F20 Better Ways to Manage Poorly Validated Scientific Evidence

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The goal of this presentation is to provide judges with a set of procedures to enable them to improve their ability to manage the admission of forensic science evidence.

This presentation will impact the forensic science community by helping to better prepare judges to evaluate proffers of expert testimony in the near term (while awaiting the reforms currently under way in the forensic identification sciences).

Numerous areas of forensic science are undergoing scrutiny and preparations for rehabilitation as never before. In the United States, most of that scrutiny is taking place within newly created administrative entities overseen by the Department Of Justice (DOJ) and the National Institute of Standards and Technology (NIST). The National Research Council (NRC) 2009 Report, *Strengthening Forensic Science in the United States: A Path Forward*, which launched all of those efforts, had recommended the creation of a National Institute of Forensic Science to undertake the reform work because it concluded that every institution that could have helped build more scientifically sound, dependable forensic disciplines had failed. In addition to crime laboratories, the larger forensic community, the larger scientific community, universities, the legal community, and government at all levels, the Report also faulted courts.

Although courts have had gatekeeping responsibility for expert evidence for several centuries (it did not begin with *Daubert*), they have yet to develop real proficiency in such screening. The NRC Report said that, "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*." The clearest illustration of judges' failures to screen forensic expert evidence competently is the spectacle of courts welcoming into evidence forensic offerings that were later abolished once their lack of validity was exposed by scientific reviews external to the courts: voiceprints, comparative bullet lead analysis, and nearly two dozen arson indicators.

The reason for poor judicial performance in the gatekeeping of asserted science may be no more mysterious than that judges, as a group, lack the necessary knowledge and skill to evaluate empirical claims. They rarely insist upon seeing underlying evidence testing the validity of empirical claims, and few have the acumen to evaluate data that may be forthcoming. In a recent case, *Jackson v. Pollion* (2013), the eminent Judge Richard Posner excoriated lawyers and judges for their ineptitude regarding scientific issues.

With good reason, therefore, few observers expect judges to play much part in fixing the problems that plague forensic science. The current and ongoing assessments (and repairs) of forensic science are being conducted by more scientifically astute extra-judicial institutions. When those efforts bear fruit, judges will be able to harvest the bounty.

The question that judges can and should ask is: What can we do to better perform our responsibility to limit the risk that unvalidated or exaggerated expert claims will mislead fact finders? What can judges constructively do while waiting for new and improved forensic science? Here are some suggestions: (1) require examiners to be certified and their laboratories to be accredited; (2) require examiners to have participated in regular proficiency testing; (3) require laboratories to have submitted to routine scientific audits; (4) make use of court-appointed experts to reduce one-sided, low-quality, or exaggerated forensic evidence in the courtroom; (5) require blind examinations, evidence lineups, sequential unmasking, or other recognized procedures to minimize unintended bias in examinations; (6) employ partial admission: allow pattern-comparison examiners to describe similarities and differences between questioned and known samples, but not to opine on ultimate conclusions of identity; (7) require experts to stay within the bounds of their field's asserted expertise. The most that most courts could do in this regard is to require submission of relevant portions of major treatises in the field demonstrating that the specific task being performed in the case is one that the field believes it can do; (8) prohibit assertions of unique individualization (for fields that perform pattern comparison), assertions of perfect or near-perfect accuracy (for all fields), or specification of accuracy levels (or error rates) when those are known; (9) prohibit use of unreasonably overpowering terminology generally, such as "without doubt," "match," "share a common source," or "identification to the exclusion of all others in the world."; and, (10) instruct juries on the limitations of accuracy of particular techniques and types of expertise, even though the court has chosen to admit such testimony. This may be the most challenging of these ten suggestions, because it requires a judge to acquire some substantive knowledge of a field's limitations. Several reported cases provide examples of such instructions by the court.

Admissibility, Judicial Gatekeeping, Trial Evidence

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