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Hunter-Gatherer Egalitarianism as a Force for Decline in Sexual Dimorphism

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Stewart-Williams and Thomas (this issue) make a good case that human sex differences are not as great as evolutionary psychologists often make them out to be. Their case rests substantially on the argument that humans have long been more monogamous than polygynous, with men contributing considerably to the rearing of their own children, so men and women are relatively evenly matched in the degree to which they compete or choose in the mating game. Thus, concerning sexual dimorphism, humans are more like monogamous foxes or robins, where sex differences are minimal, than they are like polygynous gorillas or elephant seals, where sex differences are huge. I have two ideas to add here to Stewart-Williams and Thomas's argument.

The first idea is that sexual dimorphism in body size appears to have declined markedly over the course of hominid evolution. Although the data are somewhat sketchy and involve a number of arguable assumptions, the experts seem generally to agree that early hominids were far more dimorphic in body size than were later hominids and modern humans (Gordon, Green, & Richmond, 2008; McHenry, 1992; Ruff, 2002). According to one set of analyses, put forth originally by McHenry (1992), average female versus average male heights were, respectively: 105 versus 151 cm for *Australopithecus afarensis* (4–3 million years ago), 125 versus 157 cm for *Homo habilis* (2.4–1.6 million years ago), 160 versus 180 cm for *Homo erectus* (1.7–0.7 million years ago), and 161 versus 175 cm for modern *Homo sapiens*. In other words, if these data are correct, the percentage by which males exceed females in height has declined continuously, from a high of 44% for *A. afarensis* to a low of 9% for modern *H. sapiens*. Another way to look at it is this: Since the time of *A. afarensis*, female hominids have gained 56 cm in stature, whereas males have gained only 24 cm.

These data present the interesting possibility that even the relatively small sexual dimorphism in body size that remains for *Homo sapiens* could be vestigial, a remnant of the huge dimorphism that existed at an earlier time and has not entirely evolved out. I'm not necessarily arguing for this hypothesis, but I am suggesting that it can't be ruled out on the basis of existing data. The evidence that size dimorphism has declined over time in the human line should, at least, temper

evolutionary psychologists' use of that dimorphism as an argument for applying the males compete/females choose (MCFC) model to humans.

The second idea I wish to contribute has to do with the egalitarian life ways of band hunter-gatherers, which have been strongly emphasized by nearly all ethnologists who have lived in such cultures but ignored by most evolutionary psychologists (for reviews, see Ingold, 1999; Wiessner, 1996). Indeed, egalitarian behavior so pervades band hunter-gatherers, wherever they are found, that another label often used for such cultures is *egalitarian societies* (Kelly, 1995; Woodburn, 1982). Such groups do not have chiefs or "big men"; they make group decisions by consensus, through long discussions involving the whole band; and their egalitarian beliefs preclude individuals from attempting to boss one another around, which ties their egalitarian values to their high valuation of individual autonomy. The universality of an egalitarian ethos in band hunter-gatherers suggests that this ethos is essential to the nomadic, hunting and gathering way of life, which depends on intense and continuous cooperation and sharing that would be disrupted by struggles for dominance.

The writings of ethnologists make it clear that hunter-gatherers are not passively egalitarian, but actively so. In the oft-quoted words of Richard Lee (1988), they are "fiercely egalitarian." They do not tolerate anyone's boasting, or putting on airs, or trying to lord it over others. Their first line of defense against such behavior is ridicule. If anyone—especially a young man—acts as if he is better than others or fails to show proper humility, the rest of the group make fun of that person until humility is shown. For example, one regular practice of the African Ju/'hoan hunter-gatherers that Lee studied, which is apparently common in other hunter-gatherer societies as well, is that of "insulting the meat." Whenever a hunter brings back a fat antelope or other prize game item to be shared with the band, the hunter has to express humility by talking about how skinny and worthless it is or by crediting others for the kill. If he fails to do that (which happens rarely), others will do it for him and make fun of him in the process. When Lee (2003) asked one of the elders of the group he was observing about this practice, he received the following response:

