

Personality and Reproductive Success in the Ache (Paraguay):
Implications for the Evolution of Human Individual Differences

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Abstract

This study tested alternative evolutionary mechanisms regarding the maintenance of heritable variation in human personality by examining the relations between personality and reproductive success (RS) in two villages in a traditional natural-fertility population, the Ache of eastern Paraguay. The relation between RS and personality was assessed in each village, and a deep pedigree allowed for an analysis that tested the relation between personality breeding values and RS in deceased ancestors living in the pre-contact forest period. Phenotypic analyses did not indicate significant relations between personality and RS. However, genetically informed analyses indicated that the relation between personality breeding values (specifically agreeableness and conscientiousness) and RS varies with historical period, consistent with the hypothesis of temporal variation in selection pressures. Personality heritability estimates were similar to those estimated in most Western samples. Finally, significant assortative mating for personality was observed, which could contribute to the maintenance of heritable variation in personality.