



I34 Do Evidence Submission Forms Expose Latent Print Analysts to Task-Irrelevant Information?

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The goals of this presentation are to educate attendees regarding the nature and quantity of potentially biasing, task-irrelevant information routinely requested by crime laboratories before latent print analyses are conducted and to provide insight into appropriate countermeasures.

This presentation will impact the forensic science community by providing results of a study examining the type and relevance of information requested by evidence submission forms in laboratories across America. Further, this presentation will apply the recent literature demonstrating contextual effects in forensic sciences to the evidence submission process and offer recommendations for countermeasures.

In 2009, the National Academy of Sciences (NAS) released their congressionally mandated Report, *Strengthening Forensic Science in the United States: A Path Forward*.¹ Detailing a variety of problems in the wide-scale practice of forensic science, this influential Report prompted media attention and widespread calls for reform. The concern that forensic science findings may be influenced by *contextual effects* (i.e., extraneous data and pressures that are unnecessary and potentially biasing to scientific analysis of fingerprints, firearms, DNA, and other evidence) was a primary identified problem. For example, forensic scientists who perform circumscribed procedures such as analyzing latent fingerprints may receive superfluous information regarding the criminal suspect or crime scene details; such contextual information is unnecessary to the task of comparing fingerprints and has the potential to bias the examiner toward a particular finding.

Concerns regarding contextual effects are clearly consistent with a rich body of research in cognitive and social psychology.² Moreover, several seminal studies specifically addressing contextual effects among forensic science procedures recently raised concerns throughout the forensic science community.³⁻⁵ Although limited, this growing body of research has substantial implications for policy and justice — many advocates have already urged substantial reforms.⁶

One of the primary recommendations offered in the NAS Report was to identify sources of bias and develop appropriate “countermeasures.”¹ This current study sought to clarify the nature and quantity of potentially task-irrelevant information that is routinely requested before latent print analyses are conducted in forensic laboratories. Moreover, this study seeks to identify explicit requests for potentially biasing information in order to provide insight into appropriate “countermeasures.”

In this study, 183 crime laboratories accredited by the American Society of Crime Laboratory Directors – Laboratory Accreditation Board (ASCLD-LAB) for the analysis of latent prints were first identified. An additional 24 laboratories accredited by ANSI-ASQ National Accreditation Board (ANAB) (a unified list of accredited laboratories was not available at the time of data collection) were identified in addition to three other laboratories that were either unaccredited or had recently stopped conducting latent print analyses. This study only identified laboratories accredited in latent print analysis for simplicity, clarity, and due to recent research specifically demonstrating significant contextual effects in latent print analyses.^{3,7} Each laboratory was asked to provide a blank evidence submission form used in latent print analysis requests. Two weeks after the initial request, a reminder email request was sent to all laboratories that did not respond. All remaining laboratories are now being contacted by telephone to personally request blank evidence submission forms.

To date, 76 laboratories responded to this study’s request and the provided submission forms represent at least 105 laboratories across America. The submission forms from 68 laboratories were sufficient to be fully coded. These forms represent at least 97 laboratories in 39 states. Descriptive analyses focus on information requested by submission forms regarding the offense, suspect, victim, and other seemingly task-irrelevant and potentially biasing subjects. For example, approximately 96% of all forms request information regarding the type of offense, whereas only 20% specifically request a police or incident report be provided. Approximately half of all forms request information regarding the suspect’s race and criminal history. Moreover, while some task-irrelevant prompts appear to have practical purposes (e.g., approximately half of the forms request information regarding the location of the offense and most request suspect’s name), others have no overt practical purpose (e.g., victim sex and race). Moreover, approximately 18% of forms request seemingly task-irrelevant information that appears likely to bias latent print analysts (e.g., “Is suspect serious violent felon?”; “Please indicate if item was the probable-cause evidence in your case”). This presentation will provide much more descriptive information regarding the type of task-irrelevant information being requested and exposed to latent print analysts.

In conclusion, this presentation will discuss the potential influence of task-irrelevant information currently being requested before latent print analyses are performed. This presentation will also relate current findings to extant literature demonstrating contextual effects in forensic sciences and latent print analysis specifically.^{3,5,7} Finally, there will be discussion regarding methods of achieving the correct balance of information necessary for latent print analysis (e.g., case management, linear sequential unmasking, Laboratory Information Management Systems (LIMS)) to prevent subconscious bias.

Reference(s):

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Contextual Effects, Bias, Latent Print Analysis