D19 Towards Standards in Forensic Archaeology: Examining the Impact of Method on Interpretation

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The goal of this presentation is to demonstrate that different methods of excavation and recording systems applied to the same archaeological features result in different reported interpretations, and therefore reconstruction of events at crime scenes. The results may impact on how field archaeologists worldwide undertake excavations, apply methods and interpret their work.

This presentation will impact the forensic science community by demonstrating the assessment of the different methods used to excavate

archaeologically justifies the need to question and test methods used to collect evidence for forensic investigations. The level of confidence we can place in different methods is questioned.

Forensic science and the standards within its' various disciplines are under the spotlight and forensic archaeology is no exception. The National Academy of Sciences (NAS) Report 2009 highlighted the need for review, and the work of the Forensic Regulator of the Home Office in the United Kingdom developing standards within forensic science show the demand and active movement towards standards determination for forensic science disciplines.

Examination of standards in forensic archaeology, quantitative determination of accuracy of contrasted methods and critical assessment of the suitability of methods for forensic and legal cases has not been undertaken systematically. Excavation method is one of these and publication of research in this area began at Bournemouth University by Hanson in 2004. This has continued and accelerated, with an increase in contributors and data collected; Cheetham 2005; Wright, Hanson and Sterenberg 2005; Hanson 2007; Cox et al 2009; Cheetham and Hanson 2009; Wright and Hanson 2009; Hanson et al 2009, critically assessing excavation, management and practice and highlighting limitations in these areas.

Archaeologists and excavators have for too long described standard practice without an assessment of what this means and whether the methods used maximize data identification and recovery. The luxury of doing without such an assessment cannot be delayed when courts and legal cases have begun examining archaeological practice and standards are being set. Now is a critical time to conduct research that can contribute data to advise the working groups and regulatory bodies as to what standards should be set for archaeological excavation methods, recording and interpretation for forensic and legal purposes.

This paper examines archaeological and forensic case studies where interpretations have been questions and the "unrepeatable experiment" of excavation has been repeated with differing results. Experiments to test methods in a controlled manner have determined levels of archaeological and evidence identification and recovery differ depending on the methods used. Excavation of simulated and identical archaeological features was undertaken by a series of participants using two different excavation methods, which were compared: (1) stratigraphic excavation, as described in detail by Harris (1989) and Harris et al (1991); and, (2) arbitrary excavation described in detail and critically compared with the former method by Praetzellis (1991). The results showed that stratigraphic excavation provides a higher level of accuracy in evidence location and identification of archaeological contexts. They also suggest that levels of accuracy are dependent on practitioner experience and speed of excavation. Arbitrary excavation methods produce a common level of accuracy independent of experience, but this level is not accurate enough to provide confidence in this method for use forensic cases, other than in specific circumstances. This variation in results dependent on excavation method not only affects confidence in the nature and context of evidence recorded but also in the interpretations given and reported upon. **Forensic Archaeology, Excavation Methods, Standards**

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