The Structure of Expertise in Criminal Cases

Christopher Slobogin

This Essay is built around three propositions about expert testimony and criminal cases. First, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*\(^1\) and its progeny, *General Electric Co. v. Joiner*,\(^2\) and *Kumho Tire Co. v. Carmichael*,\(^3\) push the criminal justice system away from the notion that knowledge is socially constructed and toward a positivist epistemology that assumes we can know things objectively. Second, in the long run, that development will be good for prosecutors and bad for criminal defendants. Third, the consequence of that differential impact will be a criminal justice system that is not only less fair, but also less reliable. In the course of developing these propositions, this Essay will have occasion to comment on several observations made by Denbeaux and Risinger,\(^4\) the principal paper in this cluster of papers on *Daubert*, as well as on several other papers presented at this Symposium.

THE POSITIVIST PUSH

There is no doubt that, in theory, the *Daubert* trilogy moves the admissibility analysis in a positivist direction. The trilogy establishes reliability as the linchpin of admissibility analysis. In contrast, the best-known pre-*Daubert* approaches to expert admissibility are the relevance test, which admits expert testimony unless its probative value is substantially outweighed by its potential for confusing or overawing the jury, and the general acceptance test, which looks at the extent to which the basis of the testimony has found favor in the

---

\(^1\) 509 U.S. 579 (1993).


\(^3\) 526 U.S. 137 (1999).

relevant professional community.\(^5\) The *Daubert* trilogy mandates that testimony be subject to verification through the scientific method or some other transparent methodology,\(^6\) whereas the latter tests come close to relying solely on the *ipse dixit* of a single individual or group, so long as he, she, or it is well-credentialed.\(^7\)

As a result, the relevance and general acceptance tests are much more likely than the *Daubert* trilogy to give legal factfinders wide-ranging, "socially-constructed" information.\(^8\) Under the relevance test, virtually all expertise is admissible, and under the general acceptance test, all expertise that is not "novel" should get in. Under the reliability standard, on the other hand, only verifiable information is admissible. The first two tests are likely to admit any expert testimony the reliability test would let in, with the possible exception of testimony based on new, verifiable findings (which might not be admissible under *Frye* but would be under the trilogy). In contrast, the reliability test is likely to exclude a substantial amount of expert testimony that is admissible under the relevance and general acceptance tests.\(^9\) That means that, under the *Daubert* trilogy,

---


\(^7\) See Giannelli, supra note 5, at 155 (stating that under the relevancy test, "if the expert was qualified, the underlying technique used by that expert was also qualified"); Paul Giannelli, *The Admissibility of Novel Scientific Evidence: Frye v. United States, A Half-Century Later*, 80 COLUM. L. REV. 1197, 1207 (1980) ("The principal justification for the *Frye* test" is that it "'assures that those most qualified to assess the general validity of a scientific method will have the determinative voice.'") (quoting United States v. Addison, 498 F.2d 741, 743-44 (D.C. Cir. 1974)). Professor Giannelli also notes how the general acceptance test obscures inquiry into reliability and probative value issues. *Id.* at 1226-28.

\(^8\) Some commentators have argued that *Daubert* is more consistent with a social constructionist view of science than the *Frye* test. More specifically, they contend that while the general acceptance test (and therefore, implicitly, the relevance test) legitimizes "elite, authoritative opinions" as "the sole arbiters of specialized knowledge," *Daubert* and *Kumho Tire* take a "realist-constructivist view of science." Joseph Sanders et al., *Legal Perceptions of Science and Expert Knowledge*, 8 PSYCHOL., PUB. POL’Y & L. 139, 149-50 (2002). The latter view, Sanders and his colleagues state, recognizes that expertise is influenced by political, economic and other non-neutral sources, albeit in a manner that is "constrained by input from the empirical world." *Id.* at 150-51 (citing Stephen Cole, *Making Science: Between Nature and Society* x (1992)). All that may be true, but it does not directly address *Daubert’s* impact in court. In determining whether *Daubert* will make expertise more positivist in tone, the focus should be on what the legal factfinder is likely to hear, not on the source of the expert’s expertise. For reasons outlined in the text, a reliability test clearly excludes more expert testimony than the other two tests.

\(^9\) As Denbeaux and Risinger state, “at least until what we might call the run-up
legal factfinders will be exposed to much less “soft” science and much less speculation based on experience. In short, the reliability standard should make the epistemology of the courtroom decidedly more scientific, in the classic sense.

Of course, in criminal cases, the focus of this Essay, that prediction has not been entirely borne out. Courts in Daubert jurisdictions still admit scientifically weak expert testimony proffered by both the prosecution and the defense. As Professors Risinger and Denbeaux point out, suspect testimony from handwriting and fingerprint experts continues unabated in many jurisdictions, and other research indicates that the prosecution often benefits from soft testimony about subjects such as dangerousness and the behavior of child sex abuse victims. Defense experts may be somewhat more likely to be rejected post-Daubert, but many trial courts still routinely allow them to testify about syndromes and other unusual mental states that are only weakly supported by data.
At the same time, the clear trend is toward more exclusion. In his contribution to this Symposium, Paul Gianelli notes that the Daubert trilogy has triggered attacks, some of them successful, on handwriting evidence, hair comparisons, fingerprint examinations, firearms identification, bite marks, and intoxication testing. An empirical study of criminal cases that was concluded in 1998 found that, although there was only a marginally significant decline in the proportion of expert evidence admitted, judges were clearly scrutinizing such evidence more closely after Daubert. It is likely that momentum in this direction will increase, now that Kumho Tire has closed the “technical and specialized knowledge” loophole by applying the reliability standard to that type of expertise as well as to scientific testimony.

**DAUBERT’S DISADVANTAGES FOR THE DEFENSE**

Proponents of Daubert think that the trend toward screening is all to the good and would like to see it accelerated. I am much more ambivalent on this score, at least when considering criminal cases. To explain why, I first want to establish the second proposition mentioned above—that the move toward the scientific way of seeing the world is much better for prosecutors than for criminal defendants.

The preliminary reaction to this point is likely to be that it gets things backward. Denbeaux and Risinger amply illustrate that prosecutors stand to lose a significant amount of expert support if Daubert is applied rigorously to testimony about handwriting, fingerprints, and the like. Defense attorneys would also find many of their experts excluded or limited under a strict Daubert regime, but most might be willing to put up with that development if the prosecution were prevented from presenting suspect forensic evidence.

