A Muster of Veterans

Man and Beast Revisited. MICHAEL H. ROBINSON and LIONEL TIGER, Eds. Smithsonian Institution Press, Washington, DC, 1991. xxiv, 386 pp., illus. Paper, $16.95. From a symposium.

In 1969 a then-unusual symposium was convened by the Smithsonian and the National Zoo. Called *Man and Beast*, it rode the crest of a wave then just breaking, which would make the long-debated question of our place among the animals more compelling and controversial than it had been in generations.

Man and Beast Revisited, based on a reconvening of the conference 20 years later, lives up to the promise of its title. A number of the original participants came again, along with a talented group of younger investigators. But the major presence at the new meeting was of course the 20 years. As they passed, E. O. Wilson, Robert Trivers (both contributors to the book), and others did the seminal work that has resulted in the establishment of sociobiology as a legitimate subdiscipline; a Nobel Prize was awarded to three ethologists; vigorous, sometimes vicious opposition has largely been defeated; and a growing number of social scientists have concluded that the proper study of humankind is—or at least includes—animals.

Like most symposium volumes, this one is uneven. There are a few compellingly interesting theory papers, some nice intellectual memoirs, and some speculations that lack coherence and factual basis. But the book is important because it represents so well the leadership of the new consensus in this field. The writing is uncommonly and almost consistently good; as symposium volumes go, this one is a pleasure to read. It is not the place to go for a comprehensive treatment of the frontier of knowledge in this general area. But it is not a bad place to start for the uninitiated who need a quick and easy overview of the state of the art, and one that takes recent history seriously.

Thomas Sebeok offers an unfortunate preface ("A Personal Note") that seems oddly out of joint with the rest of the book. He repeats his well-known contemptuous dismissal of ape language studies, offering no more reason to credit it than he has before. Happily, Irwin Shapiro follows with a graceful and funny—yes, funny—exposition on the history of the planet from the Big Bang to the dinosaurs' demise. Richard Dawkins, author of *The Selfish Gene* and *The Blind Watchmaker*, argues in his chapter, "Darwin triumphant," that Darwinian natural selection is a universal law that, like the laws of physics, would hold on any planet evolving life. In the realm of memoirs, Sherwood Washburn congratulates himself on having correctly anticipated back in 1969, via comparative anatomy, the decisive demonstration by molecular taxonomy that apes and humans are only very recently distinct.

Edward O. Wilson, the most powerful thinker and writer on sociobiology, notes in a brief essay how well his colleagues' viewpoint has withstood the test of those same 22 years: "Five journals in sociobiology have been launched. . . . Research and teaching in the field has spread worldwide. . . . The divisions that seemed at first to exist along the lines of political ideology have faded. . ."

Robin Fox supplies a valuable evolutionary perspective on aggression, explaining the need to appreciate our environment of evolutionary adaptedness (EEA) if we are to understand violence and noting that very few political or social scientists give the EEA the slightest attention. Helen Fisher escapes this criticism in her chapter about divorce. Although her attempt to explain it by reference to the age of weaning in hunting and gathering societies is not very convincing, she carefully documents a remarkable cross-cultural constancy in the timing of divorce—the modal duration of marriage before divorce being four years. Like any cross-cultural restriction of variation, this one needs explaining. Four years might be the time it takes for an initially doomed marriage to fully unravel, or the time a couple of low compatibility can stay together without locking themselves in with a pregnancy. Whatever the explanation, this is one of those delightful facts about human behavior that begins to look like a fact of human nature.

John F. Eisenberg, a leading theorist of mammalian evolution, reviews 20 years of field research on howler monkeys (*Alouatta* sp.) supporting another prediction made in the '60s, that variation in social structure among habitats *within* a species would prove as great as many differences between species—thus obviating any simple formal taxonomy of social systems corresponding to those in morphology and biochemistry. He also logs in with a description of howler-monkey competitive infanticide, its frequency "suggesting to us that the rate of takeovers by alien males, displacement of the resident male, and subsequent killing of infants less than six months of age is density dependent." The pattern is remarkably similar to the corresponding phenomenon in hanuman langurs (*Presbytis entellus*) as described by Sarah Blaffer Hrdy and confirms one of sociobiology's most important (and disturbing) predictions.

