable, but was used to convict someone who was actually guilty, we would be concerned. Analogously, if there is something wrong (which Wells seems to believe) with the process by which jurors evaluate eyewitness evidence, then there is justification for change regardless of whether the frequency of false convictions is high or low.9

The last comment came from Kenneth Deffenbacher, a researcher at the University of Nebraska (Deffenbacher, 1984). He worried that if jurors cannot make reliable and valid determinations of witness accuracy, then courts should employ methods that diminish jurors’ reliance on eyewitness evidence until such time as psychology can provide tools for improved discrimination. But Deffenbacher took even greater exception with other claims concerning the quantity and quality of knowledge that psychologists possess, and the extent to which this acknowledge is part of jurors’ common sense.10

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9 Wells asked whether the process by which jurors evaluate eyewitness testimony is correct. In his view there is evidence that jurors overbelieve eyewitness testimony, but McCloskey and Egath dismiss this evidence inappropriately (See Wells, 1984b, for a fuller discussion). McCloskey and Egath (1984) defended their dismissal of the relevant studies, claiming that jurors probably overbelieve in some circumstances and underbelieve in others. What is needed, McCloskey and Egath suggest, is expert testimony that brings juror evaluations more in line with what witnesses actually do.

10 Deffenbacher is impressed with the knowledge we have gained: “We have 100 years of research showing exponentially declining forgetting functions in a wide variety of circumstances. Should we ignore this particular psychological law? McCloskey and Egath’s presentation to the contrary, forgetting effects have been demonstrated in more than 80% of studies examining retention of facial information” (p. 1067).

As for jurors’ knowledge or common sense views about eyewitness accounts, Deffenbacher reminds McCloskey and Egath of the review by Wells (1984c) of 20 separate studies of the adequacy of human intuition that have yielded evidence of misunderstanding or oversimplification by laypersons. Deffenbacher suggests that the problem be cured by judicial instructions or expert testimony.

Egath and McCloskey (1984) challenged the premise of Deffenbacher’s claims. There is no evidence, they argued, that jurors are completely unable to distinguish accurate from inaccurate eyewitnesses; thus we do not need to reduce their reliance on eyewitness testimony. As to Deffenbacher’s concern about the solidness of information that experimental psychology can provide, Egath and McCloskey reiterate their view that there is less agreement and less forensic relevance among the cited studies than one might like to see. Egath and McCloskey accuse Deffenbacher of missing their point about the retention interval: The effects of the retention interval probably match jurors’ intuitions, so expert testimony is not necessary. And finally, Egath and McCloskey seem to imply that jurors’ intuition may not have been properly tested.
It is still too early to know how other scholars will react to the "academic standoff." While McCloskey and Egeth have some support,\textsuperscript{11} many, if not most, scholars appear to disagree with all or part of McCloskey and Egeth’s claims. Willem Wagenaar (1985), a leading experimental psychologist in the Netherlands, commented upon the mock cross-examination developed by McCloskey and Egeth. In that mock examination, the psychologist explains that identification of criminals can be mistaken, and that factors such as stress, weapon focus and the cross-racial problem should be considered. The prosecutor, with coaching from another expert, attempts to undermine the testimony by eliciting such admissions as (1) some people make accurate identifications; (2) it cannot be predicted which witnesses will be accurate and which will be inaccurate; (3) cross-racial identification is not equally difficult for all people, and besides, the decrement in accuracy is only about 10%; and (4) the effects of stress on identification are not always consistent, and are not the same for all people. Finally, the expert is hit with the last question: "How can these vague principles be of any help to the jury, Dr. Smith, when you, with all your knowledge and experience cannot use them to tell whether a witness was accurate or not. The by now very timid expert replies: "It is not my function to decide that."