*Daubert has been excluded only in isolated cases, [and] overall Daubert has not resulted in changes in the admissibility of that kind of evidence."

---


17 526 U.S. at 150-51; cf. Lloyd Dixon & Brian Gill, *Changes in the Standards for Admitting Expert Evidence in Federal Civil Cases Since the Daubert Decision*, 8 Psychol., Pub. Pol’y & L. 251, 269, 277 (2002) (finding that post-Daubert, “judges have examined the reliability of expert evidence more closely and have found more evidence unreliable as a result” and that “Kumho appears to have confirmed a trend already under way in federal district courts to apply Daubert broadly rather than restrict it to hard science”).

18 Denbeaux & Risinger, supra note 4, at 60-74.
In the long run, however, the likelihood is high that criminal defendants will suffer much more than the state if Daubert is taken seriously. That is because prosecutors and defense attorneys need different types of experts to make their cases-in-chief. The prosecution uses experts primarily to support assertions about physical facts. It most often needs opinion evidence to prove identity, as in testimony that ties a fingerprint, a strand of hair, or a signature to the defendant, or a bullet to a particular gun. Occasionally, it also uses experts to prove that a physical act occurred, such as abuse, or will occur, as in dangerousness determinations.

In contrast, the defense’s affirmative case is most likely to involve claims about the defendant’s mental state at the time of the offense, such as insanity, lack of premeditation, extreme mental or emotional stress, or learned helplessness. While the prosecution sometimes bears the burden of proving mental states, the defense always bears the burden of production on these issues. That is because most factfinders assume, based on “common sense” notions that are often legally recognized, that criminal defendants are sane, intend their actions, and act in self-defense or under duress only when objective circumstances would force a reasonable person to do so. The prosecution only needs experts on mental state issues if and when the

---


20 See, e.g., Barefoot v. Estelle, 463 U.S. 880 (1983) (upholding, against constitutional challenges, the admissibility of psychiatric testimony on dangerousness in a capital sentencing proceeding).

21 In approximately one-third of the states the prosecution bears the burden of disproving insanity, with the rest requiring the defendant to prove insanity by a preponderance of the evidence or clear and convincing evidence. RALPH REISNER ET AL., LAW AND THE MENTAL HEALTH SYSTEM: CIVIL AND CRIMINAL ASPECTS 527-28 (3d ed. 1999). The prosecution often bears the burden of proving mens rea and disproving self-defense claims, but not always. WAYNE LAFAVE, CRIMINAL LAW 54-59 (3d. ed. 2000) (discussing this complicated area and concluding that, to a large extent, “it remains for each jurisdiction to decide how to allocate the burden of proof in criminal cases as to so-called affirmative defenses”).

22 LAFAVE, supra note 21, at 54 (“[T]here is uniformly held that the defendant is obliged to start matters off by putting in some evidence in support of his defense—e.g., evidence of his insanity, or of his acting in self-defense, or of one of the other affirmative defenses . . . .”).

23 Id. at 239-41 (stating that every jurisdiction recognizes a presumption of sanity and juries are allowed to draw an inference that people intend the consequences of their actions); id. at 375 (describing when “permissive inference” instructions regarding mental state are constitutional).
defense decides to use a mental health professional. Thus, it is up to the defense to put mental health experts into play.

This difference in the type of experts the prosecution and defense need for their prima facie cases becomes extremely significant in a strict Daubert regime. That is because assertions about physical facts are eminently more verifiable than assertions about past mental state. As Denbeaux and Risinger demonstrate, testing the hypothesis that a single fingerprint is enough to provide a match or that a particular handwriting expert is proficient at identification is relatively easy as science goes. The same cannot be said for research on past mental state.

I have developed at length elsewhere why this is so. In brief, the point is that mental states such as insanity, lack of premeditation, extreme mental and emotional stress, and reasonable fear of harm are closer to social constructions than objective facts. While a scientist or technician can, at least in theory, tell us the extent to which fingerprints match, only juries can tell us whether a defendant premeditated, appreciated the wrongfulness of his or her actions, or

---

24 The prosecution does occasionally use experts to prove past mental state in drug and possession cases. See, e.g., United States v. Harris, 192 F.3d 580, 589 (1999) (“Courts have overwhelmingly found police officers’ expert testimony admissible where it will aid the jury’s understanding of an area, such as drug dealing, not within the experience of the average juror.”) (quoting United States v. Thomas, 74 F.3d 676, 682 (6th Cir. 1996)). The experts are usually police, not mental health professionals, and the assertions made (e.g., that a person with a rolled up pants-leg is a drug dealer) are generally much more susceptible to verification than the assertions made by defense experts testifying about insanity and other defensive doctrines. See Mark Hansen, Dr. Cop on the Stand, A.B.A.J., May 2002, at 31-32.

25 Denbeaux & Risinger, supra note 4, at 60-64, 68-70; see also, David A. Stoney, Fingerprint Identification: Scientific Status, in 3 DAVID L. FAIGMAN ET AL., THE LAW AND SCIENCE OF EXPERT TESTIMONY 394-95 (2002) (describing “realistic” methodological models for measuring fingerprint identification expertise that are not “particularly easy” but are “feasible” and will provide information about the reliability of identification “when there is some minimal level of detail present in the fingerprints”). The same can be said for other forensic techniques on which the government relies. See, e.g., Alfred Biasotti & John Murdock, Firearms and Toolmark Identification, in 3 FAIGMAN ET AL., supra, at 517 (“It is anticipated that objective quantitative criteria for identification will eventually become widely accepted and used because of the research already conducted and published . . . .”); Michael P. Risinger, Handwriting Identification: Scientific Status, in 3 FAIGMAN ET AL., supra, at 481 (“Research can provide a warrant for believing that document examiners possess sufficient skills in regard to particular tasks to warrant admission, at least under test conditions.”).

experienced irresistible urges or overwhelming fears. Further, even if such constructions are somehow reducible to objective referents, “scientific” measurement of their existence at the time of a criminal offense is very difficult; the stability of intent, the depth of appreciation, and the strength of urges and fears are not susceptible to easy calibration even in the present, much less the past. Thomas Grisso, who has spent most of his highly regarded career developing and researching instruments designed to assess forensic psychological issues, summarizes the two points just made as follows: “There is little reason to believe that past meager advances in performing evaluations for criminal responsibility will be augmented in the near future,” both because the relevant “theoretical and operational definitions are difficult to identify” and because “we have not yet demonstrated our ability even to make . . . basic retrospective inferences [about mental disorder at the time of the offense] reliably and validly . . . .” In a strict Daubert regime, the typical defense expert may be able to do little more than describe a criminal defendant’s alleged thoughts and actions, and leave further inferences to the factfinder.

