B201 *Human Factors in Forensic Science Practice Sourcebook*: Beyond Bias

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Learning Overview: After attending this presentation, attendees will understand: (1) the human factors that may affect forensic science practice, in addition to the well-known bias issues; (2) topics that may affect human performance, decision-making, hiring practices, and laboratory culture; and (3) a forthcoming free publication that will support the forensic science community in educating themselves about human factors in forensic science.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by exposing them to areas of cognitive science that are not always considered in conversations about "human factors," which are often limited to bias topics. Managers and practitioners alike will learn that there are many human factors that may influence either individuals or systems and can affect morale, performance, and decision outcomes.

Since the 2009 National Research Council report called out a need for "research programs on human observer bias and sources of human error in forensic examinations" (p. S-18) , there has been a surge in publication, discussion, and research centered on bias.[1] Contextual bias and confirmation bias have been the rallying cry of critics and anathema to many forensic practitioners. However, bias is not the only human factor that may influence forensic science practitioners, and while some are detrimental, others could benefit the forensic science community. For example, research demonstrates that learning is most effective when the learner is challenged with material that exceeds their current capabilities and causes errors, although much forensic training avoids tests that might reflect the failure of a student. Whether these factors are beneficial or detrimental, an understanding and awareness of human factors, and how they could affect forensic science practitioners and their work, will aid people working in forensic science.

RTI International's Forensic Technology Center of Excellence began a project in 2015 at the direction of the National Institute of Justice to assemble a Human Factors in Forensic Science Practice Sourcebook. This presentation will outline the work of the working group that was formed to achieve this task, which has met three times since then. The working group is comprised of cognitive psychology researchers and forensic scientists who have spent time getting to know one another's fields and identifying those areas where already-conducted cognitive psychology research may provide some insight into challenges faced by today's forensic science laboratories.

This presentation will also describe the structure of the resulting sourcebook, which will be freely available shortly to the forensic science community and will include chapters on: Laboratory Culture, Learning From Errors, Personnel Selection and Assessment, Communicating Forensic Science, and Accumulating, Integrating and Assessing Information.

Reference(s):

1. National Research Council. *Strengthening Forensic Science in the United States: A Path Forward.* Washington, D.C.: The National Academies Press, 2009.

Cognitive Psychology, Human Factors, Bias