H21 Past or Present? An Empirical Basis for Quantitatively Distinguishing Between Prehistoric and Modern Forensic Cases Using a California Native American Population

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The goals of this presentation are to discuss the need for a *Daubert* standard method for assessing the forensic significance of skeletal remains, and to determine the discriminatory statistical power of metric variations among prehistoric California Native American remains, indigenous Central American skeletal populations, and skeletal populations common in the forensic and archaeological context.

This presentation will impact the forensic community by explaining the general lack of qualitative and quantitative data available to identify the range of Native American populations aside from indirect expertise gained from case work. This clearly limits the confidence/ability of the forensic anthropologist in correctly allocating possible Native American remains to the forensic or prehistoric context. Metric and non-metric analyses are needed to distinguish between Native American populations and any potentially confusing cases of modern indigenous populations that may exhibit similar characteristics such as tooth wear, Inca bones, etc. The continuing influx of indigenous immigrants into California and other U.S. areas warrants the attention and refinement of forensic anthropological methods.

The goal of this presentation is to provide new data and statistical analyses for differentiating between prehistoric Native American remains and modern forensic remains. Presently, forensic anthropological standards for identifying Native American remains are based on metric and non-metric data collected on prehistoric and contemporary Native American populations from the American Southwest (see Rhine 1990, Ousley and Jantz 2005). While quantitative data are accessible for these populations, forensic criteria used to identify prehistoric Native American remains are largely dependent on field assessments of contextual information such as body position, grave goods, tooth wear, bone color, and bone texture/quality. However, as the postmortem interval widens, it becomes more difficult to apply these contextual criteria to determine antiquity, and the forensic anthropologist must rely on skeletal characteristics to determine if the remains are firstly Native American, and secondly if they are of prehistoric or forensic context.

The University of California at Santa Cruz forensic anthropological team has collected metric data on prehistoric California Native American remains. The data were analyzed to be integrated into current forensic anthropology statistical methodology for estimating the forensic significance of skeletal remains that apply to this geographical region of casework. From this presentation, attendees will better understand of the discriminatory statistical power between Prehistoric California Native American remains, indigenous Central American skeletal populations and skeletal populations common in the forensic and archaeological context.

Forensic Anthropology, Native American, Metric Analysis

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