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Going Bananas

THE EGALITARIANS—HUMAN AND CHIMPANZEE: AN ANTHROPOLOGICAL VIEW OF SOCIAL ORGANIZATION. *By Margaret Power. Cambridge University Press. $44.95.*

Reviewed by JOEL E. COHEN

Since biblical times, animal societies have served as mirrors and models for human societies. The author of Proverbs (6:6, 30:25) praised the industry and wisdom of the ants. For some people today, insect societies remain influential metaphors for human societies. The development of the theory of evolution in the nineteenth century led to interest in the societies of man's closest living relatives, the nonhuman primates (monkeys and apes)—and chief among these the great apes (chimpanzees, gorillas, and orangutans). Knowledge of the primates promised to shed light on the origins and underlying nature of human society.

In 1932, Solly Zuckerman published his observations of a group of baboons in the London zoo. His influential book, *The Social Life of Monkeys and Apes,* depicted a hierarchical baboon society in which bigger, more powerful animals dominate weaker animals by means of aggression. That contentious image prepared subsequent scientists to see dominance and aggression in field studies of non-human primates under less artificial conditions than those of the London zoo.

Considering that our closest surviving kin is probably the chimpanzee (though the gorilla contends for this honor), it is astonishing that field studies of chimpanzee behavior and society are so recent. In 1931, H. W. Nissen reported on sixty-four days of field observations. The first field studies of chimpanzees to last longer than sixty-four days began in 1960, when three independent workers launched projects: A. Kortlandt in what is now eastern Zaire; Junichiro Itani in the Mahale Mountains, Tanzania; and—best known to the public in Europe and America—Jane Goodall in what is now Gombe National Park, Tanzania. These and subsequent long-term field studies have produced extraordinary and unexpected details about the private and social lives of many individual, identified chimpanzees and chimpanzee groups.

Margaret Power's new book, The Egalitarians—Human and Chimpanzee, is not another field study of chimpanzee behavior and society. Much more ambitious, it attempts to reorganize our understanding of the detailed data of previous chimpanzee field studies. In what is apparently her first book, published at the age of seventy-one, Power paints a persuasive picture of the two chief longitudinal chimp field studies, those at Gombe and Mahale, as unintended trials of the effect of a simple human intervention on chimpanzee society. The human intervention entails provisioning: the offering of limited, centralized food baits, under human control, to attract the chimps for more convenient human observation. The effect of this intervention on chimpanzee society is enormous and dramatic.

Before the intervention, which occurred around 1965 at Gombe, and around 1968 at Mahale, chimpanzees practiced what anthropologists of human societies call an immediate-return foraging system. Members hunt or gather in dispersed, small groups from dispersed, small food sources. They consume the food obtained the same day or within a few days. Food is not processed elaborately, and any tools that may be used are simple and locally made, without much investment of labor. Individuals do not depend on second or third parties for access to food, water, or sex. The probability of conflict between individuals is minimized because each individual can easily shift from one small foraging group to

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another. Each adult is autonomous. Within a group, leadership shifts from one adult to another, depending on the needs and the willingness of others to follow at the moment. The dominant emotional tone is relaxed and positive. Mostly positive behaviors between members, and occasional peacekeeping interventions, are all there is to the social structure. This picture of chimpanzee society is based on naturalistic methods of observation that do not substantially affect the behavior being observed.

Unfortunately, naturalistic methods are extremely costly in human time and effort. Shy wild chimpanzees tend to slip away when they notice that a human observer is approaching. Because of the difficulty of following and observing chimpanzees using only naturalistic methods, the projects at Gombe and Mahale started to attract chimpanzees with substantial food baits that were kept under the control of the human observers.

At Gombe, in one of several systems of feeding that were tried, concrete feeding boxes were sunk into the ground; the boxes had steel lids that human observers could control by means of underground wires. The intention was to assure that the expensive imported bananas in the bait boxes went to the chimps and not to the local baboons, and that each chimp had one box of bananas each day. The effect of this provisioning was to generate individual frustration (as chimps saw and smelled bananas they could not eat), aggression between individuals, and social disruption. According to Power, Goodall reported that

> the constant feeding was having a marked effect on the behaviour of the chimps. They were beginning to move about in large groups more often than they had ever done in the old days. They were sleeping near camp and arriving in noisy hordes in the morning. Worst of all, the adult males were becoming increasingly aggressive. When we first offered the chimps bananas the males seldom fought over their food; they shared boxes.... [Now] not only was there a great deal more fighting than ever before, but many of the chimps were hanging around camp for hours and hours every day.

Independent researchers began to work at Gombe in June 1967. Power notes (her emphasis):

> *All studies carried out at Gombe, other than Jane Goodall's pre-1965 work, are of chimpanzees that had already experienced prolonged, human-imposed interference with access to a desired food.* By 1967, the interactions and relationships of the Gombe apes were very different from those reported by Goodall in the four years before 1965, and it was in 1967 that the systematic, much relied on, data bank was begun.

(A pessimist might suspect that the unintended effects of provisioning, as described by Power, illustrate a general constraint that governs scientists who study organisms nearly as complex as themselves: the easier an experimental intervention makes it to study a social system, the less likely it is that the behavior observed is the behavior originally of interest.)

A key insight of Power is that chimps and humans share a genetic potential for *both* kinds of society, relaxed and egalitarian or aggressive and hierarchical. The expression of one or the other mode of behavior is strongly influenced by the abundance and distribution of food in the environment. When fruiting trees of a given species are scattered and come into fruit at different times, small foraging groups compete indirectly by eating fruit in the absence of other groups. The home ranges of different groups overlap amiably. By contrast, when desired food is available at a single place in limited supply for limited times, direct conflict and frustration vented in aggression pit the strong against the weak.

Power details the contrasts between chimp social behavior reported by naturalistic field studies and provisioned field studies, and she compares the naturalistic observations with anthropological reports of six human societies organized as immediate-return foraging systems. She concludes that "the fundamental adapted form of social organization of humans and chimpanzees is egalitarian and based on positive behavior and a relationship of mutual dependence between autonomous actors shifting between fundamental leader-follower status/roles." In such societies,

> the positive form of self-interest is not a struggle for superiority or advantage, but for personal well-being, self-esteem. If enlightened self-interest was [*sic*] normally a struggle for superiority—which involves higher and lower rank, privilege and status—the foraging system could not have endured, as it has from humankind's beginnings to a short 10,000 years ago. Nor could it endure among chimpanzees, as the disintegration of the Gombe group demonstrates.

The archetype of human society, Power argues from this, was painted better by Rousseau than by Hobbes.

This book will meet diverse receptions colored by the ideological preconceptions of its readers. Those who benefit from a competitive, power-oriented society are likely to greet with skepticism Power's view that the earlier, less systematic, more limited data from naturalistic field studies describe the true prototype of chimpanzee and human societies. Those whose sympathies lie with a less hierarchical and aggressive society, with more symmetrical roles for males and females, are likely to receive warmly her suggestion that the immediate-return foraging system is prototypical for chimpanzees and humans. For me, Power's analysis of the data is as persuasive as a retrospective interpretation of a finite set of data can be expected to be. Strong confirmation can come only from further naturalistic and provisioned studies of chimpanzees under relatively undisturbed circumstances. Such studies will be possible only if the chimpanzees continue to survive in the wild. On the desirability of that, I suspect Power and Goodall would agree.