Wagenaar's distress with this line of questioning concerns the implication that psychologists are attempting to substitute their science for the courts' opinions. This is not the purpose of expert testimony, nor should it be. Psychologists play the modest role of providing hopefully useful information to those who must make the ultimate decision.\textsuperscript{12}

A Battle of Experts

One last claim of McCloskey and Egeth (1983) is that the expert testimony being proffered is likely to lead to a battle of the experts that would create or sustain the impression of psychology as a subjective, unscientific discipline. In

\textsuperscript{11} Robert Pachella, a University of Michigan psychologist, complained to a reporter for \textit{TWA Magazine} that "Experimental psychologists have established that there can be stress-related memory loss, but they simply cannot know to what extent a given eyewitness may have experienced it. Defense attorneys just want to bring in people like her to indirectly impeach the credibility of eyewitnesses" (Jenkins 1984, p. 26). Pachella makes no effort to conceal his disgust. But it does not matter if we cannot say with certainty that a particular eyewitness experienced memory loss. In the legal field, the probabilistic decision criterion is admittedly subjective. The law unabashedly recognizes the need for different degrees of certainty. The system operates quite well without complete reliance on quantitative preciseness for its basic evidence (Levine, 1974).

\textsuperscript{12} In a similar vein, Monahan and Walker (1985), Professors of Law at the University of Virginia, took issue with McCloskey and Egeth’s assertion that the fact that psychologists cannot tell which particular witness is inaccurate. Thus expert testimony should not be admitted. The flaw here is that most courts would not permit the psychologist to make such statements about the accuracy of a particular witness (see Arizona v. Chappell). The only statements that can be made are statistical, but this should not disturb us. A kind of uncertainty principle applies: We cannot say whether any particular witness is right or wrong, correct or incorrect, accurate or inaccurate. We can only say that certain conditions lead to a statistically greater incidence of accuracy than do other conditions. The Courts must then decide whether this information is useful.
fact battles of experts have already taken place in this domain, although it is unlikely that the field is worse off for them.

One such battle arose out of the case of Antonio Harris, a black Colorado University football player accused of participating in a brutal rape of a white off-duty waitress on the Boulder campus around midnight of June 3, 1984. His alleged confederate was also black. The victim in the case, Marjorie, told the officers that one man followed her down a trail on the campus and dragged her into some bushes where he was joined by a shorter man. While Marjorie recalled that both men took sexual liberties, she was positive that only the shorter man entered her vaginally and ejaculated.

Antonio Harris was seen later in the area and found his way into a photographic lineup. Three days had passed since the crime. The victim immediately picked Antonio’s photograph stating that she was 110% sure that this was the shorter assailant who ejaculated. A blood and semen test indicated that Antonio could not have deposited the semen.

The prosecution had a problem. It argued that Marjorie identified the right face, but she attributed it to the wrong body. A prosecution witness, Dr. Louis Harvey from the Psychology Department at CU, testified that it was quite plausible that a victim of a violent crime that got a good view of one attacker’s face but not the second attacker would later be able to make a clear identification of the first attacker, but would interchange his role with that of the second attacker. The defense had another explanation for why Marjorie picked Antonio’s photograph. Apparently she had worked as a cashier at the James Restaurant 11 months before the rape. For two months during the summer, Antonio worked as a dishwasher there, and time cards indicated that both worked together during several shifts. Moreover, the manager recalled that Marjorie and Antonio had had conversations on several occasions. Thus, the defense contended that Antonio’s photograph had looked familiar because of the prior contact between the two.

In other words, both sides claimed that an “unconscious transference” had occurred, which means that a person seen in one situation is confused with a person seen in another situation. The prosecution expert, Harvey, testified that it was more likely that Marjorie recognized Antonio because his face was seen (on another body) at the time of the crime than because his face was familiar from the prior summer. The defense expert said there was no evidence that one type of situation is more likely to produce an unconscious transference than the other.

What is the effect upon jurors of opposing expert witnesses with similar credentials expressing conflicting views? One possible result is neutralization (Doyle, 1984) and a reliance on what would have been relied upon without any expert testimony at all (See Fraser et al., 1985, for a jury simulation study demonstrating this outcome). In Harris’ case, the influential factor was undoubtedly the extreme confidence with which the victim expressed her identification. Harris was convicted in his rather unusual case.

A battle of experts that is more typical of what the future is likely to hold arose out of the case of People of California versus Joseph J. Pacely (1984). It is more typical because the defense expert presented evidence to support certain propositions, while the prosecution expert claimed that the evidence was not
sound. The Pacely case stemmed from an incident occurring on September 9, 1984, at 4 a.m. in which Mrs. M. reported that a stranger came into her home via an open living room window. He then attempted to assault her sexually while she was asleep in her living room. Several children slept nearby. The assailant was apparently frightened off when the children and some guests sleeping in another room woke up.

