

## The Indelible Stamp

Man still bears in his bodily frame the indelible stamp of his lowly origin.

Charles Darwin,  
*The Descent of Man* (1871)

*The hunters and I are up early. Nine of us—eight of them plus me as observer—are in a small forested valley among rugged hills in a remote part of East Africa. We left together in the darkness of early morning, and now as daylight comes the band of hunters stops on a grassy hillside overlooking a lake. They gather a breakfast of berries and leaves while I sit nearby eating a granola bar. We do not speak, nor can we speak any language the other would understand. I am simply following quietly and taking notes. During breakfast the hunters hear calls from their neighbors to the north, and set off to meet them. We cross a series of ridges, and as the group traverses a stream bed and climbs the valley slope on the other side we see and hear a group of monkeys feeding in a stand of small trees. The monkeys are social and noisy, clamoring about and leaping around in the lower branches. The hunters quickly assess the situation and*

*run to the base of the trees; several begin to climb up toward the monkeys while others remain on the ground below, scanning the treetops. A large monkey falls from the tree while trying to escape and thuds into the dry leaves at my feet. A hunter rushes to grab it, then thumps it against the ground until it is dead. A moment later he steals another hunter's kill with impunity and stands in front of me gripping each monkey in a fist. After several minutes of frenzied action the hunt ends with five monkeys caught. Everyone then sits down around the base of the tree, feasting on the meat they have caught. The hunters politick throughout the meal, sharing and swapping scraps of the much-desired meat. For more than two hours they eat the monkeys, and the noise of bones crunching and contented grunting is all around me. The hunters share the bounty with one another, finish off most of the meal, and then nap for an hour. Every bit of the carcass—including bones and skin—is eaten raw. After they are sated and rested, they get up as if on cue and walk off in search of more food.*

This event took place not among a group of African hunter-gatherer people, such as the Hadza of northern Tanzania or the !Kung of the Kalahari desert, but among wild chimpanzees. In forests of western Tanzania and across equatorial Africa, these apes include the meat of other mammals as a small but regular part of their diet. The parallels to what traditional human societies do with meat are of-

ten striking. Traditional foraging people (“hunter-gatherers”) subsist on the natural products of the landscape and get by with minimal technology, gathering plant foods and hunting for small animals.

In this book I argue that the origins of human intelligence are linked to the acquisition of meat, especially through the cognitive capacities necessary for the strategic sharing of meat with fellow group members. Important aspects of the behavior of some higher primates—hunting and meat sharing and the social and cognitive skills that enable these behaviors—are shared evolved traits with humans and point to the origins of human intelligence. This does not mean that there is an instinctive desire to hunt on the part of all modern humans; only a small percentage of people in industrialized countries have ever hunted for anything that’s alive. Instead, the intellect required to be a clever, strategic, and mindful sharer of meat is the essential recipe that led to the expansion of the human brain.

Chimpanzees hunt and eat the meat of a variety of mammals. They are skilled makers and users of tools. These apes and their closest relatives have large brains and an intellect that surpasses that of all other nonhuman animals. They are funhouse mirrors of our ancestry; the same stock produced us, but with a filter of millions of years of adaptations that occurred during the history of each lin-

eage. Chimpanzees, along with the other great apes—the bonobo, gorilla, and orangutan—illustrate how evolution can mold a highly intelligent animal that lives in a complex forest environment and an even more complex society. There is only one animal of greater intelligence, and it also lives in an incredibly intricate web of social relationships, navigating its way through life using group-mates as support systems and as tools to be manipulated. This other animal, of course, is humankind.

A second key piece of evidence about the behavior patterns that made us human is that our ancestors foraged for meat. The fossil record contains evidence of increasingly sophisticated tool manufacturing beginning some two and a half million years ago, just as the human brain began to approach the size threshold that is considered human. Researchers believe that this tool use facilitated an increase in the importance of meat in the early human diet. Exactly when did meat become an important part of the diet, and how was it obtained? Were early humans savage and cunning hunters, or clever but weak scavengers? How important was meat in the diet as our ancestors' lineages evolved and diversified, and how could the eating and sharing of animal prey have contributed to the expansion and reorganization of the human brain and cognition? What are the nutritional and social roles of meat in traditional human societies? These are

questions to which anthropologists studying the fossil record have few answers.

