Forensic Science Evidence and Judicial Bias in Criminal Cases

By Judge Donald E. Shelton

The use of forensic evidence in criminal cases in the United States is well over a century old. The case law developed with the application of the *Frye* doctrine, which required only that such testimony be "generally accepted." As more courts admitted testimony from any particular forensic science field, other courts used those decisions to bolster the idea that the field was "generally accepted." There was rarely any challenge to the scientific reliability of such evidence, especially if proffered by prosecutors.

The routine acceptance of forensic expert testimony for the prosecution expanded beyond areas of physical science or physical examination. Psychologists, sociologists, social workers, and even counselors or police officers were allowed to give their opinion that the testimony, or other conduct, of a complainant was consistent with a person who had been sexually abused in the manner similar to that described by the complainant. Nevertheless, most courts did not allow social scientists proffered by the defense to testify to the unreliability of eyewitness testimony.

The last 20 years have ushered in an era of doubt about the validity of forensic testimony. DNA has become the "gold standard" and DNA typing is now the standard against which many other forensic individualization techniques are judged. While forensic DNA evidence has proven to be a dramatic improvement, one unanticipated effect of these new scientific analyses has been to cast doubt on some traditional types of forensic evidence that trial judges have long treated as reliable and generally accepted. Post-conviction DNA testing has revealed many wrongful convictions based on seemingly reliable non-DNA forensic evidence. These exonerations are strong indications that the routine admission of non-DNA expert testimony in criminal cases may be erroneous. Nevertheless, for the most part, that routine admission of prosecution evidence continues. Why?

The Trial Judge as "Gatekeeper"

All states regard the trial judge as the gatekeeper responsible for determining which forms of scientific forensic evidence are appropriate for consideration by the jury. Some states still use the "general acceptance" test established in *Frye v. United States*.[1] The federal courts and many states, however, use a revised admissibility standard first announced by the U.S. Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*[2] *Daubert* and two subsequent Supreme Court amplifications, *General Electric Co. v. Joiner*[3] and *Kumho Tire Co. v. Carmichael*,[4] commonly referred to as the *Daubert* trilogy, directed trial judges to examine the principles and methodology of proffered scientific evidence, rather than focus only on conclusions as to what was generally accepted.[5]

The Court held that when faced with a proffer of expert scientific testimony under Rule 702, the trial judge must preliminarily assess the scientific validity of the testimony's underlying reasoning or methodology and determine whether it can be properly applied to the facts at issue.[6] The Court suggested that the criteria for making that decision included whether the proffered theory has been tested, whether it "has been subjected to peer review," its error rate, the existence of standards controlling its operation, and whether it has acceptance within the relevant scientific community.[7] The Court made it clear that the focus is on the principles and methodology of the scientific proposition and not on the proffered conclusions.[8]

In *Joiner*, the Court clearly indicated that the trial judge gatekeeper could totally reject and disallow an expert's opinion upon finding that the opinion is not "reliably" based on an accepted methodology. In *Kumho*, the Court again indicated that significant deference was to be given to trial judges in the exercise of their gatekeeping role, and it extended the *Daubert* analysis to evidence proffered by all experts, not just scientists.[9] Second, the Court reinforced *Joiner's* holding that trial judges must examine whether an expert's conclusions are sufficiently reliable, even if based on a proper and accepted methodology.[10]

The three cases in the *Daubert* trilogy were all civil cases in which the plaintiff was offering scientific evidence that the corporate defendant wanted excluded. Nevertheless, the *Daubert* trilogy significantly changed the legal landscape for the admission of forensic science evidence in criminal cases, as well as civil, in two important ways. First, the cases changed the basic question of admissibility from "general acceptance" to scientific validity, requiring empirically sound theoretical foundations appropriately applied to the particular case. In addition to general acceptance, the new criteria required proof of testability, error rate, and peer review. Second, the Court firmly established the trial judge as the "gatekeeper" who must make the scientific reliability and applicability assessment of the proffered evidence before it may be presented to the jury. Even in some state versions of *Frye*, courts have begun to address the fundamental questions posed by a *Daubert* analysis.

