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Review Article

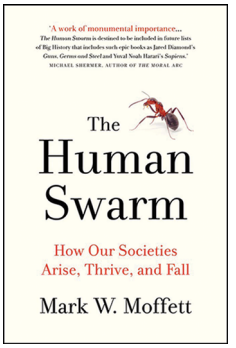
Evolution of human behaviour and societies

Ian Tattersall*

* Division of Anthropology, American Museum of Natural History, USA (✉ iant@amnh.org)

Leslie Newson & Peter J. Richerson. 2021. *A story of us: a new look at human evolution*. New York: Oxford University Press; 978-0-19088-320-1 hardback $29.95.

Mark W. Moffett. 2019. *The human swarm: how our societies arise, thrive, and fall*. London: Head of Zeus; 978-1-78954-417-6 hardback £20.



Early in their book *A story of us*, the evolutionary psychologists Leslie Newson and Peter Richerson remark of very early hominins that "we can't know what it is like to experience life with a brain so very different from our own" (p. 34). These words neatly encapsulate an unfortunate reality that confronts anyone who tries to understand or reconstruct the evolution of human cognition: we humans are so completely imprisoned within our own cognitive style as to be incapable of fully imagining what was going on in the minds of extinct hominins who were behaviourally highly sophisticated, but who nonetheless did not think like us—which basically includes all of them. The reason for this difficulty is that we modern *Homo sapiens* are entirely unique in the living world in the way in which we manipulate information about our exterior and internal worlds. We do this symbolically, which is to say that we deconstruct those worlds into vocabularies of mental symbols that we can then combine and recombine in our minds, according to rules, to make statements not only about the world as it is, but as it *might* be. And evidence in the archaeological record for the routinely symbolic behaviours that are our best proxies for the apprehension of the world in this fashion is at best very sparse indeed prior—and even for some time subsequent—to the initial appearance of *Homo sapiens.*

Newson and Richerson nonetheless take on the task of reconstructing what it may have felt like to belong to a sequence of early hominin species that they see essentially as a gradually modifying continuation of an initial ape theme. They start with the very early hominins of the period between about seven and four million years ago, and then in succession tackle the australopiths, early *Homo* and the first *Homo sapiens*. In the second half of their book they continue onto the easier terrain of Cro-Magnons, early farmers and the inhabitants of evolving modern complex societies, ending with a quick look forward. To accomplish this broad survey, the authors adopt the unusual but curiously effective expedient of first providing the reader with an extended fictional vignette of hominin life in the period concerned, as seen through the eyes of a child "because it's during childhood that the competition for survival is most acute" (p. 4). Each vignette is then justified by a discussion of the evidence on which it is based. This is an admirably innovative approach, but Newson and Richerson quickly and

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inevitably run into the problem they so acutely articulated in the quotation at the beginning of this review. Inevitably, because the (very late) adoption of symbolic thinking changed all the rules about perceiving the world, making modern *Homo sapiens* a very poor model for understanding any of its predecessors; and yet each of the vignettes is necessarily created by, and processed through, a modern sensibility. And we modern humans simply cannot viscerally understand how it feels to be clever, insightful and resourceful, all things we associate with ourselves, and yet not to reason in our unusual symbolic manner.

The initial look at the "ape ancestor" (p. 19), as Newson and Richerson call the very earliest hominids, is basically the story of an ape as seen through human eyes, while the australopith portrait is already that of an objective observer of its surroundings in the modern style. By the time we get to early *Homo* some 1.5 million years ago the vignette's protagonist is already improbably dispensing advice using the "social tool" (p. 69) of language, and the very earliest African *Homo sapiens* shows a sophistication that is way beyond anything suggested by its material culture. For the balance of the book Newson and Richerson are on somewhat firmer biological ground, but are obliged to wade through the swampy territory of cultural evolution. Here they generally follow a model of inexorably increasing cultural complexity that may make intuitive sense when one confines oneself to technology and the behaviours associated with it, but that is much harder to justify in other areas of human activity and experience. Many readers will also find it hard to share the authors' enthusiasm for applying rigid neo-Darwinian principles of evolution to the social sphere. Nonetheless, as a curiously endearing example of what one might call 'evolutionary psychology lite' their book is engaging when not infuriating, and occasionally rises to the provocative.

