



Jurisprudence Section - 2016

F17 A New Paradigm for Fingerprint Reporting ... Without Individualization

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After attending this presentation, attendees will better understand the difficulties with supporting claims of single-source attribution (e.g., “individualization” or “identification”) in the pattern and impression evidence disciplines, with specific emphasis on fingerprints, and be introduced to an alternative framework implemented within the Department of Defense.

This presentation will impact the forensic science community by exploring the evolution of fingerprint testimony as it pertains to “individualization” and “identification,” highlight potential issues with the current reporting paradigm and use of such language, and recommend an alternative reporting framework without those terms to ensure fingerprint results are reported in an epistemologically compatible and more scientifically defensible manner.

For more than 100 years, fingerprint evidence has been used as a valuable tool for the criminal justice system. Relying on the generalized premise of “uniqueness,” the forensic community has regarded fingerprint evidence as nearly infallible, having the capacity to “individualize” the source of a fingerprint impression to a single individual. While the uniqueness of a complete record of friction ridge skin detail is generally undisputed, the extension of that premise to partial and degraded impressions has become a central issue of debate. Nevertheless, forensic science laboratories routinely use the terms “individualization” and “identification” in technical reports and expert witness testimony to express an association of an item of evidence to a specific known source.

Over the last several years, there has been growing criticism among the scientific and legal communities regarding the use of such terms to express source associations which rely on expert interpretation. The crux of the criticism is that these terms imply absolute certainty and infallibility to the fact finder, which has not been demonstrated by available scientific data. As a result, several authoritative scientific organizations have recommended forensic science laboratories to not report or testify, directly or by implication, to a source attribution to the exclusion of all others in the world or to assert 100% infallibility and state conclusions in absolute terms when dealing with population issues. Consequently, the traditional paradigm of reporting latent fingerprint conclusions with absolute certainty to a single source has been challenged. The underlying basis for the challenge pertains to the mathematical logic applied during the interpretation of the evidence and the manner in which that evidence is articulated. By recognizing the subtle, yet non-trivial, differences in the mathematical logic, the fingerprint community may consider an alternative framework to report fingerprint evidence to ensure the certainties are not over or understated.

This presentation will: (1) discuss the logic largely subscribed to by the fingerprint community, along with the underlying basis as to why it is the focus of challenge; (2) present an alternative framework for the community to consider adopting, which is epistemologically more compatible and defensible; and, (3) discuss how this transition was achieved within the Department of Defense without minimizing the value of fingerprint evidence.

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Fingerprints, Identification, Individualization