Exonerations are strong indications that routine admission of non-DNA expert testimony may be erroneous.

Scientific Evidence in Civil Cases: Defendants Win

After the Supreme Court remanded the *Daubert* case to the Ninth Circuit, the latter court again declined to allow the plaintiff's evidence, even without an additional evidentiary hearing, and added a significant amplification to the *Daubert* requirement for peer review. Writing for a panel of the Ninth Circuit, Judge Kozinski stated:

> One very significant fact to be considered is whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying. That an expert testifies for money does not necessarily cast doubt on the reliability of his testimony, as few experts appear in court merely as an eleemosynary gesture. But in determining whether proposed expert testimony amounts to good science, we may not ignore the fact that a scientist's normal workplace is the lab or the field, not the courtroom or the lawyer's office. . . .
>
> If the proffered expert testimony is not based on independent research, the party proffering it must come forward with other objective, verifiable evidence that the testimony is based on "scientifically valid principles." One means of showing this is by proof that the research and analysis supporting the proffered conclusions have been subjected to normal scientific scrutiny through peer review and publication.[11]

He again affirmed the trial court's summary judgment for the pharmaceutical company. The Supreme Court refused to hear an appeal of that ruling. In spite of the Supreme Court's earlier decision, the result was that the plaintiffs were never allowed to have a jury decide whether their birth defects were caused by Bendectin.

The irony of *Daubert* is that what was first thought to be an avenue for civil plaintiffs to admit empirically based scientific evidence quickly became a vehicle for civil defendants to get judges to exclude such evidence. The results in civil cases were almost immediately apparent. There was a deluge of challenges to expert testimony in civil cases and empirical studies show that most of the challenges

resulted in summary dispositions in favor of the civil defendants.[12] Compared to this deluge, the impact in criminal cases amounted to a barely perceptible trickle.

Scientific Evidence in Criminal Cases: Defendants Lose

If Judge Kozinski's rationale in the *Daubert* remand were taken seriously in the criminal case context, prosecutors would face a difficult task in getting much of their forensic scientific evidence before a jury. In the criminal forensic science field, most of the testimony has no origin or basis outside of the context of criminal investigation and litigation. It was developed strictly for use by the government to aid in the prosecution of alleged criminal activity in court.

Judge Kozinski seems to have been aware of the obvious problems that his added criterion would pose for prosecutors in criminal cases. He added a footnote:

> There are, of course, exceptions. Fingerprint analysis, voice recognition, DNA fingerprinting and a variety of other scientific endeavors closely tied to law enforcement may indeed have the courtroom as a principal theatre of operations. *See, e.g.*, United States v. Chischilly, 30 F.3d 1144, 1153 (9th Cir. 1994) (admitting expert testimony concerning a DNA match as proof the defendant committed sexual abuse and murder). As to such disciplines, the fact that the expert has developed an expertise principally for purposes of litigation will obviously not be a substantial consideration.[13]

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The reference to DNA analysis is not appropriate, however. DNA, the model for scientific evidence admissibility that Judge Kozinski and others presumably prefer, was developed entirely outside the courtroom context and rests upon a foundation of empirical data that forms a database for identification testimony that is probabilistic to an almost astronomical degree of certainty. Only in the cloisters of the law would one think that DNA has "the courtroom as a principal theater of operations."