Phyllis Dolhinow, who has with increasing strain resisted this adaptive explanation of langur infanticide, nevertheless gives here an otherwise useful review of infancy and mother-infant relations in *P. entellus*; her studies give us more information on these subjects for this species than is available for any other colobine monkey. Robert Trivers, one of the founders of sociobiology, holds an engaging if unconvincing discourse on deception; it is, he argues, vital to adaptation, and to deceive well an animal must first deceive itself. One might conclude from this that the Freudian laws, like the Darwinian ones in Dawkins's argument, would have to evolve on any planet harboring "intelligent" life.

Martin Moynihan offers a disappointing discussion of animal communication in relation to human language, almost justifying the unfair claim of Thomas Sebeok's preface that animal behaviorists "habitually confound" communication, language, and speech. However, one case does not make a generalization, and the investigators who trouble Sebeok and other linguists most—those who study acquired symbol systems in apes—understand these distinctions perfectly well. Richard Restak contributes a graceful five pages on what the brain can do that computers can't—although he seems in the end to protest too much against the analogy, and certainly in places he underestimates computers.

Three chapters on animals as companions refer credulously to dubious material—all positive—on the effects of pets on people, published mostly in obscure books and journals. Except for the value of assistance-pets for the handicapped, little is really known on this matter. The authors are animal advocates, and they do not even entertain the hypothesis that pets may sometimes increase the isolation that separates the lonely from those they need most—other human beings. Their bias does not admit to consideration the thought that an intense attachment to an animal may not be a laudable goal philosoph-

ically or psychologically. The questions are interesting, but the answers are premature.

Michael Robinson, one of the editors of the volume, offers an engaging memoir of a lifetime in ethology, demonstrating that fascination with animals is a more powerful kind of advocacy than special pleading is. His co-editor, Lionel Tiger, gives an impressively good-humored account of how he and others were mistreated by ideologists of the '70s for their claim that biology was relevant to social science. He also briefly summarizes the argument in his book *The Manufacture of Evil*, which sees great explanatory power—and grave threats—in so colossal and sudden a departure from our species's EEA. Ironically, his biological argument is probably a more radical critique of modern industrial capitalism than was Marx and Engels's. In the light of it, Norman Myers and Stephen H. Schneider round out the volume with discussions of some consequences of industrialization, for the varieties of life on earth and for the climate of the planet respectively. Both raise doubts, no less valid for being familiar, about whether our current heedless industrial juggernaut is compatible with our long-term survival.

I have skipped over three chapters that deserve special mention. Richard Potts supplies a superbly reasoned, informative, and crisp account of the problem of the order of events in the evolution of human brain and behavior. In 1969 it was necessary to think of our major departures from the great apes—bipedalism, meat-eating, hunting, tool-making, marriage, prolonged infancy, large brains, language, and culture—as having more or less balled along together in evolution, in a cycle of mutual and cumulative causation; no longer. Today it is not only possible but necessary, in the light of paleontological discoveries (by Potts among many others), to do what he calls "untying the knot." For example, brain size and tool technologies have not been as tightly coupled as we thought; during the more than 1 million years in which our predecessor, *Homo erectus*, held sway, a significant increase in brain size occurred without any change in stone-tool technology. Similarly, the evolution of bipedalism needs to be decoupled from the much later emergence of markedly slowed ontogeny. One might add that Potts's conclusion—that "traces of the events and processes involved in becoming human span the entire fossil history of hominids"—directly contradicts the punctuationist model that has become popular among some paleontologists.