A second, more subtle difference between prosecution and defense expertise is that, on those occasions when verifiability is possible, the latter type of expertise is more prone to lack “fit.” Daubert and Kumho Tire have made the fit inquiry a fundamental

---

27 A behavioral scientist friend of mine who insists that we can study past mental state scientifically put the point this way: past mental states “are hypothetical constructs based on inferences drawn from multiple observed sources, sometimes of tenuous relationship to the underlying construct, [rather than] a single observation of a concrete, observable fact with an inevitable but often very small error rate associated with the accuracy or validity of the observation.” Mark Fondacaro, comments to author, January 14, 2003. Whether my take or his is more accurate, both expose the difference between defense (past mental state) and prosecution (physical fact) expertise.


30 Stephen Morse argues that this is all mental health professionals should be allowed to say in court, because further inferences are unreliable and trench on the legal factfinder’s job of making normative decisions. Stephen J. Morse, Crazy Behavior, Morals and Science: An Analysis of Mental Health Law, 51 S. CAL. L. REV. 527, 600-19 (1978). Professor Bonnie and I took issue with this position, see Richard J. Bonnie & Christopher Slobogin, The Role of Mental Health Professionals in the Criminal Process: The Case for Informed Speculation, 66 VA. L. REV. 427 (1980), for reasons that later parts of this Essay suggest and elaborate upon. See infra text accompanying notes 55 to 77.
aspect of admissibility analysis. The key issue here, as Denbeaux and Risinger indicate, is “the reliability of the proffered expertise specifically as it applies to the task for which it is being utilized in the litigation in which it is offered, not in some more global sense.”

This reliability-for-a-specific-purpose test is likely to exclude more defense expertise than prosecution expertise because, given the greater ease with which they can be found in the real world or simulated in the laboratory, physical facts can be investigated with much more specificity than the usual types of claims defendants make.

For instance, if investigators want to determine the accuracy of fingerprint identification when there are only two partial prints or only three match points, they can simply replicate those situations using known individuals, in as many variations as they desire, and ascertain the experts’ ability to match the prints with the full prints of the sample. The same sort of procedure can be undertaken with handwriting, ballistics and DNA analysis. In scientific terms, the research can be carried out with objective criterion variables having high external validity.

Scenarios useful to criminal defense experts, by contrast, are much more difficult to arrange in the lab. This is most evident with respect to mental states during criminal events. For obvious ethical and legal reasons, these mental states cannot be reproduced experimentally. More fundamentally, even if they could be, or are discovered through ex post interviewing, these states are so varied in content and process that obtaining “scientific” data about them that are generalizable to legal proceedings is close to futile. As Daniel Fishman notes about psychological states generally,

[i]n the individual case, be it the possibility of suicide, the determination of which parent is better qualified in a custody hearing, or the assessment of whether a criminal defendant is innocent by reason of insanity, context and complexity dictate against operationalizing a discrete outcome or collecting base rates on similar types of situations.

---

31 See Daubert, 509 U.S. at 591 (“Fit’ is not always obvious, and scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes.”); id. at 597 (stating that the Federal Rules of Evidence “assign to the trial judge the task of ensuring that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand”); see also Kumho Tire, 526 U.S. at 156 (“The trial court ha[s] to decide whether this particular expert had sufficient specialized knowledge to assist the jurors ‘in deciding the particular issues in the case.’”).

32 Denbeaux & Risinger, supra note 4, at 30.

33 Daniel B. Fishman, The Case for Pragmatic Psychology 210 (1999). Putting this point another way, on those occasions when we can get "scientific" information
The other two types of defense expertise mentioned above—false confession and eyewitness testimony—can be almost as difficult to bolster with task-specific research. Consider first false confessions. Ideal research either would simulate the types of police techniques hypothesized to cause such confessions (analogue research), or would locate people who have confessed to a crime they did not commit and then try to trace the factors that led to the confession (validation research). Analogue research would have the most potent external validity if it involved police use of various interrogation techniques, such as prolonged questioning, promises of leniency, and deception about the strength of the evidence, in situations where it was known the suspect did not commit the act police want him to admit. But practical and ethical problems with this type of research abound (e.g., making the interrogation “real” for both police and suspects; concerns about subjecting innocent individuals to coercion and deception). An alternative analogue study might involve accusing subjects of something noncriminal and subjecting them to lesser pressures; if false confessions occurred under such circumstances, one might be able to draw conclusions about the effects of police techniques. But the prosecution would rightly point to the fact that the consequences of a false admission in such noncriminal contexts do not approximate imprisonment and thus make such admissions easier.\footnote{The only study of this type, conducted in 1996, involved seventy-five college students who were given a typing test on a computer and told not to touch the “ALT” key because it would crash the computer program and ruin the experiment. One minute into the test the computer program crashed; although the crash was caused by the experimenters, the subject was blamed. Using several modern interrogation techniques, the research team was able to get 69% of the subjects to falsely confess to causing the crash. But as Professor Kassin, the principal investigator, recognized, far higher stakes are involved in a criminal investigation and, perhaps more importantly, the facts were such that the subjects could have honestly believed they caused the crash, as evidenced by the fact that over a third of the confessors stated they were responsible after simply being asked “What happened?” Saul M. Kassin & Katherine L. Kiechel, \textit{The Social Psychology of False Confessions: Compliance, Internalization, and Confabulation}, 7 PSYCHOL. SCI. 125 (1996).}

Validation research—i.e., finding people who have confessed falsely and then classifying possible causal variables—is even more difficult, because of the low base rate of false confessions\footnote{Paul G. Cassell, \textit{Protecting the Innocent from False Confessions and Lost Confessions Before and from Miranda}, 88 J. CRIM. L. \\& CRIMINOLOGY 497, 502 (1998) (estimating the base rate for false confessions at between 1 in 2400 and 1 in 90,000).} and the

---

\textsuperscript{34} The only study of this type, conducted in 1996, involved seventy-five college students who were given a typing test on a computer and told not to touch the “ALT” key because it would crash the computer program and ruin the experiment. One minute into the test the computer program crashed; although the crash was caused by the experimenters, the subject was blamed. Using several modern interrogation techniques, the research team was able to get 69% of the subjects to falsely confess to causing the crash. But as Professor Kassin, the principal investigator, recognized, far higher stakes are involved in a criminal investigation and, perhaps more importantly, the facts were such that the subjects could have honestly believed they caused the crash, as evidenced by the fact that over a third of the confessors stated they were responsible after simply being asked “What happened?” Saul M. Kassin & Katherine L. Kiechel, \textit{The Social Psychology of False Confessions: Compliance, Internalization, and Confabulation}, 7 PSYCHOL. SCI. 125 (1996).

