J12   Forensic Document Examiners' Expertise in the Examination of Text-Based Signatures

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The goal of this presentation is to provide attendees with an overview of the performance results stemming from Forensic Document Examiner (FDE) participation in a skill-based test designed to assess the expertise (e.g., skill) of a group of FDEs tasked with rendering opinions regarding the authorship of genuine, disguised and simulated text - based signatures.

This presentation will impact the forensic science community, and in particular, the forensic document examination community, as data addressing FDE reliability regarding the examination of genuine, disguised and simulated text-based signatures has not previously been reported.

A group of FDEs (N=11; 5 individual FDEs and 3 peer groups consisting of 2 FDEs per group) were tasked with comparing a set of known specimen signatures (N=18) written by a single writer to a set of questioned signatures (N=60). The questioned signatures were comprised of 9 genuine signatures written by the specimen writer using their normal signature style; 6 disguised signatures written by the specimen writer; and 45 simulated signatures written by a group of 8 lay- forgers. Participants were provided with 4" x 6" commercially printed images of the previously scanned (600 ppi) original questioned and known signature specimens.

The participant group, which did not include any laypersons, are all FDEs employed in local (N=2), state (N=1), federal (N=6), or private (N=1) forensic laboratories. The experience levels of this group varied: 1-5 years (N=3), 6-10 years (N=1), 11-15 years (N=2), 16-20 (N=1), 21- 25 years (N=3), and >26 years (N=1).

A total of 480 authorship opinions were expressed by the FDE group. In terms of called opinions only (excludes all inconclusive opinions), 8 misleading opinions (3.2% of called opinions) and 242 correct opinions (96.8% of called opinions) were expressed by the group. Overall, 230 of the 480 opinions expressed were inconclusive (47.9%), 242/480 opinions (50.4%) were correct and 8/480 opinions (1.7%) were misleading (i.e., erroneous identification/elimination). The questioned "genuine" signatures did not attract any misleading opinions. One (1) of the "disguised" signatures produced an erroneous finding as did 7 of the "simulated" signatures. Although eight "forgers" were utilized to produce the 45 simulated signature specimens, only one "forger" succeeded in producing simulations (N=7) of the specimen's writer normal signature resulting in misleading opinions. All of the misleading opinions expressed (N=8) were generated by a single FDE. Furthermore, all of the misleading opinions were "qualified" (i.e., less than definitive). The remaining seven answer booklets did not contain any misleading opinions.

Historically, FDEs have demonstrated a high correct called rate and low inconclusive and/or misleading rates associated with determining the authorship of "genuine" signatures. In contrast, lower correct called rates and higher inconclusive and higher misleading rates and have been associated with authorship opinions stemming from FDEs examination

of non-natural writing types (e.g., disguised and/or simulated signatures). In this regard, the data reported from this study appears to be consistent with previously published research addressing FDE expertise for similar tasks (i.e., signature comparisons).

Reliability, Error Rates, Text-Based Signatures