



Position Paper on Removing the Term 'Uniqueness'

In 2017 the CanFRWG voted unanimously to modify the philosophy of friction ridge identification by removing the term 'uniqueness'. The modified philosophy reads as follows:

"Friction ridge identification is established through the agreement of sufficient friction ridge formations in sequence."

The philosophy was modified because friction ridge skin uniqueness cannot be scientifically supported and therefore its inclusion in the philosophy of friction ridge identification can be misleading to the courts. Furthermore, uniqueness is not a required element for an examiner's opinion of identification.

Background

In his paper titled "The Philosophy of Identification"¹ Chief Supt. Huber of the RCMP succinctly described the Philosophy of Identification as follows:

"When any two items contain a combination of corresponding or similar and specific oriented characteristics of such number and significance to preclude the possibility of their occurrence by mere coincidence, and there are no unaccounted for differences, it may be concluded that they are the same, or their characteristics attribute to the same cause."

Dave Ashbaugh² paraphrased the philosophy in 1999 with as "Friction ridge identification is established through the agreement of friction ridge formations, in sequence, having sufficient uniqueness to individualize." For decades this approach has been taught at the Canadian and Ontario Police Colleges in Canada.

Huber who was assistant director of the RCMP Laboratories and Identification Directorate, also discussed the certainty of science stating that "...there is little in this world of which we may be absolutely certain; that all propositions must be considered only in terms of the balance of probabilities".

The fingerprint identification discipline has long relied on the uniqueness and persistency of friction skin as the basis for identification opinions. Claims of the uniqueness of friction ridge skin features and any reproductions of those features have been challenged by Dr. Simon Cole³ and others. Empirical support for uniqueness, would require the observation and comparison of all areas of friction ridge skin of the world's population, past, present, and future which is an impossible undertaking.

The Organization of Scientific Area Committees (OSAC) Friction Ridge Subcommittee's (FRS) draft document, Guideline for the Articulation of the Decision-Making Process Leading to an Expert Opinion of Source Identification in Friction Ridge Examinations, describes the friction ridge skin as follows:

"While the highly discriminating nature of friction ridge skin is often expressed as 'uniqueness', this claim has not been empirically proven. Additionally, it has been suggested that the concept of uniqueness is

¹ Huber RA. The Philosophy of Identification. RCMP Gazette 34 (7) and (8); 1972:9-14.

² Ashbaugh, DR. Quantitative-Qualitative Friction Ridge Analysis: An Introduction to Basic and Advanced Ridgeology. 1999, CRC Press, USA, page 97.

³ Simon Cole. Forensics without uniqueness, conclusions without individualization: the new epistemology of forensic identification Law, Probability and Risk (2009) 8, 233-255

neither a guarantee of an examiner's ability to make an accurate source identification, nor a necessary precondition to reaching a reliable forensic conclusion".

OSAC FRS also makes clear that there is a distinction between the entirety of an individual's three-dimensional friction skin and any resulting impressions, subject to a number of potentially distorting factors.

"An entire complement of a particular anatomical source of friction ridge skin is highly discriminating. However, it is less certain at what point a subset of the skin's features, imperfectly reproduced as an impression, are no longer discriminating enough to distinguish between similar sources."

Rather than relying on a philosophy an examiner should have a clear understanding of an identification opinion and how to explain that opinion to the courts. The following definitions from SWGFAST and OSAC provide a good understanding of an identification opinion.

The SWGFAST definition of an identification:

"The decision by an examiner that there are sufficient features in agreement to conclude that two areas of friction ridge impressions originated from the same source. Individualization of an impression to one source is the decision that the likelihood the impression was made by another (different) source is so remote that it is considered a practical impossibility."

The proposed OSAC definition of identification:

"Source Identification is the strongest degree of association between two friction ridge impressions. It is the conclusion that the observations provide extremely strong support for the proposition that the impressions originated from the same source and extremely weak support for the proposition that the impressions originated from different sources. Source Identification is reached when the friction ridge impressions have corresponding ridge detail and the examiner would not expect to see the same arrangement of details repeated in an impression that came from a different source."

By introducing a likelihood, SWGFAST recognizes that an identification opinion is based on the balance of probabilities between two competing propositions. Proposition 1, the impressions were made by the same source versus proposition 2, the impressions were made by a different source. Though the wording is different in the OSAC definition, they also recognize the probabilistic nature of the opinion, as the weighing of strong support for and weak support against. Neither definition requires adhering to the absolute uniqueness of an impression.

The Canadian Police College has adopted the CanFRWG modified adaptation of the philosophy, but will continue to reference the original Ashbaugh version. The CanFRWG slide library contains the modified version of the philosophy.