



Jurisprudence Section – 2007

E17 Gateway of Opportunity for the Conviction of the Wrongfully Accused

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After attending this presentation, attendees will have the ability to identify multiple sources of significant errors in expert testimony despite the scientific methodologies typically accepted by the courts.

This presentation will impact the forensic community and/or humanity by demonstrating the ability to identify fallacies of logic and various errors of practice commonly encountered in the testimony of experts.

The *Frye* test and now the *Daubert* standards are evolving tools designed to ensure the sciences and expert opinions presented in court are truthful, accurate, accepted by the scientific community and are stated by persons qualified to truly know what they are testifying about. Despite meeting evidentiary requirements, inappropriate evidence may be admitted with devastating effects.

The risk of admitting erroneous science has many sources: systemic, cultural, and human. Systemic errors arise from the lack of applying the scientific method to problem solving. Over-reliance upon artful inductive reasoning more than scientific deductive reasoning is compounded when an absence of guidelines or protocols exist. Quality assurance and quality review are not yet universally accepted tools. Forensic scientists do not monitor themselves or correct the misinformed and inexperienced. Cultural practices are reflections of organizational influences; some investigative agencies compartmentalize scientists who perform tests without context, others keep the scientists fully informed. Some agencies use a “supervising” scientist to testify, instead of the scientist performing the procedure. Differences in culture or competencies among agencies may create rivalries or rifts impairing cooperation and communication. Human factors include the decision, skill-based and perception-based errors of individuals. Hopefully, their opinion is formed in the absence of such errors, but is there documentation to assure that? Human factors also reflect resource management and supervision of the investigation. How well do investigators communicate among themselves and their scientists? Can members of a multi-agency “task force” become sufficiently familiar with each other to use communication tools (statements vs. summaries) in common?

This unseen environment is permissive; prosecutors are susceptible to using errors of science because they work with whatever they have been handed. Not being scientists and expecting *Daubert* to be followed may produce a mindset where the possibility of being misled accidentally, much less deliberately rarely occurs to the attorneys involved. Anxious, since forensic science crime shows became so popular, for the most scientific support of their argument, the opportunity exists for attractive yet erroneous science to enter the courtroom. Under the current rules of evidence it becomes the burden of the defense to either challenge everything under *Daubert*, compromise or fail to challenge because the discovery “looks OK” or seek to identify potential discrepancies in the science. This latter is often difficult since the worksheets capable of revealing this are not readily discoverable.

Sources of error with some examples for presentation:

- Loss of objectivity: sentimentalism destroys emotional balance (child cases, sexual assault).
- Science removed from reality: an inverted pyramid of logic (Descartes, 1596-1650).
- Misinformed: reliance upon an incomplete fact basis.
- Dogma: reliance upon tradition, “father to son” science as in exploding heads.
- Myth: hypothesis appealing to emotionality as in rule-of-three theory in child deaths.
- Absence of scientific method: intuitive reasoning, not deductive, rejection of coincidence.
- Idolatry: new “sciences” profilers, cadaver/anthrax dogs, facial recognition.
- Inappropriate expertise: over-reaching from one discipline to another.
- False Authority: documented expertise in one area is not conferred with administrative authority over other areas.
- Misplaced confidence: assumptions that scientific guidelines have been followed.

Jurisprudence, *Daubert*, Forensic Expert