\textsuperscript{35} Paul G. Cassell, \textit{Protecting the Innocent from False Confessions and Lost Confessions Before and from Miranda}, 88 J. CRIM. L. \\& CRIMINOLOGY 497, 502 (1998) (estimating the base rate for false confessions at between 1 in 2400 and 1 in 90,000).
difficulty of determining when confessions are in fact false.\(^{36}\) Most importantly for present purposes, even if it can be carried out, neither it nor analogue research is likely to produce results that easily fit a proposition in criminal adjudication. Rather, the findings are likely to read something like, “The longer the interrogation, the more likely a false confession will occur,” or “People who are diagnosed as submissive based on personality testing are more likely to give in to suggestions.”\(^{37}\)

Simulation of eyewitness situations is somewhat easier. Researchers can subject experimental eyewitnesses to crime-relevant scenarios, varying the race of the perpetrator, the presence of a weapon, the length of the encounter, lighting and distance, and a host of factors having to do with the nature of the identification procedure (lineups, photo arrays, etc.). They can then gauge the ability of the subjects to describe and identify the actual perpetrators.\(^{38}\) For this reason, study of eyewitness accuracy tends to be among the most reliable research, as far as it goes.\(^{39}\) But in the end, it does not go very far. Similar to false confession research, all that eyewitness research is likely to tell us is something comparative, to wit: “All else being equal, an eyewitness who is confronted with a gun is less likely to be accurate in identifying the perpetrator than someone who was not confronted by a weapon.”\(^{40}\)

It should not be surprising that courts have tended to exclude this type of testimony.\(^{41}\) Sometimes the exclusion is explicitly on unreliability grounds,\(^{42}\) but more commonly, consistent with the foregoing comments, it results from a judicial determination that the

---

36 Compare Richard A. Leo & Richard J. Ofshe, The Consequences of False Confessions: Deprivations of Liberty and Miscarriages of Justice in the Age of Psychological Interrogation, 88 J. CRIM. L. & CRIMINOLOGY 429 (1998) (claiming to have found sixty cases of false confessions) with Cassell, supra note 35, at 587 (claiming that nine out of the twenty-nine cases reported by Leo and Ofshe that Cassell examined did not involve false confessions).


38 See generally Gary L. Wells, Eyewitness Identification: Scientific Status, in 2 FAIGMAN ET AL., supra note 25, at 391-422.


40 See, e.g., Wells, supra note 38, at 404-07.


evidence is not helpful to the trier of fact because, given its general nature, it is within the ken of the jury and will not help resolve the particular issues in the case. The study of appellate court decisions reported by Jennifer Groscup and Stephen Penrod in this Symposium verifies this conclusion. It found that the type of behavioral science expert most likely to be excluded by the courts was the experimental psychologist (precisely the type of expert who testifies about eyewitness and confession issues) and that the usual reason given for the exclusion was the testimony’s failure to “assist” the factfinder. These types of holdings, whether correct or not, will only increase if courts dogmatically adhere to the Daubert trilogy’s focus on fit; trial judges can tell themselves that, while the expert’s research is interesting, it does very little to resolve whether this confession or this eyewitness identification is false.

Another way to make these points, in Daubertian language, is to say that useful error rates will be harder to ascertain for defense expertise than for prosecution expertise. Error rate is one of the four

---

43 The following two cases are representative. With respect to false confession research, consider State v. Free, 798 A.2d 83 (N.J. Super. Ct. App. Div. 2002). “[S]ince Dr. Kassin cannot identify the degree to which the presence of one or more of these factors might cause a false confession, his opinions . . . would be of no assistance to the jury. What the jury would be left with . . . was accurately categorized by the Supreme Judicial Court of Maine as ‘nothing more than an assertion that false confessions do occur.’”. Id. at 96. With respect to eyewitness testimony, consider United States v. Hall, 165 F.3d 1095 (7th Cir. 1999). “‘[E]xpert testimony regarding the potential hazards of eyewitness identification—regardless of its reliability—will not aid the jury because it addresses an issue of which the jury already generally is aware, and it will not contribute to their understanding of the particular factual issues posed.’” Id. at 1105 (quoting United States v. Larkin, 978 F.2d 964, 971 (7th Cir. 1992)).

44 Groscup & Penrod, supra note 13, at 1153 (reporting a survey of appellate cases finding that testimony from experimental psychologists was admitted in only 22.1% of the cases—compared to a 49.7% admission rate for clinical psychologists and an 85.7% rate for police—and that the courts’ rationale for exclusion was usually not unreliability but a conclusion that the “experimental psychologists did not assist the trier of fact.”).

45 I think they are incorrect, because the testimony educates the jury in helpful ways, a fact which some courts recognize. See, e.g., United States v. Mathis, 264 F.3d 321, 340 (3d Cir. 2001) (“[T]he eyewitness expert] attempted to provide information that, if itself deemed credible, might cause the jury to evaluate [the eyewitness’s] testimony in a different light.”); Miller v. State, 770 N.E.2d 763, 774 (Ind. 2002) (“[False confession] testimony would have assisted the jury regarding the psychology of relevant aspects of police interrogation and the interrogation of mentally retarded persons, topics outside common knowledge and experience.”). See generally D. Michael Risinger, Preliminary Thoughts on a Functional Taxonomy of Expertise for the Post-Kumho World, 31 SETON HALL L. REV. 508, 515-26 (2000) (describing “summarizational” and “translational” expertise which educates the jury about general scientific and technical knowledge).
factors identified in *Daubert* as indicia of reliability, and perhaps the most important. Forensic labs can produce error rates for all sorts of scenarios, for the reasons indicated earlier. In contrast, particularized error rates are much harder to generate in connection with social science research because of the multiplicity of potential variables that might explain criminal behavior or its perception. Even with respect to eyewitness testimony, which is based on the most sophisticated social science research canvassed here, useful error rates are hard to come by. As Gary Wells, a prominent researcher in this area has noted,

Unfortunately . . . effect size measures from [eyewitness] experiments are not necessarily applicable to actual cases (even when measured as standard deviation units), because experiments tend to hold constant and ensure the independence of other variables that could influence eyewitness accuracy. The result of this is that most eyewitness experts are reluctant to make firm statements regarding effect sizes.

