

A59 The Importance of Hand-Drawn Maps in Forensic Archaeological Recoveries

Anthony V. Lanfranchi, BS*, West Babylon, NY 11704; Kristine A. Kortonick, BS*, Mercyhurst University, Erie, PA 16546; Victoria Lamond, BA*, Mercyhurst University, Ancaster, ON L9K 1H8, CANADA

Learning Overview: The goal of this presentation is to demonstrate the importance of forensic archaeological techniques in outdoor crime scene reconstruction, specifically in the detailed documentation of context and association via a detailed hand-drawn map.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by detailing the importance of the hand-drawn map in forensic anthropology. Attendees will understand how hand-drawn maps are used to document context and association of evidence, remove non-forensically significant information, and simplify the presentation of evidence for the courtroom and report.

Archaeology and forensic crime scene reconstruction share a similar goal of obtaining knowledge to reconstruct and understand past events. According to Dirkmaat and Adovasio, “archaeology and crime scene reconstruction, in practice as well as in theory, share the common goals of systematically documenting, collecting, and interpreting physical evidence for the purpose of understanding the factors that affected the depositional history of the evidence.”¹ Thus, it is no surprise that archaeological methods are particularly useful in the reconstruction of outdoor crime scenes, with numerous authors sharing the view that effective and efficient protocols drawn from archaeology represent the best option to process outdoor crime scenes.

In the application of forensic archaeology, the establishment of context and association for all the elements in the crime scene is crucial. One of the most useful and straightforward tools toward this goal is the humble but extremely informative hand drawn map.¹ According to Dirkmaat et al., carefully implemented mapping procedures often reveal previously unnoticed patterns of spatial distribution of evidence and significant information about the events transpired at the crime scene.¹

Properly produced hand-drawn maps will display the precise relative positions and orientation of each evidentiary item as found *in situ* at the scene. These hand-drawn maps serve different goals: (1) providing precise measurements of the placement of evidence at the scene that allow the analysis of contextual information and association patterns; (2) doing so *in situ* and in real time, as scene processing progresses, allowing immediate detection and correction of potential documentation mistakes and inconsistencies; (3) simplify the presentation of the relevant information in reports and court presentations by focusing the display only on the forensically relevant elements of the denuded scene without the distraction of non-relevant elements.¹

For these purposes, hand-drawn maps are also edited and stylized to allow for easy presentation in court and reports, while still keeping their original documenting rigor and high level of detail for all relevant evidentiary information. Photographs and 3D scans cannot efficiently replace hand-drawn maps in this sense, as they do not exclude the confounding non-evidentiary information, which may hide or obscure the forensically significant patterns and associations.

This contribution presents a collection of hand-drawn maps, from actual case scenes, that highlight and illustrate different elements, issues, and techniques that have shown to be particularly useful in the casework processed by Mercyhurst University in the past three decades. The goal of this presentation is sharing some of these techniques, as well as discussing some of the most common challenges and difficulties encountered in the production of hand-drawn maps.

Reference(s):

¹ Dirkmaat, Dennis C. *A Companion to Forensic Anthropology*. Chichester, West Sussex, UK: Wiley-Blackwell, 2012.

Forensic Archaeology, Forensic Anthropology, Crime Scene Documentation