



### E13 An Independent Forensic Laboratory May Reduce Bias

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After attending this presentation, the attendees will understand and be able to apply the four forensic science laboratory design principles: independence, democratic and local management, scientific inquiry, and scientific truth, also taking into account the tight relationships among the prosecution, police, and crime labs may introduce bias into forensic analysis. Attendees will learn to appreciate the importance of who the boss is. Attendees will understand how the alignment among the three organizations is created by having the same objectives, e.g., maximize number of convictions; by who funds the laboratory, determines and measures the success of the lab directors or supervisors; and by the integrated culture created among the prosecution, police and forensic scientists. Finally, attendees will learn the basic principles concerning how to change this relationship to minimize bias and to apply the design principles to redesign an organization. They will learn that these principles may require changing the principal (the boss) and the incentives leading to the crime laboratory identifying with the prosecution or police. They will learn that laboratories may need to report to a board of directors, rather than the prosecutor and police; may need to develop compensation plans for middle managers to encourage them to build a culture of learning based on error tolerant systems rather than error punishment; and may need to facilitate identity changes by the middle managers to encourage them to engage in the necessary organizational changes.

This presentation will impact the forensic science community by ensuring the lab is independent of the prosecution or defense and by describing monetary and non-monetary incentives that focus on producing scientific truth, leading to support a criminal justice system that will be seen as fair and impartial.

This presentation suggests that creating an independent forensic laboratory may reduce bias caused by the current tight relationship among the prosecution, police, and crime lab. When crime laboratories are funded by and aligned with the objectives of the prosecution or police, there is an increasing probability of conviction. This relationship may create the incentive to convict, with the matter of guilt or innocence as a secondary matter. This incentive to convict may induce unconscious bias in forensic-science analyses and interpretations. Labs that are independent of the prosecution and police (and the defense) will tend to be less subject to unconscious bias and bias-induced errors.

Who the boss is, is important. In any organization, it is the boss who sets the agenda, determines what success is and how that success is measured and rewarded. Organizational economics refers to this as a principal-agent relationship. The principal, in the tight relationship among the prosecution, the police, and the forensic laboratory, is either the prosecution or the police. The agent is the forensic laboratory. The direct agents are the directors and laboratory supervisors, i.e., the middle managers. The agents are motivated by monetary and non-monetary incentives. These incentives encourage the managers and the scientists to identify with the objectives of the principal. In a tight-knit relationship, the objectives of the principal and agent are aligned. In the criminal justice system, an objective is to achieve a high conviction rate. The prosecution, police, and crime lab are aligned in this objective. Incentives are built around this objective. This leads to strategic screening of who to bring to trial, what evidence to process through the crime lab and what evidence to present to decision makers, the judge, or jury. If errors are not made, then this process would be acceptable.

Unfortunately, errors of both commission and omission have occurred and will, in all likelihood, continue to occur. The tight relationships among the prosecution, police and the crime lab ensure that strategic screening will continue to occur; bias will creep into cases; and errors, convicting the wrong person or freeing the actual perpetrator, will continue. This paper proposes to level the playing field between the prosecution and defense and to ensure that the crime laboratory delivers unbiased scientific evidence to both the prosecution and defense witnesses.

**Organization, Bias, Independent**