And when experts demonstrate this reluctance, courts influenced by fit considerations have been quite willing to find it grounds for exclusion.

The dichotomy between prosecution and defense expertise would be even greater under one interpretation of *Daubert*. Suppose research shows that forensic investigators with a two-point match can make a correct fingerprint identification only 20% of the time; in other words, there is an 80% error rate in such situations. One can make a good argument that, under *Daubert*, even this relatively high error rate should not be a bar to admission, because the error rate can be communicated to the jury, and the jury can act accordingly. Only the failure to have the error rate handy would lead to exclusion. The defense is much more likely to fail in this regard because of the aforementioned methodological difficulties.

This latter comment suggests the final way *Daubert* hurts the defense more than the prosecution. Research requires money. The

---

46 Daubert, 509 U.S. at 594.
47 Wells, supra note 38, at 415.
48 See, e.g., State v. McClendon, 730 A.2d 1107, 1115 (Conn. 1999) (“Leippe did refer to several areas of scientific inquiry concerning eyewitness identification, but . . . admitted, in sum, that ‘we don’t always know what factors are influencing’ an eyewitness. He conceded that a controversy existed in the area of the statistical probability of false identification, the one kind of information inaccessible to the average juror.”).
state has more of it. Of course, the defense is always resource-disadvantaged when it comes to expert testimony. But Daubert exacerbates that disadvantage by putting a premium on verifiability, rather than allowing anyone with credentials to testify.

The state not only has more money, but it is better equipped, in an institutional sense, to use it. Prosecutors are much better at sharing information than defense attorneys. That is partly because the government is by its nature a more coherent entity than the defense bar, but it is also because the state is better able to anticipate the scientific issues that will arise and act accordingly. Indeed, Daubert and Kumho Tire have already stimulated massive federal efforts to validate the type of forensic expertise typically relied upon by the prosecution. There is no analogous criminal defense effort to generate scientific research on past mental states, false confessions, and eyewitnesses and, given the atomistic nature of defense work, unlikely to be any. Further, any one attorney’s attempt to obtain research for a particular case is likely to meet a hostile reception from the courts, because it is so obviously motivated by litigation needs.

Professor Park notes that academic researchers have often come to the aid of defense attorneys, and implies that they can counterbalance the government’s advantage. But their resources pale when compared to the government’s. More importantly for the

---

50 For example, in 2001, Congress appropriated over $12 million to the FBI for scientific research on projects such as identification of latent fingerprints and gunshot residue, and overall provided “the means to initiate over 47 new, high-priority research and development projects, for a total of 93 active projects in 2002.” Steven T. Homeyer, The FBI Research Partnership Program, 5 FORENSIC SCI. COMM. (Jan. 2003), at http://www.fbi.gov/hq/lab/fsc/backissu/jan2003/homeyer.htm (last visited Aug. 21, 2003). For 2002, the relevant congressional committee recommended another $8 million over 2001’s appropriation (for a total of over $20 million). Id. There are at least ten government-sponsored “scientific working groups” in areas such as DNA analysis, bloodstain pattern analysis, firearms and tool marks identification, and drug analysis. Carol Henderson, presentation at panel on Science after Kumho Tire: When is Science Really Science?, A.A.L.S. Meeting, Wash., D.C. (Jan. 3, 2003) (on file with author).

51 The advisory committee notes to the revised Federal Rule of Evidence 702 indicate that courts often consider as a reliability-indicating factor the “nonjudicial uses” to which the basis of expert testimony has been put, suggesting that if there are no non-judicial uses, reliability is suspect. See also, Judge Kozinski’s opinion in Daubert v. Merrell Dow Pharm. Inc., 43 F.3d 1311, 1317 (9th Cir. 1995) (“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.”).


53 Between 1989 and 2002, the National Science Foundation dispensed roughly
thesis of this Essay, their alliance with the defense might not survive more rigorous application of Daubert. In contrast to the effect of exclusion on prosecution experts, who often work for the government, exclusion of academics’ testimony will not necessarily work any change in research agenda, since neither the reputation nor the livelihood of these professional scholars depends on the courtroom.\(^{54}\)

**DAUBERT’S POTENTIAL DAMAGE TO THE SYSTEM**

These observations lead to the following question, which gets at the third and final proposition I want to address: Assuming Daubert has the differential impact on prosecution and defense expertise just described, is it something we should worry about, or is it merely a sensible consequence of focusing criminal cases on reliability? My answer is that we should worry, because Daubert’s reliability test, if it does lead to significant exclusion of defense evidence, will make the system both less fair and less reliable.

As many commentators have pointed out, Daubertian reliability is not the only objective of the criminal justice system. I have written about the defendant’s entitlement to voice, derived in the first instance from the Court’s due process jurisprudence establishing the right to testify,\(^{55}\) but also from the idea that the criminal justice system’s legitimacy is undermined when courts squelch the defendant’s efforts to tell his or her story, however tenuous.\(^{56}\)

Professor Sanders, in his article for this Symposium, similarly alludes to the procedural justice literature, which suggests that an important component of adjudication, from society’s as well as the individual’s

\(^{54}\) This fact, together with the fact that defense attorneys are typically not “repeat players” for these types of expertise, may mean that the hope that strict admissibility standards will trigger different research will not be borne out in this context. Cf. David L. Faigman, *The Evidentiary Status of Social Science under Daubert: Is It “Scientific,” “Technical,” or “Other” Knowledge?,* 1 PSYCHOL., PUB. POL’Y & L. 960, 971-77 (1995) (arguing that proper application of Daubert will stimulate better research).