More disturbing, however, is Judge Kozinski's sweeping suggestion that expert testimony in criminal cases is somehow "obviously" so different that the potential bias of the expert is not the "substantial consideration" he thought appropriate in civil cases. If there was any difference to be acknowledged, expert testimony that could deprive a person of life or liberty should be more, not less, rigorous than testimony used to protect the interests of civil defendants. The danger that expert testimony developed principally to aid one side in litigation will be biased and unreliable is an important factor in criminal cases. Precisely because most scientific evidence in criminal cases arises out of "scientific endeavors closely tied to law enforcement," the danger of biased testimony is very high.[14]

Regardless of the logic, judges have not regularly used *Daubert* to examine the admissibility of expert testimony for the prosecution in criminal cases. Scholarly studies have substantiated this pro-prosecution pattern.[15] For example, Professor Risinger's 2000 study found that while the rate of challenges to scientific evidence increased markedly after *Daubert*, most of that increase was in civil cases by defendants, and, as previously noted, a large proportion of those challenges succeeded.[16] The opposite was true in criminal cases. The Risinger study found that criminal defense *Daubert* challenges to government evidence were successful less than 10 percent of the time in federal trial courts and less than 25 percent of the time in state trial courts.[17] And in a study of appellate decisions before and after *Daubert*, Jennifer Groscup and her group concluded that "the basic rates of admission at the trial and the appellate court levels did not change significantly after *Daubert* in criminal cases on appeal" and that at both trial and appellate levels

> experts proffered by the prosecution were more likely to be admitted than experts proffered by defendants. At the trial court level, prosecution experts were admitted 95.8% . . . of the time, and defendant-appellant experts were admitted only 7.8% . . . of the total number of times they were offered. This pattern was slightly less pronounced at the appellate level, with prosecution experts admitted 85.1%. . . of the time and defense experts admitted 18.8% . . . of the total number of times they were offered.[18]

In other words, even though there are serious questions about the scientific validity of many non-DNA forms of forensic science evidence, criminal court judges, at both the trial and appellate levels, continue to admit virtually all prosecution-proffered expert testimony.

DNA Exonerations and the NAS Report

DNA typing in closed cases has led to the exoneration of persons who were erroneously convicted, often by the use of other supposedly reliable forms of forensic science evidence. A recent study was conducted of 137 of the persons who have been exonerated by later DNA testing.

> In conducting a review of these 137 exonerees' trial transcripts, this study found invalid forensic science

testimony was not just common but prevalent. This study found that 82 cases—60% of the 137 in the study set—involved invalid forensic science testimony. . . .

The testimony at these 137 exonerees' criminal trials chiefly involved serological analysis (100 cases) and microscopic hair comparison (65), because most of these cases involved sexual assaults for which such evidence was commonly available at the time. Indeed, in many cases, where both hair and semen were recovered from the crime scene, both disciplines were utilized. Some cases also involved testimony concerning: fingerprint comparison (13 cases), DNA analysis (11), forensic geology (soil comparison) (6), forensic odontology (bite mark comparison) (6), shoe print comparison (4), fiber comparison (2), voice comparison (1), and fingernail comparison (1).

In the two main categories of evidence present in the study set, serology and hair comparison testimony, this study found the following: Of the 100 cases involving serology in which transcripts were located, 57 cases, or 57%, had invalid forensic science testimony. Of the 65 cases involving microscopic hair comparison in which transcripts were located, 25 cases, or 38%, had invalid forensic science testimony.[19]

The apparent association of these invalid convictions with many forms of routinely admitted forensic science evidence are clearly a factor in causing the public, defense lawyers, and the courts to doubt or at least reexamine the scientific validity of such evidence.

The DNA exonerations, at least in part, led to the decision by Congress to commission a study by the National Research Council of the National Academy of Sciences (NAS). NAS's findings were relayed to Congress in 2009 in a report of over 300 pages.[20]

The summary of the NAS Report includes this caustic analysis of the use of forensic science in criminal cases:

> The bottom line is simple: In a number of forensic science disciplines, forensic science professionals have yet to establish either the validity of their approach or the accuracy of their conclusions, and the courts have been utterly ineffective in addressing this problem. For a variety of reasons—including the rules governing the admissibility of forensic evidence, the applicable standards governing appellate review of trial court decisions, the limitations of the adversary process, and the common lack of scientific expertise among judges and lawyers who must try to comprehend and evaluate forensic evidence—the legal system is ill-equipped to correct the problems of the forensic science community.[21]

The validity of scientific evidence is important, not only for defendants, but for victims and society too.