I also examine traditional human societies using the same Darwinian paradigm that has provided answers to key questions about animal behavior. Comparing the behavioral ecology of humans living in very traditional settings to nonhuman animal ecology is an inquiry into whether both are driven by the same principles of natural selection. Because the direct evidence of early humanity in the fossil record is and always will be scanty—full of bones but lacking in flesh, both literally and figuratively—information on living human and nonhuman meat eaters is very important. There is much to be learned from modern hunting people in this regard. Modern foraging people are not relicts of the past. They have lives and societies with as much cultural sophistry as any other group of modern humans. But technologically they tend to be simpler, allowing us to see how people who need to subsist from their forest or savannah worlds can do so. This interaction of ecology and behavior provides a backdrop against which the potential range of ecological adaptations of ancient humans can be considered.

If not for the anthropocentrism of the earliest taxonomists—the scientists who devised the naming system we still use to classify living things—humans and apes would be grouped together because of our many shared traits. We three hunting

apes—chimpanzees, ancestral hominids, and modern foraging people such as the !Kung or Aché—provide a frame of reference of our evolutionary history and therefore the roots of human behavior. I am not the first anthropologist to address these issues, although this is the first account to integrate modern evidence from my three areas of interest. The role of meat in the lives of early hominids has been viewed at times as crucial, at other times as minor, and at still other times as nonexistent in different eras of anthropological thought. With fossils and human foragers providing supporting evidence for what we know about great apes, we can consider a detailed triptych of hunting, scavenging, and meat sharing, all aimed at exploring the origins of human behavior.

#### MAN THE HUNTER REVISITED

In 1990 I wrote a short paper with a colleague lamenting the way in which human evolutionary scholars were getting away with erecting male-centered portraits of our early human ancestors, hiding behind the mask of Darwinian principles.<sup>1</sup> Shortly thereafter I went to Tanzania and watched wild chimpanzees for the first time. What I saw was a shock to my values regarding a gender-balanced ethics of behavior. Male chimpanzees brutalize females routinely, coercing them for sexual access and

punishing them when they don't receive a desired mating. Some females certainly wield power as the matriarchs of powerful family lineages, but even high-ranking females submit to the lowest-ranking males much of the time. I came to see this ape society as one in which might makes right, a pervasive pattern in human patriarchal societies as well. In both chimpanzee and human societies, the control of meat contributes to a might-makes-right form of patriarchy. This led inevitably to my fascination with the notion of Man the Hunter, or perhaps Man the Meat-possessor. As I sat in an African forest collecting data on chimpanzee hunting and meat-sharing behavior, I did not realize that I was entering an academic jungle considerably wilder than the one my chimpanzees inhabited.

A previous generation of scholars sought to explain the role of hunting in the origins of human behavior and intelligence. It was called "Man the Hunter" after a volume that grew out of a conference on the behavior of modern hunting and gathering peoples. A paper by Sherwood Washburn and Chet Lancaster in that book attributed many aspects of modern human social behavior and intellect directly to a history of hunting large animals. The coordinative and communicative abilities that are fundamental to the success of a cooperative hunt were linked to the increasing role of meat eating. In subsequent years this model of human

origins was roundly attacked, in part on factual grounds and in part due to the inherent and unacknowledged biases it was said to contain. *Man the Hunter* is infamous in anthropological circles, and the scholarly reactions against it cannot be overstated. Feminist anthropology as a discipline grew in part out of the anger over the gender inequities inherent in *Man the Hunter*. This is because in its original formulation the model of human brain expansion based on male-driven activities was tinged with sexism and blatantly ignored evidence of the important role of women in acquiring protein in most societies.