\(^{56}\) Id. at 117-19.
perspective, is the perception that people have an opportunity to
make their point of view known.\textsuperscript{57} Professor Goldwasser has argued
that reliability-based exclusionary rules, when used against the
defendant, impair the Sixth Amendment right to jury trial. That
right, she notes, is “founded on the notion that juries are likely to be
more protective of an accused than are judges”\textsuperscript{58} because, as a diverse
group of laypeople, they will more likely “be receptive to—or at least
give meaningful consideration to—the unusual, unexpected, or even
implausible stories criminal defendants sometimes bring to court.”\textsuperscript{59}
And Professor Hoeffel has forcefully contended that the Sixth
Amendment Compulsory Process Clause has been and should be
read to accord the criminal defendant the right to present all
material evidence.\textsuperscript{60} To interpret \textit{Daubert} to require something more
than materiality, she contends, undermines the fair process goals of
rationality, predictability, and consistency, as judges futilely try to
implement an amorphous reliability threshold in a wide array of
contexts.\textsuperscript{61}

I will not rehearse these arguments any further here. They all
suggest that, whatever might be the case in the civil context out of
which the \textit{Daubert} trilogy arose, in the criminal setting concerns about
process should trump concerns about reliability. But it should also
be recognized that reliability is not necessarily sacrificed when the
defense is permitted to use evidence that fails the positivist threshold
d dictated by \textit{Daubert}. There are at least three reasons for thinking so.

I have already suggested the first reason. When the expertise
addresses inferences about past mental state, we cannot \textit{know}
whether the opinion is reliable in the Daubertian sense, and thus exclusion
may work a real harm to accuracy goals. As one court has stated,
“[I]legal tests of criminal insanity are not and cannot be the result of
scientific analysis or objective judgment.”\textsuperscript{62} The same might be said
about whether a person premeditated a crime or perceived a threat

\textsuperscript{57} Joseph Sanders, \textit{The Merits of the Paternalistic Justification for Restrictions on the
\textsuperscript{58} Katherine Goldwasser, \textit{Vindicating the Right to Trial by Jury and the Requirement of
Proof Beyond a Reasonable Doubt: A Critique of the Conventional Wisdom About Excluding
\textsuperscript{59} \textit{Id.} at 639.
\textsuperscript{60} Hoeffel, \textit{supra} note 41, at 1352.
\textsuperscript{61} \textit{Id.} at 1316-52 (using court decisions involving eyewitness, false confession, rape
trauma syndrome, and polygraph expertise as a basis for arguing that courts apply
\textit{Daubert} inconsistently, and often with little attention to reliability concerns).
\textsuperscript{62} Holloway v. United States, 148 F.2d 655, 666 (D.C. Cir. 1945). The court
continued, “There is no objective standard by which such a judgment of an
admittedly abnormal offender can be measured.” \textit{Id.}
and believed the force used was necessary to combat it. Aside from the malingerer (who can often be detected), defendants who say they suffered mental aberrations during the offense may well be “right,” at least we have no scientific way of proving them wrong.

For this reason, the suggestion that expert opinion testimony about mental state should be excluded unless it can be shown to be “reliable” in the social science sense (i.e., consistent over evaluators) would be inappropriate. While disagreement between two evaluators assessing the same individual does mean that one is wrong, it does not mean that both are wrong. Because we cannot tell which evaluator’s opinion is invalid simply from comparison data, and because exclusion would deprive the defendant of voice, we should err on the side of letting the testimony in. (At the same time, in an effort to improve consistency, we can insist on assessment techniques that consider, in a structured way, the legally relevant variables.

The second reason the admission of “unscientific” evidence may not undermine ultimate “reliability” (now returning to use of that term to mean valid or accurate) relates to the typical heuristics of legal decision makers. In cases where the defense makes claims based on past mental state, false confessions, or mistaken identification, the defendant is left with very little ammunition for creating reasonable doubt if he or she is deprived of an expert. In these cases the defendant is trying to overcome assumptions, legal or otherwise, that are quite strong: that people who commit criminal acts intend their actions, control them, and do not grossly

---

63 See Bethea v. United States, 365 A.2d 64, 87 (D.C. 1976) (“The concept of mens rea involves what is ultimately the fiction of determining the actual thoughts or mental processes of the accused. It is obvious that a certain resolution of this issue is beyond the ken of scientist and laymen alike.”) (internal citation omitted).

64 Michael L. Perlin, The Jurisprudence of the Insanity Defense 238-40 (1994) (stating that advances in detection of malingering can discern faking in over 90% of cases when it does occur).

65 This proposition was put forward by David Faigman at this Symposium. Actually, reliability studies have shown fairly good inter-rater agreement between clinicians when gross dysfunction is the issue. See Gary B. Melton et al., Psychological Evaluations for the Courts: A Handbook for Mental Health Professionals and Lawyers 229-31 (2d ed. 1997) (summarizing studies that find agreement rates on the issue of “insanity” of 64% to 97% between mental health professionals and of 88% to 93% between mental health professionals and courts); see also Richard Rogers, R-CRAS Manual 13 (1984) (showing inter-rater agreement of 87% for “loss of cognitive control” and 89% for “loss of behavioral control”). Agreement on other types of issues is much lower, however. See Doubts About Daubert, supra note 26, at 920-21.

misperceive the surrounding circumstances; that people who are innocent do not confess to crimes; and that eyewitnesses who are sure about their identification do not get it wrong. Expert testimony provides the decision maker with plausible reasons for challenging those assumptions. Without the testimony, decisions are very likely to be uninformed. Alternative explanations will never be heard, or will never be considered because they are supported only by the presumably self-serving statements of the defendant and the attorney.

The result could be truly unreliable decisions, not just with respect to past mental state, the indeterminacy of which has already been noted, but also in connection with false confession and mistaken identification claims. It is well to remember that mistaken identifications are the single most significant cause of wrongful convictions, and that coerced confessions are not too far behind in that category. Furthermore, articulate defense experts can help make up for the woefully inadequate representation often accorded defendants, another cause of wrongful convictions. Routine exclusion of defense expertise could also have more subtle effects on the accuracy of criminal adjudications: Knowing that their interrogation and identification processes will not be meaningfully challenged, prosecutors and police may be less careful in their investigation, producing further risk of erroneous verdicts.

The final reason evidence that fails Daubert should not be of tremendous concern in the criminal defense context is that criminal judges and juries know what to do with it. As Professor Nance notes

67 Barry Scheck et al., Actual Innocence: Five Days to Execution and Other Dispatches from the Wrongly Convicted (2000) (finding that eyewitness identifications were involved in 84% of 63 definitive DNA-based exoneration cases in the United States); Arye Rattner, Convicted but Innocent: Wrongful Conviction and the Criminal Justice System, 12 LAW & HUM. BEHAV. 283, 289-91 (1988) (stating that out of 205 erroneous conviction cases, eyewitness misidentifications were responsible for 48.8%, a greater proportion than all other causes, including perjury (26%), coerced confessions (16%), and forensic science errors (3%)).