The specific analyses of each of the separate areas of forensic evidence were damning. The Council committee researched the alleged scientific basis for each specialty, the training requirements for persons holding themselves out as experts in that field, and the nature of the substantive testimony proffered in court by those persons. With the exception of nuclear DNA typing and testing, in most areas of forensic science the NAS Report found a distinct failure to provide the type of criteria mandated by a *Daubert* analysis.

The Council made 13 recommendations for improving the system, beginning with the creation of a new National Institute of Forensic Science to oversee improvements in the system.[22] Congress has not yet acted on the recommendations, but the findings in the NAS Report have quickly reverberated throughout the forensic science community and parts of the legal community. The response of the forensic science community has been mixed. Formally, the scientific organizations have supported the general recommendations of the NAS Report, but their members have continued to believe that future scientific research will validate most of the bases for forensic science disciplines.[23]

The legal community has been, perhaps predictably, slower and more muted in its response to the NAS Report. Appellate decisions take time to materialize and there is no way to measure whether *Daubert* motions have increased in the short time since the NAS Report. There are few reported trial court rulings on the issue. And at least one or two of them indicate that the courts may not give the NAS Report a great deal of weight in making an admissibility threshold determination,[24] but that they at least may consider it in limiting government expert testimony.[25]

This is unfortunate because the validity of scientific evidence is important, not only for defendants, but for victims and society too. As the NAS Report concluded:

> [B]ecause accused parties in criminal cases are convicted on the basis of testimony from forensic science experts, much depends upon whether the evidence offered is reliable. Furthermore, in addition to protecting innocent persons from being convicted of crimes that they did not commit, we are also seeking to protect society from persons who have committed criminal acts. Law enforcement officials and the members of society they serve need to be assured that forensic techniques are *reliable*. Therefore,

we must limit the risk of having the reliability of certain forensic science methodologies condoned by the courts before the techniques have been properly studied and their accuracy verified. "[T]here is no evident reason why ['rigorous, systematic'] research would be infeasible." However, some courts appear to be loath to insist on such research as a condition of admitting forensic science evidence in criminal cases, perhaps because to do so would likely "demand more by way of validation than the disciplines can presently offer."[26]

Pro-prosecution Bias

What accounts for the current relative lack of defense challenges to government expert testimony and the overwhelming court rejection of those challenges that are made? As to the lack of challenges, some have suggested that it is "poorly funded, unskilled counsel" and an "inadequate pool of experts" available to the defense, especially when compared to resources available to civil plaintiffs.[27] As to the overwhelming judicial rejection of criminal defense challenges that are made, there are several possibilities.

One is that the government's science in criminal cases is simply of higher quality

Rules and Tests of Scientific Evidence Admissibility Applied by States

State	State Rule	Admissibility Test
Alabama	Ala. R. Evid. 702	*Daubert* for DNA; *Frye* for all else
Alaska	Alaska R. Evid. 702	*Daubert*
Arizona	Ariz. R. Evid. 702	*Frye*
Arkansas	Ark. R. Evid. 702	*Daubert*
California	Cal. Evid. Code § 720	*Kelly/Frye*
Colorado	Colo. R. Evid. 702	*Daubert*
Connecticut	Conn. Code Evid. § 7-2	*Daubert*
D.C.	N/A	*Frye*
Delaware	Del. Uniform R. Evid. 702	*Daubert*
Florida	Fla. Stat. § 90.702	*Frye*
Georgia	Ga. Code Ann. § 24-9-67.1	*Daubert*
Hawaii	Haw. Rev. Stat. Ann. § 702	Some *Daubert* factors
Idaho	Idaho R. Evid. 702	*Daubert*
Illinois	No substantial equivalent to Fed. R. Evid. 702	*Frye*
Indiana	Ind. R. Evid. 702	*Daubert*
Iowa	Iowa R. Evid. 702	*Daubert*
Kansas	Kan. Stat. Ann. § 60-456	*Frye*
Kentucky	Ky. R. Evid. 702	*Daubert*
Louisiana	La. Code Evid. Ann. art. 702	*Daubert*
Maine	Me. R. Evid. 702	Some *Daubert* factors
Maryland	Md. R. Evid. 5-702	*Frye*
Massachusetts	N/A	*Daubert*
Michigan	Mich. R. Evid. 702	*Daubert*
Minnesota	Minn. R. Evid. 702	*Frye/Mack*
Mississippi	Miss. R. Evid. 702	*Daubert*

