B24 Forensic Intelligence - Forensic Science Beyond the Courtroom

Rebecca Bucht, BSc, 309 West 76th Street, #4A, New York, NY 10023; and Oliver Ribaux, PhD, Université de Lausanne, Ecole des Sciences Criminelles, Lausanne-Dorigny, BCH, 1015, Switzerland*

The goal of this presentation is to introduce a framework for integrating forensic evidence into the criminal investigation and intelligence analysis processes, complete with examples of real life applications and results.

This presentation will impact the forensic community and/or humanity by demonstrating how the development of forensic intelligence can improve knowledge of criminal mechanisms through the exploitation of a solid set of real-time data at a tactical, operational and strategic level.

Despite evidence of the benefits of applications of forensic case data to the investigative and intelligence world, research and implementation of forensic science continues to focus primarily on its function as proof in courts of law. This not only deprives said investigative and intelligence applications from an added information source, it also renders a huge wealth of forensic information unexploited.

Forensic intelligence is in essence the product of logically processing forensic case data. Although the concept of collecting and processing forensic data is by no means novel, modern technology provides databases capable of storing, handling and sorting large amounts of increasingly complex data, allowing these old concepts to be realized more effectively and on a larger scale.

The basic inferences made from forensic data include identifying recidivists, individualizing a source based on a trace, individualizing a trace based on a source, linking cases by trace-trace comparisons, profiling of the source of a trace, classifying the source of a trace, listing possible sources of a trace and listing possible relatives of the source of a trace. These inferences are made based on physical and chemical characteristics of samples and standards.

Fingerprint and DNA databases are two examples of where forensic information is used in a wider context, whether it is to identify recidivists, individualize a source based on a trace, individualize a trace based on a source, or link cases. Other forms of traces such as shoeprints, tool marks, and glove prints are less systematically exploited. These traces are abundant on crime scenes, less expensive to process, and can provide significant information. Even though a particular trace cannot necessarily provide a conclusive enough inference to be used as evidence in a court of law, the information it can provide can be indispensable in an intelligence setting.

The forensic science community should be more aware of the importance of extending the impact of forensic science beyond the courtroom. Similarly the intelligence community needs to be aware of the kind of information forensic science can provide. Effort also needs to be made to ensure functional channels of communication exist between forensic scientists and investigators, intelligence analysts and other professionals in order to ensure that the forensic case data is properly understood and contextualized.

For example, in the case of illicit drug profiling, the chemical data is first interpreted by forensic scientists in order to evaluate links between seizures. This linkage information is then passed on to investigators, and further to criminologists and geo-politicians, who all may be able to combine the forensic data with the data they already base their investigations on.

There are many potential benefits in expanding the use of forensic science data in investigative and intelligence scenarios. The input and cooperation of the forensic science community is needed in order to assure a successful integration.

Forensic Intelligence, Intelligence Aanalysis, Linkage Blindness

 ** Presenting Author*