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AN EVOLUTIONARY MODEL OF SOCIAL AND ECOLOGICAL NICHE CONSTRUCTION IN HOMINOIDS

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The hominoids are characterized by several morphological, physiological, and social characteristics including an extension of life history phases and varied patterns of complex social arrangements that extend beyond relatives, beyond sociosexual relationships, and beyond the immediate social group. In addition, our understanding of intraspecific variation suggests an evolutionary history of expanding behavioral plasticity in response to variable ecological and social selection pressures. The variation is likely related to resource distribution, population density, and individual social relationships both within and between social groups. We summarize published data on hominoid ecology and social behavior to elucidate the commonalities and differences among taxa. We will briefly review salient data on variability from each of the extant hominoid genera. We will also consider the evolutionary implications of the expression of individual variation and behavioral plasticity for the emergent relationships among individuals and groups. Ecological inheritance and niche construction in general can occur via behavioral action, and we suggest that the hominoids lay a baseline for such action through their social and ecological flexibility. We propose that this creates a form of socio-ecological inheritance resulting in social niche construction in the hominoids, which in turn forms the baseline for the hominin expansion on these themes. We conclude that a mosaic of ecological and social inheritance patterns should be considered in the reconstruction of early hominin social systems.

Keywords: social organization; Hominoidea; ecological and social niche construction; hominin evolution