

# Second Nature: Economic Origins of Human Evolution

Haim Ofek

Cambridge: Cambridge University Press, 2001. Pp. 254.  
ISBN 0-521-62534-3

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Whenever an outsider tackles a core topic in another discipline there is nervousness. When the outsider reveals next to nothing about himself beyond a single sentence (e.g., neither acknowledgements nor endnotes), this unease is heightened. So, what are we to do when a professor of advanced microeconomic theory writes a book that seeks to explain human origins?

Prof. Ofek outlines his case succinctly and lucidly in a 5-page introduction: Humans are unique in being traders, that is, in doing mercantile (as opposed to symbiotic or nepotistic) exchange. Exchange is the main driving force of human evolution, and not a by-product of other features, nor an artifact of modern times. Thus, economic theory will provide insight into evolutionary theory and together these will account for several hitherto "unexplained remarkable facts" about human evolution: fire, lithic technology, gut morphology, migration, war, agriculture, and pastoralism. This is a strong set of claims that invites scrutiny.

The theoretical relationship of economics to evolution is treated largely historically, from Adam Smith's "invisible hand" to Darwin and Wallace on natural selection. More modern interfaces, such as game theory, are mentioned only in passing, or in the case of optimal foraging theory, not at all. One looks in vain for such human evolutionary ecologists as Bruce Winterhalter or Eric Alden Smith.

Since (barring the invention of a time machine), we will never see ancestral hominids engaged in trading, Ofek must rely on indirect evidence and inference, as in all such reconstructions. This is crucial, for though we might hope to find archaeological evidence of goods, we will not find services. Key elements to his argument, such as division of labor, or exchange with nonrelatives as opposed to kin, leave no fossils or artifacts. Similarly, money, which, Ofek proposes as the source of all symbolism (p. 180) appears late in human evolution.

Sensibly, Ofek turns first to living animal models, and convincingly dispenses with ensocial insects and mammals on the grounds of their instinctive rigidity. (Though his dismissal of trophylactic ants as "vending machines" sounds harsh!) Domesticated animals, especially, the dog, are given a woolly treatment in terms of something termed "emotional currency." Primates receive the most attention, but inexplicably, Ofek chooses the baboon as his model, based on the pioneering work of DeVore, Washburn and Kummer. More recent students of baboon ecology will cringe. Chimpanzees are virtually ignored, on the grounds of their not having a fission-fusion social structure, which instead is precisely what they do have. This means that key findings such as the power politics of meat-sharing (e.g., Nishida, Stanford) are ignored. These arguments would have benefited from input by primatologists, pointing out, e.g., that of the four possible combinations of exchange of goods and services, it is goods-for-goods that is unique to human primates.

Ofek then turns to the paleo-evidence for trade. All of his candidates for key features are plausible, but none requires trade as an explanation. It may be that refinements in lithic tools, hoarding of raw materials, central-place foraging, etc., all suggest trade between social groups, but each of these can also be explained without trade. It is only in the Upper Paleolithic when indisputable evidence for long-distance trade appears, such as Mediterranean sea shells in central Europe. Other paleo-claims can be refuted by reference to living primates, e.g. tools cannot be "first and foremost a measure of division of labour" (p. 429) if apes have the former but not the latter. Ditto, the domestication of fire cannot be the enabling force for cave use, if fire-less nonhuman primates use caves.

Ofek writes clearly and tightly, but largely refuses to cite sources; citations average only about one per page. The references number only about 175, and are mostly secondary. However, his 18-page index is highly specific and comprehensive. The few illustrations are unremarkable but the special topic boxes are helpful.

The short, this is a provocative book with a viewpoint that will probably be fresh for most paleoanthropologists. Human trade likely is significantly different from the exchanges of cleaner fish, vampire bats, naked mole rats, and yes, even chimpanzees. But whether or not it was the driving force of human evolution remains unclear.

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