

# Humans in the balance

Robert Attenborough

**The Rise and Fall of the Third Chimpanzee.** By Jared Diamond. *Hutchinson Radius*: 1991. Pp. 360. £16.99.

If Professor Diamond's Gibbonesque title hints at stunning new discoveries in cryptozoology or palaeontology, then the hint has misled. His third chimpanzee is Aristotle's political animal, Oakley's toolmaker, Morris's naked ape, Tobias's tottering biped, Wilson's promising primate, Passingham's human primate. . . in short, you and me. This is a book about the evolutionary origins of our species, its development and special features (attractive and otherwise), and its future.

As a crisp encapsulation of the human condition, 'third chimpanzee' is a more apt phrase than many; nonetheless, it is a little strained. Our kinship with chimpanzees is indeed now shown by molecular evolutionists to be even closer than anatomists and palaeoanthropologists took it to be: but by any measure we remain much more strongly differentiated from the common and pygmy chimpanzees than they are from each other; and if (as it seems) we and chimpanzees are phylogenetically closer to each other than to gorillas, it is probably not by very much. Differences between chimpanzees and humans in DNA and protein are small (1.6 per cent in the DNA study that Diamond quotes), which shows not just that we are phylogenetically close, but also that relatively few genes can produce large phenotypic differences. Diamond concedes much of this, although he also maintains, unconvincingly to my mind, that a properly revised taxonomy (*Homo troglodytes* for chimpanzees, and so on) would have large conceptual and ethical consequences.

The book is, however, too diverse in content to be judged simply on the idea crystallized in its title. It deals with aspects of humans as various as their evolution, life cycle, unique characteristics, dispersals and conquests, and the threat to their survival posed by destruction of biota and habitat. Most of the chapters are versions of articles originally written for *Discover* or *Natural History*; and as the book proceeds, their separate origins become more apparent despite linking sections.

Whether viewed as a whole or as a collection of essays, his book confirms Diamond as an impressive scholar and popularizer. He makes effective use of his own areas of expertise, with birds

providing many of his behavioural and ecological examples — a refreshing change from primates. More striking is how acutely he observes other fields. I can find no serious fault with his facts about primatology, human evolution and archaeology; his sources are good and often very recent; and with minor exceptions his overviews are up to date and his interpretations defensible. One might ask whether the "great leap forward" (Mao's phrase borrowed to describe the cluster of human behavioural innovations suddenly emerging around 40,000 years ago) will turn out to be an artefact of working near the limits of radiocarbon dating; nevertheless, even here Diamond's interpretation is broadly consistent with the evidence that is currently available.

On some controversial issues Diamond justifiably takes sides. He favours rapid replacement from Africa rather than multi-regional continuity for the evolution of anatomically modern humans; he adopts late dates for the peopling of the Americas; and he suggests a Bronze Age steppe rather than a neolithic Near Eastern origin for Indo-European languages, with the horse as their vehicle for dispersal. Generally, he outlines the opposing view as well as his own, and gives reasons for his opinions, although not in detail. On the peopling of the Americas, for instance, there is too little detail for the reader to form an independent view; yet Diamond's adoption of the dominant orthodoxy here is crucial to his interpretation of faunal extinctions.

On other fields Diamond is sometimes less sure-footed. I am unpersuaded by his explanations for racial differences (Darwin's sexual selection hypothesis), assortative mating for physical traits (direct mate choice) and drug abuse (Zahavi's sociobiological handicap principle). And the chapter on art is disappointing, being anthropologically unsophisticated. More generally, a worrying progressivism and cultural absolutism (if that is the opposite of relativism) creeps into many of the interpretations of cultural behaviour, past and present, despite his explicit caution against this way of thinking in the chapter on agriculture. There is also a general tendency to interpret cultural behaviour glibly in natural-selection terms.

Two small slips warrant a mention: a sociobiological relationship is misstated on page 76; and a myth about the first outside contacts with highland New Guinea being in 1930 is repeated on page 205 (there were visits by German missionaries from 1919).

Diamond's approach is semipopular, neither as racy as Morris's, nor as scholarly as Passingham's. His prose is accessible, colloquial and literate, though

not without clichés. The stylistic devices that Diamond uses to ingratiate himself with the readers and to hold their attention can obtrude at times, but if they bring him a wider audience than all the better. The costs of this approach include some selectivity and simplification, and the omission of references from the text. It is an irony of the genre that where thorough sourcing is most needed, readability considerations permit no more than reading suggestions relegated to endnotes.

Nonetheless, this is an enjoyable, stimulating and audacious book, a showcase for Diamond's admirable ability to keep abreast of so many fields of research. And in disseminating his knowledge, he achieves his wider aim of consciousness-raising about the extinction we are causing other species, and the impact that this destruction might have on our own prospects of survival. □

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There is something for everyone's holiday relaxation in the crop of books newly published in paperback ■ *The Search for Eve* by Michael H. Brown is a journalist's account of the hunt for the mother of us all. J. S. Jones described it as "a racy tale about the studies of the human race and about the quarrels of those who study it" (*Nature* **345**, 395; 1990). Published by HarperCollins, price is \$10.95. ■ Those contemplating taking on Las Vegas in their summer break should read Thomas A. Bass's *The Newtonian Casino*, an insider's revelation of how a group of physicists and computer buffs sets out to beat the house at roulette with computers small enough to fit into their shoes (for review see *Nature* **345**, 776; 1990). Published by Penguin, price £5.99. ■ A less ambitious challenge is *The Lady and the Tiger?* by Raymond Smullyan, a collection of problems and paradoxes which lead to the very heart of Gödel's theorem (Oxford University Press, £6.99). ■ Also from Oxford comes *The Threat and the Glory* by Peter Medawar and *A Very Decided Preference* by his wife, Jean Medawar. The first contains Peter Medawar's Reith lectures and several of his essays, while the second was described by Alex Comfort as being "an unsentimental tribute" to life with the great man (*Nature* **346**, 709; 1990). Both are priced at £6.99. ■ In *The New Age: Notes of a Fringe-Watcher*, Martin Gardner continues his noble crusade against pseudoscience and the paranormal with pieces taken from *Skeptical Inquirer*, *New York Times*, *Discover* magazine and other publications (Prometheus, \$15.95). ■ Finally, everyone would be advised to absorb at least a few of the thoughts in Alan L. Mackay's impressive *A Dictionary of Scientific Quotations* (Adam Hilger, £9.50), for in the words of Albert Einstein "The whole of science is nothing more than a refinement of everyday thinking." □