Mark Moffett's *The human swarm* is a very different beast. Moffett is a field biologist with a specialist interest in ants, and his central concern here is the relationship of the individual to society, and of societies to each other, principally but far from exclusively in the context of human beings and their history. Although Moffett began his academic life as a student of Ed Wilson, the Harvard biologist whose 1975 book *Sociobiology* ultimately inspired evolutionary psychology, his basic assumptions are very different from those of Newson and Richerson. As he declares in his prologue, "While animal models are helpful in illuminating the value of societies, they are insufficient to explain how humans got to where we are today" (p. 4). He does, however, share Newson and Richerson's conviction that human societies embody an inner dynamic towards change, and even complexity, if for entirely different reasons.

Moffett's highly readable discussion of his many-sided topic is wide ranging and discursive, swinging effortlessly back and forth between leafcutter ant colonies, sperm whale pods, great ape troops, human hunter-gatherer societies, the Roman Empire and manifold other expressions of the social impulse. And the thing that knits this sprawling book together is its author's conviction that the key feature that both unites the societies of human beings and social insects, and that divides the social groupings of humans from those of other mammals, is the tolerance of individual anonymity. A human being does not need to be personally acquainted with a conspecific to know how to treat him or her in a civil way. Moffett trenchantly points out that "the seemingly trivial act of entering a café full of strangers without a care in the world is one of our species' most underrated accomplishments" (p. 5), and a

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virtually unique one. Among other vertebrates, he observes, members of social groups must learn to recognise and tolerate each other as such. And limitations of memory place a strict limit—he suggests around 200, though herding animals have ways of exceeding this—on the number of individuals those societies can contain before they break up. Social insects and human beings, in contrast, can live in societies of millions and even billions of individuals (and, indeed, in complex cities), cohesion being permitted by the common possession of markers not of individual identity, but of group membership. In leafcutter ants those markers are inbuilt and mainly odoriferous, while in humans they are deliberately constructed and include such attributes as accent, mode of dress, bodily decoration, ritual, flags and even name tags.

How far back in time does this human penchant go? Moffett hazards that the "glass ceiling" of 200 individuals was probably broken "before the origin of *Homo sapiens* […] by forming anonymous societies" (p. 356). And the uniquely human prosociality which underpins the inclusive hierarchy of group memberships that anonymity allows may indeed have ancient roots among the hominins. But if the establishment of the necessary anonymity depended on the availability of extrasomatic symbols, perhaps we should expect some evidence of such symbols in the archaeological record—which turns out, as already noted, to be extremely light on evidence for symbolic behaviours of any kind before about 100 000 years ago. In which case, perhaps it would make more sense to conclude that humans only swarmed *after* the appearance of our species *Homo sapiens*.

Still, it needs to be said that comparing human to ant societies may be a little unfair, at least to the ants. Like all ant specialists, Moffett has unqualified respect for his subjects, alluding to the "wisdom of the swarm", and trotting out the obligatory quote from King Solomon: "Go to the ant, thou sluggard, consider her ways, and be wise" (p. 355). In the event, however, humans have evidently not learned very much from observing those wise ants. As Moffett notes, mindless "swarm intelligence", in which "each individual contribut[es] at most a bit of information […] makes strategic sense in that millions of ants end up taking a productive course without anyone at the lead" (p. 119). Productive not only for the ants themselves, he might have added, but also for the biota of which they are part, and in which they play an important and constructive role. If only the same thing could be said for human beings, among whom billions of rational decisions, or at least self-interested ones, have added up to wanton destruction of the environment worldwide.

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