B40 The Failure of Forensic Science Academia to Address Perceived Scientific Shortcomings

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After attending this presentation, attendees will be aware of limitations in traditional forensic science education programs to generate adequate foundational scientific underpinnings for forensic science analysis of impression/pattern evidence.

This presentation will impact the forensic science community by bringing to light the limitations of traditional forensic science educational programs to address criticism lodged against the forensic science community in the area of patterned evidence.

Forensic science educational programs have mushroomed since *CSI* aired on television. In fact, a surplus of students has resulted. The quality of the educational programs has increased. Forensic science educational programs are moving to faculties with more than a single member; in fact, all Forensic Science Education Programs Accreditation Commission (FEPAC) -accredited programs have multiple full-time forensic science faculty members. FEPAC has been launched. Nonetheless, despite significant progress, some problems in forensic science education, discussed in the 2004 Technical Working Group on Education (TWGED) report, have in some ways deepened. There is still too little hands-on laboratory analysis in many programs. But what has received less attention is a faculty knowledge gap. Over and over, forensic science programs are bringing chemists and molecular biologists into their faculties, but other forensic science disciplines are generally getting short shrift. There are virtually no questioned document examiners, firearms and tool marks examiners, latent print examiners, or bloodstain pattern analysts as full-time faculty members. University accreditation commissions require a terminal degree for faculty positions — in particular, a PhD degree is sought. Of course, there are no PhD programs in questioned documents examination, firearms and tool marks examination, tire marks examination, etc. Thus, there is a chicken-and-egg situation that results in the continuation of this gap in forensic science academia. Universities do not seem to know how to address this gap. The result is that research in the underlying foundational science that has been called for in the patterned and impression evidence area is lacking.

The 2009 National Academy of Sciences (NAS) Report, Strengthening Forensic Science in the United States: A Path Forward, declares, "…the major forensic science disciplines…those that are used most commonly for investigations and trials…have been cause for concern in court or elsewhere because their reliability has not been sufficiently established in a systematic (scientific) manner…" *Chemical and Engineering News* recently reported, "Five years ago, the National Academy of Sciences put out a report condemning the state of forensic science. It concluded that many common forensic techniques — the analysis of fingerprints, bite marks [sic], blood splatter [sic], and ballistics, for example — lack sufficient scientific underpinnings. Thousands of convictions were thrown into question. But in the years since, little has been done to shore up the discipline's scientific base…". There is, of course, some research in these areas, but not as much as there should be. Some of this research is performed in collaboration with true expert practitioners, but some research is being conducted by academicians without deep understandings. Furthermore, the absence of doctoral students hampers research in the field. The presentation will end by discussing a concept to fill in this expertise and research gap by creating an innovative new PhD program, in which the professors are non-experts and the students are experts.

Forensic Science Education, Research Gaps, Patterned Evidence