than that being offered by civil plaintiffs. But the NAS Report's finding that many non-DNA forms of expert testimony used by prosecutors are of questionable validity should dispel that notion. Moreover, judicial decisions for the most part do not indicate that the judges, trial or appellate, weighed the scientific validity of the proffered evidence in any meaningful way.[28] Rather, most of the decisions simply rationalized admissibility based on the prior admission of such evidence by other judges. In other words, the typical analysis was one of *stare decisis*, rather than the scientific inquiry required by *Daubert*.

More likely is the suggestion that there is a systemic pro-prosecution bias on the part of judges and that such a bias is reflected in admissibility decisions, regardless of the standard of admissibility. As one scholar puts it, "as a general proposition, judges disfavor civil plaintiffs and criminal defendants and, are more likely to rule against them than against their opposites even when presenting equivalent evidence or arguments."[29]

Systemic pro-prosecution bias is a function of fairly obvious psychological concepts. Dean Chris Guthrie, relying on significant empirical studies of judicial attitudes and actions, described judicial bias as a reflection of an "attitudinal blinder." As he notes,

From Andrew B. Flake, Eric R. Harlan, & James A. King, *Rules of Evidence and Tests Applied by States, Summary Table,* from the *Fifty-State Survey of the Applicability of* Daubert, ABA Section of Litigation, available online at http://www.abanet.org/litigation/committees/trialevidence/daubert-frye-survey.html.

Missouri	Mo. Rev. Stat. § 490.065(1)	Unique test for civil; *Frye* for criminal
Montana	Mont. R. Evid. 702	*Daubert*
Nebraska	Neb. Rev. Stat. § 27-702	*Daubert*
Nevada	Nev. Rev. Stat. Ann. § 50.275	*Daubert* "may provide persuasive authority"
New Hampshire	N.H. R. Evid. 702	*Daubert* (although *Frye* has been applied to DNA evidence)
New Jersey	N.J. R. Evid. 702	*Daubert* for toxic tort cases, certain medical causation cases; *Frye* for other civil cases; *Frye* for criminal
New Mexico	N.M. R. Evid. 11-702	*Daubert*
New York	N.Y. C.P.L.R. 4515	*Frye*
North Carolina	N.C. Gen. Stat. § 8C-1	Some *Daubert* factors
North Dakota	N.D. R. Evid. 702	*Frye*
Ohio	Ohio R. Evid. 702	*Daubert*
Oklahoma	Okla. Stat. tit. 12, § 2702	*Daubert*
Oregon	Or. R. Evid. 40.410	Applies a multifactor test that includes the *Daubert* factors
Pennsylvania	Penn. R. Evid. 702	*Frye*
Rhode Island	R.I. R. Evid. 702	*Daubert*
South Carolina	S.C. R. Evid. 702	*Daubert* factors
South Dakota	S.D. R. Evid. 702 (S.D. Codified Laws § 19-15-2)	*Daubert*
Tennessee	Tenn. R. Evid. 702	*Daubert* factors
Texas	Tex. R. Evid. 702	Some *Daubert* factors
Utah	Utah R. Evid. 702	Unique test
Vermont	Vt. R. Evid. 702	*Daubert*
Virginia	Va. Code Ann. § 8.02-401.1	Unique test
Washington	Wash. R. Evid. 702	*Frye*
West Virginia	W. Va. R. Evid. 702	*Daubert*
Wisconsin	Wis. Stat. Ann. § 907.02	Unique test
Wyoming	Wyo. R. Evid. 702	*Daubert*