68 See Leo & Ofshe, supra note 36 (describing 60 cases in which they claimed false confessions were obtained); Rattner, supra note 67, at 290 (finding coerced confessions responsible for 16% of erroneous convictions).


70 Cf. Ellen Yankiver Suni, Who Stole the Cookie from the Cookie Jar?: The Law and Ethics of Shifting Blame in Criminal Cases, 68 FORDHAM L. REV. 1643, 1690 (2000) (“If police and prosecutors know that defendants have limited resources to investigate . . ., and that even if defendants obtain resources to do so, evidence that they find will be unusable . . ., police and prosecutors will have little incentive to explore alternative theories once they have reached a preliminary conclusion.”)
in this Symposium, jurors are not credulous.\textsuperscript{71} The research that Professor Sanders believes calls for a paternalist stance toward jurors at best suggests that they are confused by “complex” expertise involving statistics;\textsuperscript{72} that type of testimony is rarely presented by the defense in criminal cases. Professor Sanders also presents evidence suggesting that jurors engage in peripheral, rather than central, processing, even in non-complex cases.\textsuperscript{73} Even if that is so, it is not clear that adjusting expert admissibility standards is the appropriate response. Arguably, the proper prescription for any lay tendency to pay too much attention to demeanor, amount of fee, credentials, and other “non-central” factors is not a reliability threshold—even reliable evidence will be ignored under the appropriate peripheral conditions—but rather presentation of expert evidence in as bland a manner as possible, perhaps through documents without identifying the source. That, for better or worse, runs afoot of our adversarial tradition in criminal cases.\textsuperscript{74}

Most research shows that juries do not attribute undue significance to syndrome testimony, eyewitness testimony and the like; if anything, such testimony is undervalued because of a pervasive skepticism about social science claims.\textsuperscript{75} The one study described by Sanders that found to the contrary involved prediction testimony by a prosecution witness, which even strong cross-examination and an opposing expert could not shake.\textsuperscript{76} That study does not suggest that

\begin{itemize}
  \item \textsuperscript{71} Dale A. Nance, \textit{Reliability and the Admissibility of Experts}, 34 \textit{Seton Hall L. Rev.} 191, 228 (2003).
  \item \textsuperscript{72} Sanders, \textit{supra} note 57, at 901-07.
  \item \textsuperscript{73} Id. at 909-16.
  \item \textsuperscript{74} Trial by document is prohibited by the Sixth Amendment’s right of confrontation clause. See, e.g., Coy v. Iowa, 487 U.S. 1012 (1988) (requiring face-to-face meeting with available witnesses).
  \item \textsuperscript{75} A meta-review of jury research in “non-scientific” cases summarized the findings this way: “It is clear that expert testimony is not accepted in a mindless fashion by gullible jurors awed by flashy credentials. Rather, expert testimony is scrutinized as intensively as the testimony of any other witness and even viewed somewhat cynically.” Dennis J. Devine et al., \textit{Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups}, 7 Psychol., Pub. Pol’y & L. 622, 689 (2001); see also, Charles Bleil, \textit{Evidence of Syndromes: No Need for a “Better Mousetrap,”} 32 S. Tex. L. Rev. 37, 66 (1990) (arguing that social science testimony is probably “the least over-awing” of the various types of expert testimony “because jurors have some innate knowledge of human behavior”); Neil J. Vidmar & Regina A. Schuller, \textit{Juries and Expert Evidence: Social Framework Testimony}, 52 Law & Contemp. Pros. 133, 173 (1989) (reporting research indicating that jurors do not treat expert testimony on battered woman syndrome, rape trauma syndrome and eyewitness reliability with an unwarranted aura of accuracy).
  \item \textsuperscript{76} Sanders, \textit{supra} note 57, at 931-36 (describing Shari Seidman Diamond et al., \textit{Juror Reactions to Attorneys at Trial}, 87 J. Crim. L. & Criminology 17 (1996)).
\end{itemize}
defense witnesses need to be kept from the jury, but rather supports the point made earlier that the state naturally benefits from assumptions against defendants, so much so that defense evidence rarely dents its case. That is all the more reason to put as few obstacles in the way of defense efforts to do so, if reliability of outcome is really our ultimate goal.

In sum, admission of expert testimony on past mental state, eyewitnesses, and interrogation will probably enhance reliability, even if that testimony is of questionable validity or fit. Occasionally, a person who commits a serious crime will be erroneously acquitted because a jury, misled by expert testimony, mistakenly disbelieves a confession or an eyewitness, or mistakenly sympathizes with a psychopath asserting an insanity or diminished responsibility defense. But note first that, in the latter cases, a win for the defense will still usually result in incarceration, either in a hospital or prison.

Second, and most importantly, the small number of cases in which a guilty person actually walks free because of “unreliable” defense expertise will probably fall far below the number of cases in which it saves an innocent person. In scientific terms, the number of false positives such testimony prevents is likely to be greater than the number of false negatives it causes. If so, the reasonable doubt standard strongly suggests that the experts should be allowed to testify.

CONCLUSION

*Daubert* and *Kumho Tire*, construed so as to require strong verifiability and vigorous fit to the task at hand, will exacerbate the imbalance between prosecution and defense that already exists. Once it has adjusted to the more stringent standards, the state, with its superior resources, its institutional incentives, and its focus on

---

77 Only when the government expert himself admitted he might be wrong two out of three times did study subjects tend to change their minds. Diamond et al., *supra* note 76, at Table 4. The authors of the study themselves suggest that the outcome they obtained was due to the concordance between the expert’s views and the jurors preconceptions. *Id.* at 53.

78 Typically, people found not guilty by reason of insanity are hospitalized for at least as long as those convicted of similar crimes spend in prison. See Melton et al., *supra* note 65, at 188-89. Successful diminished responsibility defenses result in conviction on the lesser included offense. *Id.* at 204-08.

