

Patterns of variation within two samples of south-central European Neandertals. J.C.M AHERN, J.D. HAWKS, and S.-H. LEE. Department of Anthropology. University of Michigan. Ann Arbor, MI 48109-1382.

The late Neandertal sample from Vindija (Croatia) has been described as transitional between the earlier Central European Neandertals from Krapina (Croatia) and modern humans. However, the morphological differences indicating this transition may rather be the result of different sex and/or age compositions between the samples. This study tests the hypothesis that the metric differences between the Krapina and Vindija supraorbital samples are due to sampling bias. We focus upon the supraorbital region because past studies have posited this region of Vindija's morphology as particularly indicative of the sample's transitional nature. Furthermore, the supraorbital region varies significantly with both sex and age.

We analyzed six variables and nine derived indices of supraorbital torus form as defined by Smith and Ranyard (1980). For each variable and index, a normally distributed population based on the Krapina sample was created using a *Pascal* program written for this purpose. The lower half of this distribution was then resampled to determine the probability that the Vindija summary statistics could be drawn from a young age and/or female-biased subset of a Krapina-based population.

Our results show that when the Krapina sample is assumed to be random, the probability that the differences between the Krapina and Vindija supraorbital samples are due to different age/sex ratios is exceedingly low. The hypothesis that the observed differences are due to sampling bias can only be accepted when the Krapina sample is assumed to be all males/old and the Vindija sample is exclusively females/young. Thus evolutionary change rather than differences in sample composition offers the best explanation for the morphological differences between the Krapina and Vindija samples.