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# **BOOK REVIEWS**

# Kinship and Human Evolution: Making Culture, Becoming Human by Steen Bergendorff

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It would be easy to dismiss Steen Bergendorff's book as a "just so" story. However, this would also cause us to lose sight of his useful point that kinship is the key to understanding the evolution of modern *Homo sapiens*. Bergendorff argues that current discussions about the evolution of *Homo sapiens* do not link the evolution of our species to environmental

adaptation that, he asserts, derived from the evolution of systems of kinship relations. Kinship made possible, he points out, the formation of networks and alliances that integrated otherwise isolated groups. The integration of isolated groups through kinship led, in turn, to cultural diversity in the way different groups are organized together through kinship. In his view, it is kinship, with its cultural diversity, that made possible trade and exchange between groups in different localities. This gave rise, he concludes, to the unique form of environmental adaptation through culture enacted through kinship that characterizes our species and played a key role

in the extinction of other species in the genus *Homo*, such as *Neanderthal*, *Homo erectus*, and *Homo ergaster*.

It is the origin of kinship, then, rather than morphological changes that took place as part of successive speciation during hominin evolution, that provides for Bergendorff the key to understanding the emergence of *Homo sapiens* through culturally implemented modes of adaptation. Bergendorff connects kinship with evolution through resources: "the evolving humans invented kinship to integrate the resources from complementary ecological zones" (p. 92). Kinship, he asserts, socially integrates otherwise autonomous groups into a single collectivity, thereby averaging out resource variability occurring at the spatial scale of those autonomous groups. When this leads to a sufficient jump in the population density, the collectivity wins out under resource competition with autonomous groups (Read 1987; Read and LeBlanc 2003).

Bergendorff considers the cultural adaptation of modern Homo sapiens to have begun around 100,000 BP in coastal South Africa during the last major ice age with the invention of kinship. He builds his account from C. W. Marean's (2010) observation, based on Pinnacle Point Cave on the coast of South Africa, that our ancestors had already developed an adaptation based on complementary use of coastal resources (shellfish) and inland resources (tubers) prior to 100,000 BP. During the ice age, the distance between Pinnacle Point Cave and the coastline increased due to the lowering of the oceans, hence, Bergendorff speculates, what had been a single group now became two groups, one in each of the two ecological zones, yet each group was still dependent on resources from both ecological zones. This, he argues, meant that "they survived . . . by inventing kinship" in order "to combine things and make alliances" (pp. 35–36).

Bergendorff's speculation is questionable because it requires the group at Pinnacle Point Cave to have obtained shellfish from the coastal group during the Marine Isotope Stage 6 (MIS6) time period, but there are no shellfish remains in the MIS6 layers of Pinnacle Point Cave (Marean 2010). More problematic, Bergendorff does not indicate how kinship was "invented," other than to say that "the most widespread form of human social organization is kinship, so we may assume this is how the early humans organized the relationships between their groups" (p. 40). By alliances, he is referring to marriage, supposedly invented to enable survival in contexts with resource separation and having the effect of "turning single-group foraging into alliance networks" (p. 42), thereby enabling resource exchange between groups. Exogamous marriage causes, he also asserts, all parallel cousins to be in one group and all cross cousins to be in another group (p. 44), but this occurs only when there are two intermarrying groups. The separation of parallel cousins from cross cousins leads, he states, to cross-cousin marriage (symmetric or asymmetric), and this, he claims, "was all early humans needed to invent" because "all other (tribal) forms of social organization follow from this" (p. 46). If only the deep history of *Homo sapiens* were so simple.

Running throughout the book is lack of reference to a vast corpus of publications relevant to his argument. He states that "scholars of human evolution . . . have tended to overlook the fact that human evolution is based on adaptation to the environment" (pp. 83-84), but evolution leading to Homo sapiens through adaptation to environmental conditions has long been a central research topic in biological anthropology. No reference made by him to the extensive, cross-disciplinary, and Darwinian-based theory of cultural evolution developed over the past several decades with the goal of accounting for the evolutionary appearance of *Homo* sapiens as a culture-bearing species. This endeavor has problems due to reducing culture to traits transmitted phenotypically (Lane et al. 2009; Read 2003), but the absence of any reference to this research is striking. Bergendorff's more specific claim that "our early ancestors must have found a new way of sharing resources between groups . . . by establishing some kind of relationship between the groups" is a "scenario [that] has not been proposed by other scholars" (p. 83) is belied by Clive Gamble's discussion of "an external cognitive architecture by which hominins achieved social extension within local groups and a wider community" (2010, 32). Likewise, Bergendorff's comment that previous studies "have [not] pointed to the adaptive role played by kinship" (p. 63) is belied by the book How Culture Makes Us Human (Read 2012), in which is presented the critical role that the evolution of kinship systems had for the formation of human societies. In sum, while the goal of Bergendorff's book is laudable, its execution is not.

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