Mrs. M. described her attacker to one officer as a black man, 5'7"–5'9", 170 pounds, medium build. He had tiny braids and wore a blue baseball style cap. He had an odor of hard liquor on his breath.

One block north of the assault, police saw Joseph Pacely standing by his car. He was a black male, 5'9" and 140 pounds. When the police approached him, he said his battery had died and he was trying to find someone with jumper cables. He knew nothing about the assault, he claimed. But he was identified later by Mrs. M. Pacely was charged with attempted rape, and was tried in December 1984.

I testified in a manner similar to testimony I had offered many times before. I described some research on the effects of stress and fright on memory, including the Yerkes–Dodson Law, which describes the theoretical relationship between stress and memory. To provide an illustration of how high arousal could impair memory, I described a series of studied conducted in collaboration with a student, Terry Burns (Loftus & Burns, 1982). Burns and I had presented subjects with a short film of a mentally shocking event in which a young boy is violently shot in the face. Compared to other subjects who saw a nonviolent version of the same film, those who saw the mentally shocking version showed poorer retention of the details of the film. We suggested that mentally shocking episodes may disrupt the lingering processing necessary for full storage of information in memory.

The prosecutor brought their own expert, Dr. Ebbe Ebbesen from the University of California, San Diego. Ebbesen, on direct examination, was asked about some of the areas about which I had testified. He was asked for example to characterize the state of the field with regard to the relationship of stress to memory. He answered: "In a nutshell, we simply do not know what the relationship is." He noted that some studies show memory increases with stress while others show it decreases. Of course this is predicted by the Yerkes–Dodson Law, depending upon the degree of stress or arousal that is implicated. Ebbesen attempted to demean the Yerkes–Dodson Law by noting, rather sarcastically, that "It was proposed to explain some research with rats in the 1920's and 1930's, which basically showed that performance in time mazes followed more or less this function. If rats were highly stressed, very highly stressed, like if they were shocked with an electric shock under extreme circumstances, they had more difficulty navigating the maze than if they were not shocked or just hungry, or neither shocked or neither hungry."

Ebbesen attacked not only the general theory, but the Loftus/Burns study that was used as an illustration. He indirectly attacked the work because it involved students, not real crime victims, a common ploy of prosecutors. But he also noted that "even under her high stress . . . conditions, 83% of the people are
remembering everything. That is, she gets a significant difference... between the low stress and the high stress, 4% and 17%. But even under her supposed high-stress conditions, we still had a very high accuracy rate. 83% of the people are remembering the details that she asked about.”

He emphasized the high degree of accuracy again when talking about studies of face recognition. “People have reported accuracy levels in as much as 97%... which is actually why people originally got interested in this area. They were amazed that people could remember, even after weeks, as much as 80% of those faces that they have seen under that quick exposure.”

A capsule summary of this exchange, then, is that I claimed that extreme stress can impair memory. Ebbesen claimed that the studies are not very good and besides, memory can often be excellent. I would agree that memory can be excellent, but only if certain conditions are met.

I testified about the cross-racial identification problems since the case involved the identification of a black man by a Mexican woman. “What the psychological work has shown, (and) there are at least 20 studies now that have shown this same effect, is that we make more mistakes when we attempt to identify a member of a different race than (when) we attempt to identify a member of our own race. Even if we have had some experience with members of a different race, the cross-racial problem is still present.”

Ebbesen’s attack on this conclusion was a surprise to me. He tried to illustrate for the jury a graphic representation of the cross-racial identification problem. Using blacks and whites, he drew a straight cross-over interaction. He then went on to say that less than half of the studies “show anything approximating this effect.... Sometimes whites are better overall than blacks. Sometimes blacks are better overall than whites. Sometimes blacks and whites are no different indentifying blacks. Sometimes blacks and whites are no different identifying whites. It sort of depends on the particular details of (the) study and the procedures that are used. And currently there is no existing theory that tells us what happens if one were to find this result, this result, this result, or that result.” This argument is unfair: Although the data in each and every study may not correspond to a perfect cross-over interaction, the pattern of results across studies makes appropriate the conclusion that people are less able to identify members of their own race than members of another race. The pattern is clear (Shapiro & Penrod, 1986) and most experts know it (Yarmey & Jones, 1983).

