

(2019)

DIVERSITY WITHIN THE DIASPORA: AN ANALYSIS OF INTRA-
POPULATION VARIATION IN 20TH CENTURY AMERICANS

Isis Sorayah Lynn Dwyer

Abstract

American Blacks and American Whites represent two significantly different mechanisms of population formation. The American Black population can be traced in large part to West African populations via the Transatlantic Slave Trade, while the American White population is a result of multiple, often unrelated immigration events from countries throughout the European continent. I hypothesize that due to higher levels of genetic variation in African and African descendant populations, an American Black sample should display higher within population variation than a non-black population. However, the difference of mechanism of migration in Europeans may result in an American Whites sample that mirrors or surpasses the variation within the American Black sample. Additionally, in accordance with the single function hypothesis of cranial evolution and theories of climate adaptation, the nonmetric variance observed in each sample will be concentrated in traits related to nasal configuration, and insignificant in traits related to orbital shape. In adult males, ages 25-40, from the Hamann-Todd Human Osteological Collection, I use 35 three-dimensional landmarks, with variance quantified by sum of eigenvalues, and a nonmetric analysis of 15 macromorphoscopic traits with variance quantified by their average Pearson product moment correlation. Both measures of variance indicate that the American Blacks do not vary more than American Whites. While the degree of variation was similar, each sample exhibited a unique pattern of variance in both metric and nonmetric traits. Additionally, nonmetric variance was most heavily influenced by traits involved in the configuration of the nasal aperture. Future analyses will include a larger sample size, as well as changes to methodology that allow for a more seamless integration of metric and nonmetric data.