

PETER NEUFELD
ANSWER IN RESPONSE TO SENATOR AL FRANKEN
QUESTIONS FOR THE RECORD
SENATE JUDICIARY COMMITTEE HEARING ON
“IMPROVING FORENSIC SCIENCE IN THE CRIMINAL JUSTICE SYSTEM”

Question for Peter Neufeld

1. Some have argued that the courtroom is the best place to test the reliability of forensic evidence in any particular case – that any problems with the forensic evidence will come out through cross-examinations. For example, if a prosecutor tries to use faulty fingerprint analysis to make her case, the defense lawyer will be able to poke holes in that evidence when he presents his case.
 - a. How would you respond to the suggestion that cross-examination is the best way to test forensic methods?
 - b. From the fact that a particular piece of forensic evidence is admissible in court, does it follow that the evidence is reliable?
 - c. Would the development of an independent forensic science research agency compromise prosecutors’ ability to present reliable evidence in court?
 - d. Is the development of an independent forensic science research agency inconsistent with the adversarial criminal justice process?

ANSWER:

- a. Although the conventional wisdom once stated that a sound defense and cross-examination would enable courts to properly assess the strength of forensic evidence, the NAS report unequivocally states, and the post-conviction DNA exoneration cases clearly demonstrate, that scientific understanding of judges, juries, defense lawyers and prosecutors is wholly insufficient to substitute for true scientific evaluation and methodology. It is beyond the capability of judges and juries to accurately assess the minutiae of the fundamentals of science behind each of the various specific forensic assays that the NAS called into question. Asking them to evaluate the reliability of a forensic technique to determine the truth in various cases is an unfair and dangerous burden for us to place on their shoulders.

According to the NAS report, “[f]or 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. In short, judicial review, by itself, is not the answer.” This is particularly important because the overwhelming majority of cases are resolved with plea bargains, necessitating defense lawyers and prosecutors – with no judicial involvement – to interpret and rely on the reports’ conclusions as a basis for making an important decision affecting the liberty of life of the accused. It is absolutely clear – and essential – that the validity of forensic techniques be established “upstream” of the court, before any particular piece of evidence is considered in the adjudicative process.

- b. No. For years, soil comparison, fiber comparison, and hair comparison analyses – examples of an area of forensics called “pattern evidence” techniques – have been accepted as reliable in courts; however the NAS was unequivocal that microscopic hair analysis, soil comparison and fabric print analysis have not been tested to determine their scientific reliability or validity. As a result, it is impossible to know how many other soil samples might be similar to soil from the crime scene or the likelihood that a common fiber may come from a specific piece of clothing, and there is not adequate empirical data on the frequency of various class characteristics in human hair. Without an existing database or set of “knowns” a proper statistical inference of likelihood cannot be made.
- c. We strongly believe that an independent forensic research endeavor would benefit all players of the criminal justice system—including and especially prosecutors. Since the NAS report was released, many defense attorneys have been writing briefs about the faultiness of forensic sciences as a major part of their defense arguments. They have been arming themselves with the critiques presented in the NAS report. Because the report is mentioned in a recent Supreme Court case, it has precedential authority in the courtroom. Prosecutors have little or no recourse in refuting this argument because of the lack of reliability and accuracy of these forensic science techniques. If prosecutors back the initiative to validate and assess the reliability of forensics based on statistical accuracy, then this will guarantee that the evidence presented in court is close to if not irrefutable.
- d. No. On the contrary, an independent forensic science research agency will enhance the adversarial criminal justice process. The landmark case *Daubert v. Merrell Dow Pharmaceuticals* created a standard by which judges act as gatekeepers to assess the admissibility of expert testimony, including forensic science evidence. The case established four general factors for judges to consider which include: (1) whether the theory or technique has been tested; (2) whether it has been subjected to peer review and publication; (3) the known or potential error rate of the scientific technique; and (4) whether the theory or scientific technique has widespread acceptance in the scientific community. In theory, *Daubert* should have an extraordinary impact on criminal litigation. However, *Daubert* has been implemented more rigorously in civil cases to protect civil corporate defendants than in criminal cases to protect individual defendants, where life and liberty are at risk.¹ The judicial process has not been

¹ Neufeld, PJ, The (Near) Irrelevance of *Daubert* to Criminal Justice and Some Suggestions for Reform. American Journal of Public Health, Vol. 95, No. S1 (2005).

adequate to provide the obligatory controls over unvalidated or unreliable evidence. In part, this is because the actors in the judicial system are not scientists and in part because attorneys generally do not have the sufficient scientific understanding of the weaknesses of forensic evidence to bring these challenges to judges in a way that would facilitate their gatekeeping responsibility. Conducting research and setting standards that quantify the relative accuracy and reliability of forensics upstream of the courtroom will bring those techniques in line with other bodies of science and the standards that *Daubert* has set and provide the basis of information that judges can rely upon in order to better evaluate evidentiary standards.