"Sexual selection theory," writes Mary Jane West-Eberhard in her excellent overview of the theory, "ranks alongside molecular genetics and immunology as an area in which a biologist trained twenty years ago is likely to need an update." That, for any of these three fields, is a noteworthy understatement. She goes on quite fairly to say, "A student of human evolution, character diversity in any sexually reproducing organism, or sociality who does not have a basic understanding of sexual selection theory is as crippled and anachronistic as a geneticist who would proceed today without a basic knowledge of the nature of DNA." Starting with Darwin, she reviews ideas about sexual selection and social behavior. Among her more provocative suggestions is that "the extravagantly developed human brain" is "the 'peacock's tail' of human evolution." Although I consider it more likely to be an organ necessary for getting through years of parenting with hopelessly dependent young, either explanation is intrinsic to reproduction—in contrast to the traditional brains-are-for-toolmaking sort of theory that Potts and his colleagues may now have ruled out of court.

Finally, there is a wonderfully interesting chapter by John Hurrell Crook on the evolution of self-awareness, intersubjectivity, and other cognitive states we humans are so proud of. I resent such speculation but in this case was won over. Crook's argument is hurt by silly musings, unencumbered by ethnological facts, on "primitive" hunters and shamans, and he registers some philosophical speculations that are painfully reminiscent of the pop Zen Buddhism of the '60s. Yet he has earned the right to think about the implications of evolution for philosophy and cognitive psychology, just as he once earned the right to seek the meaning of primate social behavior for taxonomy. He sees humans as "the most extreme case" of "social calculation," shaped by adaptive pressure favoring intersubjectivity—whether it appears as generous empathy or Machiavellian intelligence. As in the chapters by Fox and West-Eberhard, here it is *social* cognition that is driving the phylogeny of mind.

Crook sees hope in this fundamental capacity: "We may come to see the universe in a less adversarial way, not as a resource about to let us down, but as the matrix from which we came, of which we are, and with which we must cooperate." Perhaps this book's most decisive message lies in Crook's radical dissolution of one of philosophy's most ancient problems: "Nature is not an 'other.' We are ourselves pervaded by it. We *are* it and have always been so." Yet, to our lasting detriment, we have not always acknowledged it. Perhaps we can begin to do so now.

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The Burt Case: Another Foray

Science, Ideology, and the Media. The Cyril Burt Scandal. RONALD FLETCHER. Transaction Books, New Brunswick, NJ, 1991. xxviii, 419 pp. $29.95.

Sociologist Ronald Fletcher here makes the most outspoken attempt yet to rehabilitate the reputation of Sir Cyril Burt (1883–1971), the British psychologist widely accused of publishing a fraudulent series of separated-twin studies, among other unethical practices. Following a detailed critique of the accusations that will be fully intelligible only to readers already familiar with the case, Fletcher concludes "that the 'scandal' in the 'Cyril Burt scandal' lies chiefly in the disgraceful nature of the testimony of those who have raised and pursued it" (p. 342).

Fletcher effectively exposes some of the rhetorical excesses of Burt's critics and the one-sided and sensationalistic reporting of the case by the media. He reminds us that Burt, whatever his flaws, also made many positive contributions to British psychology. But on the main substance of the charges against Burt, informed readers will find Fletcher's arguments to be highly questionable.

Some of the charges scrutinized by Fletcher involved unethical editorial practices. For example, Alan and Ann Clarke claimed that Burt published, under their names, summaries of their Ph.D. theses actually written by himself and slanted in such a way as implicitly to discredit the theories of their mentor Hans Eysenck. Fletcher reprints the two summaries in question, from the *British Journal of Educational Psychology*, together with Alan Clarke's actual abstract as included in his thesis (Ann Clarke's thesis apparently included no abstract). Fletcher declares for Alan Clarke that the "substance and the conclusion [of the two abstracts] are the same, but set out more precisely and in more systematic form in [Burt's] version"; for Ann Clarke he asks the reader to consider in what way Burt's abstract could be seen as "slanted against Eysenck," with the obvious implication that it is not (pp. 120–125).

In fact, however, both Burt-authored abstracts explicitly mention Eysenck as having