



Odontology Section - 2016

G22 Scorched Earth Forensics — Why The Move to “Eradicate” Disciplines From the Courtroom Is Bad for Science and Bad for the Law

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After attending this presentation, attendees will explore the debate behind calls to “eradicate” various forensic disciplines as being insufficiently “scientific.”

This presentation will impact the forensic science community by explaining the dangers to victims, defendants, and civil litigants if the move to “eradicate” various forensic disciplines succeeds.

When the 2009 National Academy of Sciences (NAS) Report, *Strengthening Forensic Science in the United States: A Path Forward*, was published, how many of us realized that “the path forward” would involve a concerted effort to impose a wholesale ban on the use of well-established forensic disciplines? Calls by highly placed government officials to “eradicate” entire fields of evidence, along with well-funded attacks by defense groups, threaten to undermine the civil and criminal justice systems rather than to fix them. Jo Handlesman from the White House Science and Technology Office blasted forensic odontology and other disciplines, saying they were not based on science but relied on “gut reaction.” She said, “These are the types of methods that must be eradicated from forensic science and replaced with those that come directly out of science.”¹

Any discussion must recognize that testimony by forensic dentists, although grounded in sciences like anatomy, histology, and dental medicine, is also based on the skill and experience of the forensic dentist, including his/her skill in pattern impression analysis. The same holds true for forensic pathology, forensic psychiatry, latent print analysis, and a host of other disciplines. None of these are bench sciences in which the same experiment always yields the same result. After all, we do not shoot volunteers at point-blank range to study gunshot wounds, or feed people increasing amounts of fentanyl to determine the lethal dose. Instead, we wait until they present at the emergency room or at the morgue and make observations that inform diagnoses and conclusions.

Any discussion must also accept that each bitemark is a unique event, as is every injury to a murder victim; every latent print is left under unique circumstances, as are footprints or tire tracks at a crime scene. Diagnoses of mental illness and its effect on criminal responsibility can be highly subjective and fiercely debated among experts. Ultimately, it all constitutes opinion, albeit expert opinion. How do we determine what comes directly from science, or what definition of science or evidence controls?

Defense counsel often seek to introduce the very kinds of evidence slated for extinction; this scorched earth approach affects everyone. Suspects often benefit from the threatened disciplines. Identification of one suspect exonerates another; forensic evidence provides proof of self-defense or consent. Post-conviction testing requests always seek proof that “some other dude did it.” Careful thought must precede any move to eradicate forensic odontology. Many child abuse and fatality cases involve bitemark comparisons, where victims live with the perpetrator and DNA may be cleaned away or is simply not probative.

Although important lessons are learned from exonerations, decisions to eradicate 2016 forensics because of 30-year-old mistakes will have far-reaching negative effects. Newspapers only report plane crashes, not the overwhelming number of safe landings. With courts already equipped to handle opposing forensic theories through discovery, cross-examination, and experts for each side, it is far wiser to improve forensics rather than eradicate them.

Reference(s):

1. Handlesman J. International Symposium on Forensic Science Error Management – Detection, Measurement and Mitigation, Arlington, VA, July 20-24, 2015.

Forensic Odontology, Pattern Impression Analysis, Eradication