

SOCA Undergraduate Symposium 2021
Department of Sociology and Anthropology
West Virginia University

Presentation 28

The Physical Fit Analysis of Duct Tapes and its Relevance to Forensic Anthropology

Paige Schmitt
Anthropology

ABSTRACT

Physical fit analysis is a common occurrence in the trace evidence discipline of forensic science. It can involve materials such as tapes, glass, plastics, textiles, and other polymers. A physical match can demonstrate that at one time two (or more) objects were one single object. This is important for reassociation and identification. While physical fit analyses play a prominent role, there is still a general lack of standardized procedures that are followed across different departments or laboratories. By developing and following a standard order of procedure for duct tape physical fit analysis and implementing it for various sample sets of different fracture mechanisms and material quality, we can demonstrate the validity and reliability of physical fit determinations. The basic principles of this type of analysis are also applicable in the field of forensic anthropology. This connection was explored through a critical literature review and it was concluded that physical fit analysis is a crucial aspect of skeletal analysis and can aid in the determination of a biological profile, minimum number of individuals, and allow for more complete trauma analysis and other metric analyses.