J7   Signature Frequency and Classification in the Military

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After attending this presentation, attendees will understand the classification of signature styles in a large population into three main structural types and what characteristics determine their classification. Attendees will also learn about trends in the frequency of signature styles in certain ethnic groups as well as trends based on gender and age.

This presentation will impact the forensic science community by providing additional empirical data on the frequency of signature styles based upon a relatively new objectively based system for the classification of signatures.

Forensic Document Examiners (FDEs) have been identifying and comparing signatures for over 100 years. Prior to 2008, signatures were typically classified as either "formal," "informal," or "receipt/illegible" style signatures. While the classification of signatures in this manner was generally well accepted within the FDE community, this system of classification was not well defined and lacked clear objective criteria. In 2008, Linton Mohammed's article, "*Frequency of Signature Styles in San Diego County*" introduced FDEs to a new objective system of signature classification based upon the number of legible allographs present in a signature.

In this study 1,500 signatures from U.S. military personnel were examined and classified following Mohammed's scheme as one of three types of signatures: text based, mixed, or stylized. Text based signatures are signatures where each allograph of the name is clearly written. A mixed signature is defined as a signature in which two or more (but not all) allographs are legible, and a stylized signature is defined as a signature in which there are no discernable allographs.

The demographic of the signatures taken reflected the demographic of America fairly well. Results show that female signatures are vastly different than male signatures (chi squared = 68.4 p<.001). As for ethnicity, the data shows that Asians produce fewer text based signatures and more stylized signatures (chi squared = 7.11, p<.01) compared to non-Asians. In contrast, among all ethnic groups, African-Americans were found to produce the highest percentage of text based signatures. In addition, African-Americans were also found to produce the lowest percentage of stylized signatures (chi squared = 12.8, p<.001) compared to non-African Americans. All genders and ethnicities have about the same percentage of people who have a mixed signature.

This research could be the foundation for further research regarding signature styles of genders or ethnicities. Additional research should be conducted to investigate the basis behind the observed differences in signature styles between males and females and to establish why different ethnicities appear to produce different types of signatures.

Signature, Classification, Demographics