> judges come to the bench with political views . . . [that] can predispose them to rule in ways that are consistent with those opinions or attitudes. . . . The evidence [from empirical studies] suggests that attitudinal blinders are an issue not only at the highest court in the land but also in these lower courts.[30]

These "attitudinal blinders" are especially prevalent in criminal cases and especially in the state courts where most criminal cases are tried. Most state court judges, as Professor Rodney Uphoff put it, ". . . are answerable to a tough-on-crime electorate and are often reluctant, therefore, to make risky political decisions upholding the constitutional rights of criminal defendants."[31]

> Most judges, especially those with prosecutorial experience, presume that most defendants are, in fact, guilty, even though some are, in fact, innocent. This presumption of guilt, pro-prosecution perspective not only affects the manner in which many judges rule on motions, evaluate witnesses, and exercise their discretion, but it also adversely affects the willingness of many judges to police law enforcement agents and prosecutors. Judges tolerate sloppy police work because they do not want to be viewed as micro-managing the police. Judicial reluctance to let the guilty go free has meant a decreased use of the exclusionary rule. Similarly, courts are hesitant to dismiss cases because of Brady violations or take other steps to reign in prosecutorial misconduct. Finally, even when courts find error, too many errors are deemed harmless. The expanded use of harmless error not only allows questionable verdicts to stand, it does little to discourage misconduct and sloppy practices in the administration of justice.[32]

Consequently, the current legal state of forensic science evidence in criminal cases is somewhat schizophrenic. While many scientists and scholars, and even a congressionally mandated national study, seriously question whether there is validity to non-DNA forensic evidence, trial judges simply continue to admit such evidence and appellate judges continue to affirm those decisions. ■