What disturbed me even more about Ebbesen’s remarks concerning the cross-racial issue was his singling out of one study that did not precisely fit the overall pattern. Ebbesen described for the jury the study by Brigham et al. (1982): “There was no cross racial identification effect.” he told them. Indeed the cross-racial effect was small: There were 50% false alarms when whites identified blacks and 45% false alarms when whites identified whites. Yet, when one problematic white target was removed from the analysis, a procedure that Brigham et al. felt was justified because this target was invariably not identified in any condition of the study, the cross-racial problem became considerably more evident. Even if this study had been a clear instance of a failure to observe any cross-racial problem, it seems misleading to me to present to a jury an exception to an
overall pattern and imply, even indirectly, that therefore the pattern does not exist.

There are errors throughout the testimony that are probably predictable when people testify in areas with which they are not completely familiar. For example, on the issue of children's testimony, Ebbesen states that "one typically finds that five and six year olds do about as well as adults" when asked specific questions. I doubt that experts on the development of memory would agree with this assertion. What happens to such an expert when he is cross-examined? The Defense attorney, Steven Munkelt, was reasonably gentle. He asked, "You did not represent yourself as an expert in eye-witness testimony, did you?" Ebbesen's answer:

"I am not—it depends on what you mean by eye-witness testimony. I have done research in memory, just like Dr. Loftus has. I am an experimental psychologist. One of the things that I have not done, however, has been something, for example—let us say analyzed the transcripts of an eye-witness, eye-witnesses in real court cases or something like that. And as far as I know, nobody has."

Munkelt pressed him further: "And actually, a substantial amount of your experimental time during your career has been devoted to subjects far removed from the eye-witness testimony situation, is that true?"

Ebbesen answered: "Well, it very much depends on what you mean by 'eye-witness.' You see, I think it is a mistake to call a kind of memory research that I and Dr. Loftus do, 'eye-witness research,' because it has virtually nothing to do with real life eye-witnesses as the Court thinks of them. And I do some research that is probably more research, in terms of memory research, than Dr. Loftus has done. On memory, I choose not to call it having anything to do with eye-witnesses, where she does, for example."

Does the battle of experts create or sustain the impression of psychology as a subjective, unscientific discipline. It is hard to know what jurors will make of an exchange of the sort that they heard in the Pacely case. (In Pacely, they acquitted.) But we should keep in mind that many trials involve battles of experts without any apparent loss of scientific integrity. One biomechanical engineer says that a football injury was caused by the helmet striking the back of the player's neck, whereas the defense expert, an equally reputable medical doctor, says it could not possibly have happened that way. Do these confrontations also lead to the detriment of the medical profession? McCloskey and Egeth said yes but that the medical profession then redeems itself by making some miraculous medical discovery that we read about in the popular press.

I find this reasoning hard to swallow. If medicine can undo the alleged damaging effects of contradictory courtroom testimony, then why can't psychology not do the same? In suggesting that we do not have many useful discoveries that can repair a damaged reputation, McCloskey and Egeth are perpetrating stereotypes and negative comparisons between biological and psychological fields that will indeed do us great harm. Their response: "... we are simply being realistic." (McCloskey & Egeth, i983b).13

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13 Tangentially, it is worth reemphasizing that a battle about the value of empirical data is by no means unique to the eyewitness area. Recently a psychological battle about a different topic was waged in
One means of alleviating concerns about the battle of the experts could be through the use of court-appointed experts. This suggestion was made by Deffenbacher (1984) and only partially endorsed by Egeth and McCloskey (1984). They felt it would reduce the chances that a psychologist would be perceived as a “gun for hire” but that the major problems with the expert testimony would remain.

My debate with McCloskey and Egeth reflects a strong difference of philosophy. They seem to think that the data that we collect must be more perfect or more complete before we should feel comfortable discussing them. I, on the other hand, believe that we need not wait for perfection, especially since we are likely never to achieve it. Where one person draws his or her criterion regarding how much knowledge we should have before we tell others about it is simply a matter of personal values. And personally, I do not believe that we should withhold knowledge simply because we are not 100% sure that it is right. McCloskey and Egeth subtitled their article “What can a psychologist tell a jury?” Their implicit answer was “not much.” However, in the last sentence of their 1984 reply, they noted that they “would like nothing better than to be able to rewrite that article in 10 years with the answer being ‘a lot’ ” (Egeth & McCloskey, 1984, p. 1069).