Recent information on the behavior of human hunters and nonhuman primate hunters and from the fossil record points to the crucial role of meat eating, and especially meat sharing, in the roots of human behavior and intellect. Males typically obtain meat in human and nonhuman primate societies and then attempt to use it to manipulate or control females. Socially correct gender politics notwithstanding, this is an empirical and demonstrable reality. While early views of "Man" were deeply flawed by a tendency to ignore the female side of human evolution, and by a concomitant ignorance of data on women in human societies and of female nonhuman primates, the central importance of meat acquisition and meat sharing in modern and ancient human societies is simply undeniable. Meat,

not only as a nutritionally desirable food item but also as a social currency that is controlled by males and therefore is a tool for the maintenance of patriarchal systems, plays an essential part in the social systems of both traditional human and some non-human primate societies. The main thrust of my book is this: that *Man the Hunter* was fatally flawed, first by its emphasis on the role of cognition in meat acquisition rather than meat sharing, and second by its unconscious ignorance of the role of females in the meat-control system. Correcting these two errors leads us to establish a new framework in the light of modern evolutionary theory and of current views of the roles of women and men in human societies, past and present.

#### THE EXPANDING CIRCLE OF DARWINISM

Educated and otherwise enlightened people everywhere are reluctant to accept the full extent of the evolutionary process in the natural world. Once it was widely believed that while physical laws governed the movements of bodies in our solar system, life on earth was attributed to a divine power. Later, in a post-Darwinian world, this split worldview came undone, but many continued to believe that while all animals and plants were the products of natural selection, the human species had some-

how been exempt from it. Perhaps this can be attributed to our short mammalian life spans: eighty years is too short a time in which to touch and feel the evolutionary process in the way that we can sense the presence of other shorter-lived physical and biological laws of nature. Still later, many philosophers of the human condition acknowledged the humble organic origins of humanity while continuing to maintain that the origin of human consciousness is the product of supernatural forces. The nature of the human mind is today a subject of great debate. There are those who see the mind as the sum of our long history of incrementally more complex neural inner workings, and those who do not accept that any number or arrangement of neurons could account for the tasks our brain is able to accomplish. The philosopher Daniel Dennett, one of a handful of scholars in the humanities who have turned to Darwinian principles to make sense of the human psyche, refers to the explanatory power of natural selection as a “universal acid.” It is a conceptual framework that explains everything in its path, and the last stop is human self-awareness and intelligence. As the most intelligent creatures on the planet besides humans, the apes offer us key insights into the makings of our own intellect.

“The Indelible Stamp” refers to the final sentence of Charles Darwin’s second great book, *The Descent of Man* (1871), in which he took his principles of

evolution through natural selection and applied them to humans. Our bodies are a mosaic of evolutionary influences that have acted on our ancestors at many stages in our history. For example, the grasping hand was molded in the last days of the dinosaurs some 65 million years ago; our upright posture evolved some 6 million years ago; our enormous brain ballooned to its present size only some 100–200,000 years ago. Together, the package has become what we, for the purpose of biological classification, consider human. But it is not only our anatomy that is the product of evolution. Our sociality, the most basic primate behavioral adaptation, is a product of our status as a higher primate. While we learn to be members of one culture or another through learning, our social nature itself is as basic a primate trait as breathing. A whole range of human social behaviors, from mother-infant bonding to corporate striving to choosing a mate to sexual jealousy, is influenced by evolved tendencies to respond within a certain range of emotional and behavioral reactions to particular situations. Eyebrows are raised when we consider human behavior to be motivated only by our human species centrism.

This Darwinian paradigm is of fundamental importance in tearing down old perspectives about meat eating and its role in human origins and in forging a new synthesis. Without a framework

rooted in the realities of what animals, including human animals, do, we are left with stories told through the ages and all their inherent biases and flavorings. By considering what apes do, what modern humans do, and what early hominids probably did, we may come up with an integrated view of human behavior.

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