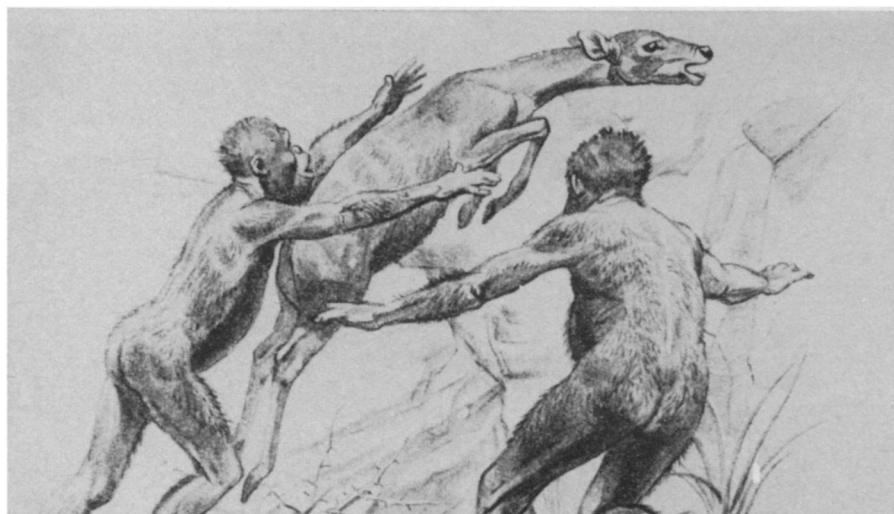


The scarred species

Whether marked from birth or scarred by culture, the human, in his aggressiveness, is under scrutiny

by Patricia McBroom



Reconstructions by Jay Matternes/Smithsonian Institution

The human line began in Africa with two-footed carnivorous primates.



Early man, Australopithecus.

Few issues bring the anthropological world to a boil more quickly than the question of man's innate aggression: Are humans born ferocious and destructive or do they learn to be that way?

The issue flared most recently with publication of two books—Konrad Lorenz's "On Aggression" and Robert Ardrey's "The Territorial Imperative"—and has been raging ever since.

Both books argue an aggressive drive in humans inherited from the evolutionary past, and their popular success caused considerable distress among cultural anthropologists who feel the argument is highly misleading.

In the cultural view, whatever man is he learns to be, since the human capacity to learn overrides any possible remnants of instinctive behavior.

In September, anthropologist Ashley Montagu replied to Lorenz and Ardrey with a collection of essays, by 14 authors, entitled "Man and Aggression." In his own chapter, Dr. Montagu writes, "The myth of early man's aggressiveness belongs in the same class as the myth of the beast . . . the myth of the jungle . . . and the myth of innate depravity or original sin."

"What we are unwilling to acknowl-

edge as essentially of our own disordering in the man-made environment, we saddle upon 'Nature.'" It is very comforting, says Dr. Montagu, and it successfully diverts attention from the real source of human destructiveness—namely, false and contradictory values operating in an overcrowded, highly competitive and threatening world.

Dr. Montagu's true antagonist is not Robert Ardrey, a writer, but Dr. Raymond Dart, the South African anatomist who influenced Ardrey.

It was Dr. Dart who in 1924 discovered the fossil remains of the two-million-year-old prehuman ancestor, *Australopithecus*. Since then he has been extrapolating from the physical evidence to create a vision of the kind of creature that bred humankind.

"These are the ogres of the fairy tales," says Dr. Dart. "They are people who would grind your bones to make their bread."

Man earned the mark-of-Cain when he turned from the herbivorous pursuits of other primates to become a carnivore, says Dr. Dart, and the "blood spattered, slaughter-gutted archives of human history" testify to the presence of a blood lust. "Man is and was a

killer. He got on his hind legs so he could kill with a club."

It is worth noting that Dr. Dart refers specifically to the ferocity of prehumans, not to an aggressive drive inherited generally from the animal kingdom. Much of the talk about evolutionary drives attempts to explain human aggression by the fighting behavior of wholly unrelated species—monkeys, rats and birds—while glossing over two million years of human evolution, during which time many species of human-related primates arose, roamed the earth and became extinct.