Unfortunately, participants in the legal system do not have ten years to wait. The California Supreme Court made this point quite well in the McDonald decision (1984). The Court noted that academic authors frequently claim “additional research is needed.” But, neither citizens nor appellate judges have the luxury of waiting for colleagues in the sciences to unanimously agree that on a particular issue no more research is necessary. “Given the nature of the scientific enterprise, that day may never come.” (p. 370).

That citizens do not have the luxury of waiting is made abundantly clear in the case of Steve Titus, who was wrongfully convicted in 1981 of raping a 17-

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a British courtroom (Tunstall, Gudjonsson, Eysenck, & Haward, 1982; Heim, 1982). The case concerned the creation of a bogus bank that was used to conduct fraudulent financial transactions. One of the defendants was a director of the bank who claimed he had been deceived by his codefendants as to the true nature of the bank’s activities. He acted only on their instructions. Several psychologists, based upon a battery of tests, testified that X’s intelligence and literacy were abnormally low, supporting the defense theory that X could not have played a significant role in planning or executing the fraud. The codefendant called a different expert, Dr. Heim, who observed X in the witness box over a period of nine days. She said from this she could see that his intelligence was average. X and his codefendant were found guilty.

The Bulletin of the British Psychological Society published the views of these opposing psychologists. The group which had given the tests was deeply offended, feeling that Dr. Heim’s testimony led to a miscarriage of justice:

“We consider that Dr. Heim acted in such a way as to reduce the credibility of the profession by claiming in this instance to be able to make a more valid estimate of intelligence on the basis of her own observation than the estimate which had been made on the basis of reputable psychological tests properly administered by clinicians of considerable experience” (Tunstall et al., p. 331).

Dr. Heim insisted that she never declared X to be of average intelligence but only “in order to fake poor (performance) successfully, a subject must have at least average intelligence.” Her opposition rather angrily replied that “Dr. Heim does not recall her own evidence. She was asked could she estimate X’s intelligence and answered that she could . . . Average?” (p. 333). Dr. Heim’s final reply was the attribution to her attackers of indignation to the fact that their side lost the case.
year-old woman on a secluded road near the airport. The victim had positively identified Titus. Titus did not have expert testimony in his trial, and the jury believed the witness. While awaiting sentencing, Titus battled to clear his name, and eventually with the help of Seattle Times reporter Paul Henderson, Titus was able to achieve the rare victory of having his conviction overturned. Henderson received a Pulitzer Prize for his work, and when he received that prize of all prizes, he called it “a fairy tale ending to the Titus story” (Provenza, 1982). But the Titus story turns out to have had only a fairy-tale middle, not a fairy-tale ending. At the age of 35, Steve Titus dropped dead of a heart attack. Thoughts of Steve Titus today bring to my mind a few of the words borrowed from President Reagan’s moving speech of May 5, 1985 at the site of the Bergen-Belsen concentration camp in West Germany: There he lies, “never to hope, never to pray, never to love, never to heal, never to laugh, never to cry.” (Shearer, 1985). Steve Titus did not have ten years to wait.

Toward a Resolution

Given the amount of growing concern about what psychologists should and should not do in the courtroom, as well as the paucity of standards governing such activity, Blau (1984) called for some informal guidelines. Blau advised his fellow psychologists to follow the principles and standards for scientific and professional conduct promulgated by the American Psychological Association (Ethical Principles of Psychologists, 1981). The preamble of the Ethical Principles alludes to some difficulties that we might face in a court setting: “Psychologists respect the dignity and worth of the individual and strive for the preservation and protection of fundamental human rights. They are committed to increasing knowledge of human behavior and of people’s understanding of themselves and others and to the utilization of such knowledge for the promotion of human welfare. While pursuing these objectives, they make every effort to protect the welfare of those who seek their services” (p. 633).