When a young man kills much meat, he comes to think of himself as a big man, and he thinks of the rest of us as his inferiors. We can't accept this. We refuse one who boasts, for someday his pride will make him kill somebody. So we always speak of his meat as worthless. In this way we cool his heart and make him gentle. (p. 53)

Two theories have been presented to account for hunter-gatherers' means of maintaining their egalitarian ways. The theories are complementary, not contradictory; both seem well supported by ethnographic accounts. One is the *reverse dominance theory*, developed most explicitly by Christopher Boehm (1993, 1999). In a standard dominance hierarchy, a few individuals at the top dominate the many. In a system of reverse dominance, in contrast, the many act in unison to dominate anyone who tries, even in a nascent way, to dominate them. According to Boehm, hunter-gatherers are continuously vigilant to transgressions against the implicit egalitarian rules. Someone who boasts, or fails to share, or in any way seems to think that he (or *she*, but usually it's a *he*) is better than others is put in his place through ridicule, which stops once the person stops the offensive behavior. If ridicule doesn't work, the next step is shunning. The band acts as if the offending person doesn't exist. In the rare case that even that doesn't bring the offending person around, the next step is expulsion from the band.

The other theory of how hunter-gatherers maintain their egalitarian ways is my *play theory* (Gray, 2009, in press). Social play, whether in humans or other animals, requires continuous attunement to the needs and desires of the other players and a suspension of any tendency to dominate (Bekoff, 2001, 2004; Gray, 2013). Without these, social play can't exist, because players who feel put upon by others will quit, which brings the play to an end. Thus, social play is a continuous exercise in cooperation, perspective taking, and nondomination. At least a rough correlation is found, across nonhuman primates, between the degree to which play continues into adulthood and the degree to which their social structures are egalitarian rather than hierarchical (Gray, in press). The play theory posits that hunter-gatherers cultivated the playful side of their human nature as a means of suppressing the domineering side of their nature, ultimately for the purpose of enabling them to cooperate and share and thereby survive. Evidence for the theory comes from ethnographic accounts of the high degree of playfulness that runs through hunter-gatherers' games, dances, religious practices, ways of working together, means of correcting people's norm violations, and approach to children's education. Also relevant to the play theory is the long-standing observation that hunter-gatherer cultures are the only known cultures that do not have competitive games (Sutton-Smith & Roberts, 1970). All of their games involve cooperation, humor, and

an apparently deliberate avoidance of any attempt to "win" or to prove oneself to be better than others (see, e.g., Marshall, 1976).

All of this is quite relevant, I think, to Stewart-Williams and Thomas's thesis. On one hand, the fact that hunter-gatherers use cultural means to counteract alpha-male behavior is evidence that human males indeed do have at least some genetic proclivity to attempt to dominate, even when such behavior is not rewarded or modeled by others around them, which is consistent with the MCFC model. On the other hand, the fact that hunter-gatherers so effectively counteract domineering behavior suggests that throughout our hunter-gatherer history such behavior may have had negative rather than positive survival value. If males with the strongest tendencies to dominate were routinely expelled from the band, which would often bring death, then the genes promoting such behavior would continuously decline in the population. Similarly, if males with the strongest tendencies to dominate were less able to play and in other ways interact with other band members in the noncompetitive ways that hunter-gatherers admire, then those males would not have been viewed as attractive mating partners, leading, again, to a decline in dominance-producing genes. Nobody knows how far back in time such cultural proscriptions against domineering behavior go, but there is reason to believe that our ancestors were hunting and gathering in cooperative bands at least since the time of *Homo erectus*. If cultural practices selecting against domineering behavior in males were in place all that time, that could have been a potent force for reducing human sexual dimorphism, including the dimorphism in body size.

A final, more general comment that I feel is worth making is this. We evolutionary psychologists often conduct research with college sophomores or other contemporary groups and then speculate on how the behaviors we observe might have come about through natural selection during our hunter-gatherer days, without taking into account what anthropologists and archeologists have learned about hunter-gatherers and human origins generally. We would do well to broaden our perspectives.

Note

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