79 Cf. R. Erik Lillquist, *A Comment on the Admissibility of Forensic Evidence*, 33 Seton Hall L. Rev. 1189 (2003) (arguing that differential standards that increase the possibility of acquitting innocent defendants but that also increase the possibility of acquitting guilty defendants is a bad tradeoff because there are so many more guilty defendants).
expertise that relies on observance of physical facts, will have no problem producing admissible evidence, especially if the main admissibility criterion is the existence of error rates, rather than the existence of low ones. The defense, on the other hand, will struggle to produce positivist-oriented expertise with sufficient external validity because of the socially constructed nature of its claims, the difficulty of simulating relevant scenarios, and the general disorganization of the defense bar. The result will be a criminal process that is unfair in appearance and in fact, and one that will produce more unreliable results than one that is more generous toward defense-produced expertise.

These considerations suggest that very few limitations should be placed on defense expertise. There are at least three versions of a relaxed reliability standard. Borrowing from the Supreme Court’s language in Rock v. Arkansas,80 Professor Hoeffel would admit defense expert evidence unless it is completely untrustworthy or is immune to the traditional means of evaluating credibility, such as cross-examination, rebuttal witnesses, and jury instructions (in other words, she prefers the relevance test of yore).81 I have suggested a somewhat more demanding standard than Hoeffel’s, requiring that when the defense expert relies on theory that has not been subjected to verification it should at least be considered plausible among the relevant professionals, and that when an expert renders an opinion about a particular individual’s mental state, he or she should use accepted evaluation protocols.82 Also more demanding is the standard proposed by Professor Nance, who would generally permit any relevant expert evidence, but not if more reliable evidence is “reasonably” available, a standard he believes is necessary to encourage further, better research.83 Each proposal can be attacked, even if we assume a relaxed approach is advisable. Hoeffel’s test will strike some as a non-standard; it might exclude astrology as completely untrustworthy, but

81 Hoeffel, supra note 41, at 1352.
82 Unfortunately, this standard can only be gleaned by looking at a number of my writings. Slobogin, Doubts about Daubert, supra note 26, at 944-47; Slobogin, Psychiatric Evidence in Criminal Trials, supra note 26, at 41; Slobogin, Scientizing Expert Testimony, supra note 65, at 302-06. The second article also makes a distinction between past mental state evidence and evidence designed to show an act did (or did not) occur. The latter evidence, I argued, should only be admissible if it meets a Daubertian verifiability standard, whether presented by the prosecution or the defense. Thus, eyewitness testimony would have to meet the latter standard, which I think it does. See supra note 45.
83 Nance, supra note 71, at 228-30.
it would let in virtually all defense testimony from behavioral scientists, regardless of how "soft" it is. My proposal suffers from the same problems that afflict Frye's general acceptance test.\textsuperscript{84} It can be difficult determining how many professionals, in what field, have to accept a theory or protocol, as well as precisely what has to be accepted as plausible, and to what extent. Nance's willingness to exclude evidence when more reliable evidence is "reasonably available" presents similar problems. Determining relative reliability, especially with respect to past mental state expertise, can be quite difficult.\textsuperscript{85} Moreover, better evidence is always possible to generate, at least in theory, and thus could be said to be "available," yet, for reasons suggested earlier, the defense bar is ill-equipped institutionally to carry it out, making a determination of when such research might be "reasonably" available a guessing game. Perhaps Hoeffel's standard, if modified to permit exclusion when better research or protocols clearly already exist, best blends the notions underlying all three proposals, while retaining clarity. Whatever the standard, it should ensure that defense expertise is not subject to a rigorous Daubert test.

Again, it would not be inconsistent with this position to require that identification expertise offered by the prosecution satisfy the latter test.\textsuperscript{86} For reasons already described, prosecution expert

\textsuperscript{84} See generally Giannelli, supra note 7, at 1208-23.

\textsuperscript{85} Consider recent debates over whether testimony about past mental state based on the results of the Rorschach test is as "reliable" as other approaches. See Barry Ritzler et al., Protecting the Integrity of Rorschach Expert Witnesses: A Reply to Grove and Barden (1999) Re: The Admissibility of Testimony Under Daubert/Kumho Analyses, 8 PSYCHOL., PUB. POL'Y & L. 201 (2002); see also William M. Grove et al., Failure of Rorschach-Comprehensive-System-Based Testimony to be Admissible Under the Daubert-Joiner-Kumho Standard, 8 PSYCHOL., PUB. POL'Y & L. 216 (2002); Barry Ritzler et al., A Final Reply to Grove and Barden, 8 PSYCHOL., PUB. POL'Y & L. 235 (2002). See generally Edward J. Imwinkelreid, The Relativity of Reliability, 34 SETON HALL L. REV. 269 (2003) (arguing that, under Nance's approach, "the lack of a definition of reliability is a major flaw in the proposal" and that "administration of this rule during a jury trial will necessitate either horrendously long sidebar conferences or prolonged recesses").

\textsuperscript{86} Professor Park argues that an "asymmetrical" approach to Daubert would create dissonance outside the courtroom (because the public will not be able to understand why the defense can use evidence the prosecution cannot) as well as inside the courtroom (because, if the defendant decides to use particular questionable types of evidence, it can be difficult figuring out how much the prosecution may respond in kind). Park, supra note 52, at 1116-17. He also suggests that loosened evidentiary standards will come back to haunt the defense because the system will make up for this advantage by shifting burdens, enhancing penalties and so on. Id. at 1123. The regime that I advocate would not be directly asymmetrical, in that the government, as well as the defense, would be the beneficiary of laxer reliability and fit rules when the expert testimony concerns past mental state, eyewitness, and confession testimony;
evidence tends to be easier to verify, better funded, less favored under constitutional doctrine, more prone to feed jury preconceptions, and more likely to cause dramatic harm if erroneous.  *Daubert*, a decision meant to make adjudication more reliable, will not do so if reliability is the only factor courts consider in making admissibility decisions.  Structural differences between criminal defense expertise and other types of expertise dictate that *Daubert* be read flexibly.

Only forensic identification and similar types of government expertise would be subject to stricter standards.  In this regime, Park’s concerns may dissipate.  To the extent they do not, they are no different than the concerns that are routinely associated with constitutionally-mandated adversarial advantages, ranging from the exclusion of evidence to the reasonable doubt standard itself.  Presumably Professor Park would not eliminate these latter advantages simply because the public may not understand them, courts have trouble implementing them, or the system adjusts in various ways to their impact.  These types of speculative harms do not outweigh the clear harm that would occur if, because of a rigid application of *Daubert*, criminal defendants are no longer able to tell their exculpatory or mitigating stories through experts.