It is speculation about the behavior of these protohumans which underlies much of the current controversy. What in their nature, what forces of evolution produced man, the mass murderer, when even his closest living relatives, the great apes, are quite peaceful creatures who rarely kill or even fight against each other?

A good deal has been learned over the past decade about this human ancestry—*Australopithecus*, *Homo erectus* and Neanderthal man, in order of their appearance on earth.

Australopithecus includes several species of bipedal primates whose members

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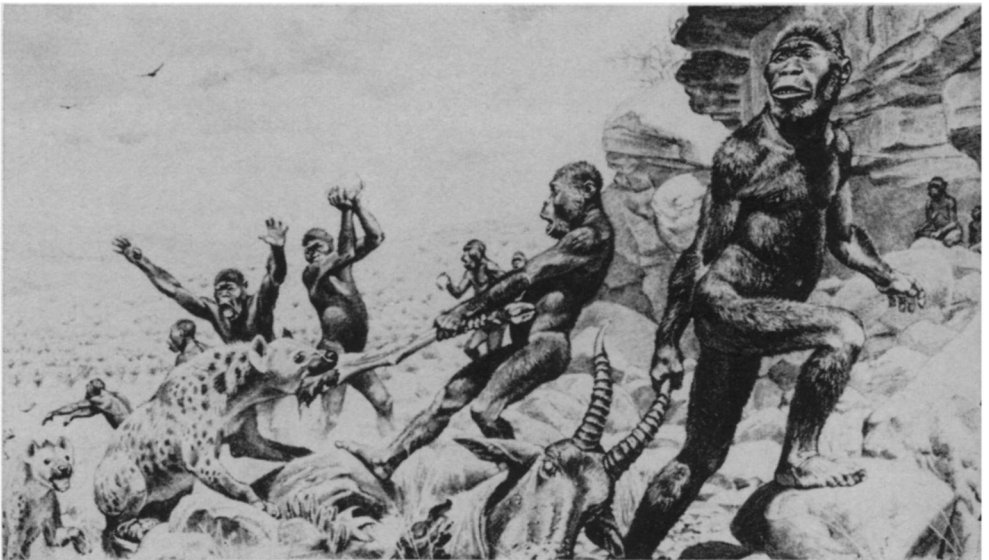
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Australopithecus emerged two million years ago as a predator. . . .



. . . . but he also must have fought hyenas for a scavenger's meal.

have so far been found only in Africa. Dr. Dart found the first representative in South Africa, but it was not until Dr. Louis S.B. Leakey uncovered an *Australopithecus* fossil from the Olduvai Gorge in East Africa in 1959 that the creature could be dated. Radiocarbon dating revealed an age of two million years, adding another 600,000 years to human development and allowing fossil remains such as Java and Peking men to fall in their proper time scale.

At least one of these *Australopithecines* was a vegetarian, but he was an evolutionary deadend, helped to extinction, it is believed, by his meat-eating cousins.

As evidence of carnivorous habits, the broken skulls of baboons have been found associated with *Australopithecine* bones, suggesting that the creature ate the brains.

But whether *Australopithecus* was a true predator or a scavenger of already killed meat is not yet established. "There certainly is evidence of carnivorous and predatory behavior," says Dr. F. Clark Howell, of the University of Chicago, an authority on early man. "but the question is, how much of the total evidence suggests this way of life."

An answer, says Dr. Howell, would have bearing on the issue of man's innate aggressiveness and on the strength of that drive, if one exists. Hopefully, a group of American anthropologists now in Africa analyzing the evidence will determine how predatory the human ancestor was.

From this pool of meat-eating, upright primates came the first known species of man, *Homo erectus*, about half a million years ago. *Homo erectus*—which includes Java man in Southeast Asia and Peking man in China—spread around the world. He was a hunter.

But again, "this was a very different kind of carnivorous behavior from other animals," says Dr. Howell. Females did not hunt, indicating that the predatory behavior was rather specialized in humans, as contrasted to such animals as cats and wolves.