Endnotes

1. 293 F. 1013 (D.C. Cir. 1923). Despite *Frye*'s limitations and the subsequent federal cases, it remains the standard by which science is evaluated for courtroom use in several states. *See* Joseph R. Meaney, *From* Frye *to* Daubert*: Is a Pattern Unfolding?* 35 Jurimetrics J. 191, 193–94 (1995).
2. 509 U.S. 579 (1993). The standards governing expert testimony in the various states are described in Jane Campbell Moriarty, *Psychological and Scientific Evidence in Criminal Trials* (2009). *See generally* Kenneth R. Foster & Peter W. Huber, *Judging Science: Scientific Knowledge and the Federal Courts* (1999).
3. 522 U.S. 136 (1997).
4. 526 U.S. 137 (1999).
5. *Daubert*, 509 U.S. at 589–92.
6. *Id.* at 592–93.
7. *Id.* at 593–94.
8. *Id.* at 595.
9. Gen. Elec. Co. v. Joiner, 522 U.S. 136, 141 (1997).
10. *Id.* at 152–53.
11. Daubert v. Merrell Dow Pharm., Inc., 43 F.3d 1311, 1317–18 (9th Cir. 1995). And see the discussion of this position in the context of criminal cases in Peter J. Neufeld, *The (Near) Irrelevance of* Daubert *to Criminal Justice and Some Suggestions for Reform*, 95 Am. J. Pub. Health 107 (2005), *available at* http://www.defendingscience.org/upload/NeufeldDAUBERT.pdf (last visited Jan. 9, 2009).
12. Lloyd Dixon & Brian Gill, Rand Corp., Changes in the Standards for Admitting Expert Evidence in Federal Civil Cases Since the *Daubert* Decision (2001); Carol Krafka et al., *Judge and Attorney Experiences, Practices, and Concerns Regarding Expert Testimony in Federal Civil Trials*, 8 Psychol., Pub. Pol'y & Law 309 (2002), excerpt available at http://files.ali-aba.org/thumbs/datastorage/skoobesruoc/pdf/CJ081-CH05_thumb.pdf.
13. *Daubert*, 43 F.3d at 1313 n.5.
14. Neufeld, *supra* note 11, at 107; Keith A. Findley, *Innocents at Risk: Adversary Imbalance, Forensic Science, and the Search for Truth*, 38 Seton Hall L. Rev. 893, 929–50 (2008), *available at* http://ssrn.com/abstract=1144886.
15. D. Michael Risinger, *Navigating Expert Reliability: Are Criminal Standards of Certainty Being Left on the Dock?* 64 Alb. L. Rev. 99 (2000); Jennifer L. Groscup et al., *The Effects of* Daubert *on the Admissibility of Expert Testimony in State and Federal Criminal Cases*, 8 Psychol. Pub. Pol'y & L. 339 (2002); Margaret A. Berger, *Expert Testimony in Criminal Proceedings: Questions* Daubert *Does Not Answer*, 33 Seton Hall L. Rev. 1125 (2003); Findlay, *supra* note 14; Neufeld, *supra* note 11.
16. Risinger, *supra* note 15.
17. *See* Modern Scientific Evidence: The Law and Science of Expert Testimony, David L. Faigman, Michael J. Saks, Joseph Sanders & Edward K. Cheng eds., 2009–10 edition.
18. Groscup, *supra* note 15, at 345–46.
19. Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 Va. L. Rev. 1, 14–15 (2009).
20. Nat'l Research Council National Academy of Sciences, Strengthening Forensic Science in the United States: A Path Forward [hereinafter the NAS Report], Executive Summary at S-1 to S-24 (2009).
21. *Id.* at 53.
22. *Id.* at 19–33.
23. *See* American Academy of Forensic Sciences, *AAFS Position Statement in Response to the NAS Report*, 39 AAFS Academy News 4 (Nov. 2009), *available at* http://www.aafs.org/pdf/AAFS_Position_Statement_for_Press_Distribution_090409.pdf.
24. *See* U.S. v. Rose, No. CCB-08-0149 (D. Md. Dec. 8, 2009), *available at* http://www.mdd.uscourts.gov/Opinions/Opinions/Brian%20Rose%20Mem-FINAL.pdf; U. S. v. Prokupek, Case No. 8:08CR183 (D. Neb., Aug. 14, 2009).
25. *See* U.S. v. Mouzone, Criminal No. WDQ-08-086, (D. Md., Oct. 29, 2009).
26. NAS Report, *supra* note 20, at 109 (quoting J. Griffin & D.J. LaMagna, Daubert *Challenges to Forensic Evidence: Ballistics Next on the Firing Line*, The Champion 21 (Sept.–Oct. 2002), and citing U.S. v. Crisp, 324 F.3d 261 (4th Cir. 2003)).
27. Neufeld, *supra* note 11, at 110.
28. *See* Faigman et al., *supra* note 17, at § 1:35.
29. *Id.* § 1:35, p. 112.
30. Chris Guthrie, *Misjudging*, 7 Nev. L. J. 420, 438–40 (2007) (citing *The Hearing of Samuel A. Alito, Jr.'s Nomination to the Supreme Court, Hearing Before the S. Judiciary Comm.*, 109th Cong. 56 (2006).
31. Rodney J. Uphoff, *On Misjudging and Its Implications for Criminal Defendants, Their Lawyers and the Criminal Justice System*, 7 Nev. L. J. 521, 523 (2007); and *see* Fredric N. Tulsky, *How Judges Favor the Prosecution*, Mercury News.com (Feb. 12, 2007), *available at* http://www.mercury news.com/search/ci_5128172?IADID=Search-www.mercurynews.com-www.mercurynews.com (last visited Jan. 9, 2009) (claiming that "in a fourth of all jury cases, a review finds, members of the bench apply their tremendous powers in ways that hurt defendants").
32. Uphoff, *supra* note 31 at 543–44.