Unfortunately, as Fersch (1980) has also noted, our Ethical Principles do not go far toward resolving the troubling issues that psychologists might face when they find themselves in court. And it is easy to see why. Foremost among the difficulties is the question of who the client is (Monahan, 1980). If psychologists are to protect “fundamental human rights,” whose rights are we to protect? The rights of the defendant in a criminal case to present the strongest possible defense, or the rights of citizens to see the guilty convicted of crimes that they have committed. If we are committed to the “promotion of human welfare,” whose welfare? If psychologists must “make every effort to protect the welfare of those we seek their services,” does this imply a duty to the defendant who has hired the psychologist to help in the advocacy role? Fersch (1980) has stated rather explicitly that when a defendant has hired a psychologist to point out the unreliability of eyewitness identification (or to help pick a jury or offer some other service), the psychologist “has but one client—the defendant—and owes responsibility solely to him or her” (1980, p. 54). But taking into account the ethical principles, how far should the psychologist go in satisfying this responsibility? In short, the Eth-
ical Principles, while usually useful concerning the matter of responsibility to clients seen in a clinical setting, provide little help to the expert in court. Thus we need to turn elsewhere to determine ways to "put the expert in expert witness," to borrow a phrase from Carson (1984).

First we should recognize that the admission of expert testimony is not our decision to make. It is the Courts that will decide whether to admit or exclude the testimony. Courts have long accepted the proposition that the testimony of one witness can have merit even if it is disputed by the testimony of another. Moreover, the Courts have the power to choose among the many subjects about which an expert might testify, and to control the scope of direct examination (Doyle, 1984). The Court can limit the expert testimony and instruct the jury on the use of expert testimony. In fact, the legal system is better suited to modulating evidence once it is offered than to dredging it up in the first place. Put another way, the mechanism for gathering information is not as well developed as is the mechanism for controlling information.

Would a single approach, whether liberal or restrictive, ameliorate the problem of what to do about expert testimony? Some scholars feel that a uniform approach to the problem of prejudice in the case of all scientific evidence has many attractions, but these attractions are outweighed by potential problems (Doyle, 1984). A uniform assumption that the potential prejudicial properties of all scientific evidence are alike will impede effective decision making. A rigorous ad hoc analysis of each particular offer of proof can enhance accurate fact finding. Perhaps the same should be said here. A uniform assumption that there are problems with all forms of expert testimony on eyewitness reliability, one could legitimately argue, should be said in favor of the practice of rigorous ad hoc scrutiny of each particular situation.

Who should resolve the dilemma posed here? As a party in the debate, I cannot decide. Nor can McCloskey and Egeth. When two people are engaged in a debate, one side cannot declare the winner. That is a job for an independent, neutral party.14

In the meantime, I suggest that we take a Darwinian approach. Let the fittest expert evolve and survive. Psychologists should simply do the best job they can within the canons of our profession. We should welcome a disagreement between experts because in the long run we will all benefit from it. The presence of opposing experts will lead to the curbing of certain kinds of behaviors. In the courtroom, those who misrepresent, exaggerate, or delete facts or studies will eventually be discovered. Their rejection by the legal system will in time predispose psychologists to testify in a more responsible manner.

We should not be put off by the adversarial confrontation; in fact we should

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14 Recently the National Academy of Sciences with funding from the National Science Foundation set up a committee to investigate the use of statistical information in court. The committee was composed of statisticians and other social scientists, and of lawyers and judges too. It may be time of psychologists to follow that constructive lead. Perhaps such a committee, after careful deliberation, could offer more guidance to forensic psychologists like Dr. Roberts who was perplexed about what he called the academic standoff.
be used to it. As researchers we already operate in an adversarial manner. Our enterprise involves claims and counterclaims, arguments and counterarguments, each side advanced by an advocate who attempts to make the best possible case for his or her position (Levine, 1974). We have referees and peer review to scrutinize our work. If published, our articles and books are subject to cross-examination in the form of attempts by others to replicate, critiques of our experiments, and attacks on our positions.

The problem with eyewitness experts in the courts is that their involvement has been rather one sided. There has not been a true confrontation or an even balance that will keep the system from collapse. We should encourage the "other side" to appear, urge them to present their best evidence, and force the triers to fact to look hard at the data. In the process, they will become more sophisticated consumers of social science, and our field will benefit because better research will emerge. In short, a marketplace of ideas in an adversarial system will benefit us all. This argument is nicely captured in the parable of the craftperson who made the very best shields in the land. When asked "Why do you, and you alone, make such excellent shields?" he said, "Because I once met a person who made such excellent swords."