In short, the mark-of-Cain thesis rests on ambiguous biological evidence. As Dr. Howell points out, man has a digestive system fit for vegetables and must cook his meat to break down the proteins. At the same time, he has an adrenalin pattern suited to the hunt.

The first *Homo sapiens*, Neanderthal man, appeared in several places about



Dart: "Man is and was a killer."

100,000 years ago. According to the most recent fossil evidence, he evolved into modern (Cro-Magnon) man in the Middle East but not in Europe. In migrating throughout the world, modern men may have overtaken and destroyed European Neanderthals who had failed to evolve.

Neanderthal man buried his dead, built dwellings, left evidence of an artistic sense—and also indulged in cannibalism, eating the brains of fellow creatures apparently to incorporate the dead man's spirit.

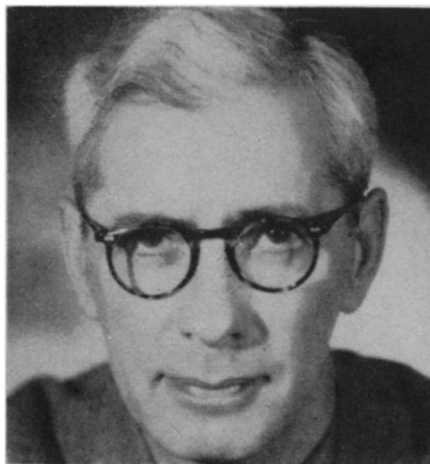
The step from eating baboon brains to eating human brains seems a short one. And if the two are derived from the same bloodlust, as Dr. Dart implies, then there would be reason to believe in some extraordinary ferocity in humans, since other animals do not eat their own kind. But lacking clear evidence of cannibalism before Neanderthal times, it would appear that more than a million years of evolution had to occur before cannibalism was possible and that it stems from man's central characteristic as a species—his symbolizing brain.

Between the time of *Australopithecus* and Neanderthal man, the brain underwent rapid changes, gaining the large neocortex which was to provide the human species with its ability to manipulate symbols.

All human groups, including the most illiterate and primitive, think in symbols.

The brain is so constructed that emotional impulses—which man shares with other animals—flow constantly through this symbolic structure in the neocortex. The neocortex, in turn, sends constant impulses to emotional centers. Except in unusual cases, human emotions are not simply experienced at an unthinking level. They are channeled through symbols—words, ideas, convictions, religious, social and personal beliefs, all of them abstractions from the concrete world experienced by other animals.

"The emergence of the ability to



Montagu: Whatever man is, he learns.

symbol," says Dr. Leslie White, University of Michigan anthropologist, "resulted in the creation of a whole new world which contains, directs, controls and regulates basic drives." In effect it cut man loose from instinctive behavior.

The product of this capacity is culture, says Dr. White, and he adds that it is futile to try to get at biological nature "by looking through the prism of culture which refracts everything."

The essence of the cultural argument is that if humans can talk themselves into eating each other for spiritual reasons, damming up their sexuality for moral reasons, killing their brothers for political reasons and going to their own deaths for ideological reasons, where is the rationale for believing in an innate aggressive drive unmodified by those same symbolic processes?

"The very fundamental drive of sex is controlled by non-biological forces," says Dr. White, "The same is true of aggression."

Whether or not the human symbolic processes are completely arbitrary, or themselves the product of evolution, concerns a group of linguists looking for universal patterns in language.

Dr. Noam Chomsky, a linguist at the Massachusetts Institute of Technology, believes symbols do have biological roots and that the kind of language and culture which humans developed over a million years was subjected to the forces of evolution.

Anthropologists take it for granted, says Dr. Chomsky, that humans can devise any kind of culture, that there are no limits. But he says, "I am morally certain that if people began understanding culture, they would discern very strict limitations."

Whether or not Dr. Chomsky is right about a biological endowment shaping culture, his theory takes even the inheritance argument back to culture. As Dr. White says in paraphrasing Alexander Pope, "The proper study of man is not mankind, but culture."

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