H107 The Taphonomic Revolution: Taphonomy as an Integrating Principle in Forensic Anthropology

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After attending this presentation, attendees will have a better understanding of the significant role forensic taphonomy plays in redefining the field of forensic anthropology as a scientific discipline.

This presentation will impact the forensic science community by outlining the components of forensic taphonomy and how they provide a strong conceptual framework and new lines of research for forensic anthropology.

As originally conceived, and perpetuated for several decades, forensic anthropology was focused almost exclusively on the practical task of victim identification. This perspective provided the driving force behind the development of the field and its professional practice as it is understood today. However, this myopic focus on only the applied nature of the proposed task also imposed severe restrictions on the scope of forensic anthropology and its growth as a scientific discipline. In particular, the paradigm sprung from the classic definition largely failed to produce a cohesive, distinctive conceptual framework capable of supporting strong theoretical foundations or promoting clearly defined lines for basic research.

This presentation discusses how the emergence of forensic taphonomy in the last two decades has come to provide a much-needed theoretical framework, representing not merely a subfield within forensic anthropology, but the conceptual scaffold supporting the discipline and directing the development of the field, especially, the progress of the rapidly evolving subfields of forensic archaeology and skeletal trauma analysis.

The classic laboratory-based, osteological paradigm has focused narrowly on the diagenetic and bone-modification aspects of forensic taphonomy (mostly to assess bone trauma or diagenetic alteration); however, modern forensic applications are increasingly related to other classic taphonomic issues, such as site formation processes or quantitative taphonomy estimates. In turn, these issues serve to outline clear basic research subjects, such as bone transport and transport potentials, bone alteration by a wide variety of agents and natural factors, or anatomical part representation biases.

Moreover, forensic contexts actually offer a unique crow's nest for the observation of early taphonomic processes in real settings, allowing for powerful actualistic studies (this is currently one of the main Achilles' heels of taphonomic research at paleontological settings).

It is concluded that forensic anthropology would benefit from a stronger integration of forensic analysis (and not only taphonomic analysis, but also taphonomic theory), both in professional practice and when designing research. A forensic investigation is better understood and more meaningfully implemented, and communicated, when it is viewed as a taphonomic analysis, thus integrating scene and osteological information within a meaningful conceptual and methodological framework. This also has implications for the training of future generations of forensic anthropologists, who will need to be well-versed and experienced in field recovery techniques and paleontological theory.

Forensic Taphonomy, Forensic Archaeology, Forensic Anthropology

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