



F40 From the CIA to CSI: How the Intelligence Community's Structured Analytical Techniques Can Offset Forensic Bias

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After attending this presentations, attendees will have knowledge of structured analytical techniques as a toolbox for offsetting cognitive biases in decisions, analysis, and problem solving.

This presentation will impact the forensic science community by informing attendees of pre-existing methods for alleviating cognitive biases that plague decisions and problem solving.

Like any other human endeavor, forensic science suffers from cognitive biases, thinking patterns that lead to irrational or illogical decisions. Numerous wrongful convictions have been shown to be the result of cognitive biases on the part of the police, attorneys, judges, and scientists. Although these biases have been pointed out in every aspect of forensic science, few agencies have taken the time to alter or adapt their policies and procedures to offset the biases under which their scientists labor.

The human brain makes mental models, or frames, to deal with the uncertainty in complex situations, such as criminal investigations. Mental models are necessary for people to process what otherwise would be a bewildering torrent of information. Sometimes called heuristics, they allow people to be mostly right about most things and have served an adaptive evolutionary purpose: rustling in long grass on the savanna usually means a predator, not a friend; however, in structure thinking mental models can cause investigators to ignore or reject important information or to not seek out missing information. With greater experience (which tends to reinforce the mental models) comes a greater chance of rigid thinking and less of a chance for transparent thought processes. Mental models lead people to perceive information consistent with their existing beliefs over contradictory, although more accurate, data. People are often unconscious of key assumptions that guide and support their decisions. Cognitive biases, such as only seeking out information that supports one hypothesis (“The husband is guilty.”), are implicit in mental models and heuristics.

The intelligence community has addressed these problems with a set of methods that re-formulate information, challenge pre-existing assumptions, and explore alternative hypotheses and interpretations. Collectively known as structured analytic techniques, these methods are used to help prevent intelligence failures and provide supported outcomes through transparent processes.

This presentation will provide an overview of structured analytical techniques and how they can be applied to forensic processes.

Cognitive Bias, Heuristics, Wrongful Convictions