Whatever the ultimate resolution of this dilemma, we would all do well to keep in mind that the impact of current developments cannot be viewed only in the short run. Rather, social science inputs often have long-run and far-reaching value that cannot or will not be known for many years to come.\textsuperscript{15,16}

\textsuperscript{15} Think back 20 years to the first reports of the work of Marvin Wolfgang, a criminologist at the University of Pennsylvania, on the relationship between race, rape and the death penalty (see Loh, 1984, for a detailed discussion). Wolfgang’s massive survey demonstrated unequivocally that during the two decades prior to 1965, black defendants convicted of rape were disproportionately frequently sentenced to death, especially if the victims were white. Wolfgang concluded that there had been a systematic, differential sentencing practice of imposing the death penalty on blacks, and said so in an assault on the legality of capital punishment (Maxwell v. Bishop, 1968).

The court rejected Wolfgang’s "statistical argument": "Whatever value that argument may have as an instrument of social concern, whatever suspicion it may arouse with respect to southern interracial rape trials as a group over a long period of time . . . we feel that the statistical argument does nothing to destroy the integrity of Maxwell’s trial."

The court further expressed doubt that for Maxwell "statistics will ever be his redemption." Seemingly, in the short run, Wolfgang’s work had little impact. But looking back from the perspective of 20 years, it seems clear that it has had a profound impact. Loh (1984) cites the example of a remark by a federal official belatedly admitting that racial discrimination did exist in the past, but suggesting that there is no evidence that it persists today. Wolfgang’s work may not have been Maxwell’s redemption, but if the federal official is correct, it may have saved subsequent black citizens who were convicted of rape and other crimes (Pruitt & Wilson, 1983) from being disproportionately sentenced to death.

\textsuperscript{16} There is a similar story to be told in the area of school desegregation. In the Detroit school case of 1974, a court challenge to anti-integration provisions of state law was brought. By the luck of the draw a judge was assigned who was unfavorably disposed towards integration. Much of the social evidence introduced before the judge was irrelevant for legal reasons, and thus were not mentioned in appellate opinions. Yet after a year and a half of listening to this unnecessary evidence, the judge developed a deep commitment to integration and ordered a massive desegregation plan (Loh, 1984). So much for the relevance of irrelevant testimony.
It is still early in the eyewitness domain. It is tempting, however, to speculate about how the current debate might make the world different, 5, 10, or 20 years from now. Perhaps the misconceptions about human perception and memory currently harbored by people in general and jurors in particular will be repaired. Perhaps new procedures will be developed and safeguards designed to minimize the chances that faulty testimony will be presented and wrongfully relied upon. Almost certainly social science involvement on different topics (e.g., confession evidence, Kassin & Wrightsman, 1985) will analogize to this one, as we have analogized here to other topics that the courts have had to grapple with. Should we have expert testimony on the subject of confessions when a confession is critical in the case? Should the courts allow such testimony? ever? under certain factual situations? The issue are the same.

For the moment, I feel gratified that this debate has brought us as far as it has in raising consciousness about eyewitness testimony. The world today is very different than it was 200 years ago when an influential scholar, T. Reid (1785, 1969), in "Essays on the intellectual powers of man," bemoaned any attack on the ability of witnesses:

"... and if a skeptical counsel should plead against the testimony of the witnesses, that they had no other evidence for what they declared than the testimony of their eyes and ears, and that we ought not to put so much faith in our senses as to deprive men of life or fortune upon their testimony, surely no upright judge would admit a plea of this kind. I believe no counsel, however skeptical, ever dared to offer such an argument; and, if it were offered, it would be rejected with disdain" (1785, Essay 2, Chapter 5).

In 200 years we have come quite a way.

REFERENCES


There is a lesson to be learned from this experience about the role of social science research in changing law and society. The current debate cannot be addressed fully by simply taking a cross-sectional look at what is happening today. Rather, we must look at what happens over time.


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*State v. Reed*, 226 Sup. Court Kansas, 519 (1979).


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