

On best behaviour

Mark Ridley

Man and Beast Revisited. Edited by Michael H. Robinson and Lionel Tiger. Smithsonian Institution Press: 1991. Pp.386. \$16.95, £13.25 (pbk).

ANIMALS, whether human or non-human, often have to sort out conflicts of interest; and as they more-or-less metaphorically size each other up to plan their next move, there may well be an advantage in deceiving each other about their strength, social connections, sex appeal, and so on. Deception only works if it is not seen through, and natural selection should act in these cases to make it as effective as possible. One effective means (as several biologists have argued) is for the deceiver first to deceive itself. We lie most convincingly when we believe we are being honest. Robert Trivers — who has done as much as anyone to inspire this line of thought — develops the idea in a marvellous essay in this multi-authored conference volume, a successor to a 1969 Smithsonian conference called *Man and Beast*.

Trivers argues that an animal will often know how angry, powerful, or whatever, it really is, but will repress that knowledge into its unconscious while holding in its consciousness ideas better suited to social advancement. "True and false information are simultaneously stored in the same individual; the true information is in the unconscious, the false information in the conscious." He describes illustrative experiments, using the galvanic skin response, for humans and suggests how analogous work could be done with nonhumans. If Trivers is right, we should be particularly likely to hold contradictory conscious and unconscious models of reality for information that matters in conflicts of interests and is capable of being communicated. In his words, his aim is to explain something that "everyone seems agreed" about: that "there is some kind of intimate connection between communication and consciousness".

Trivers takes seriously the possibility that many species (perhaps including plants) are conscious, and he describes his attempts to involve the neighbourhood birds in conversation. He has been blowing through an old whistle at the local "mockingbirds at 2 o'clock in the morning outside [his] home in Santa Cruz". "Whether they make any more sense of this than I, I cannot tell", he concludes, though he has enjoyed some extended bouts of countersinging with them. He recommends the experiments



Wooden waterwheels, such as these, kept the gardens of Cairo in bloom between the tenth and twelfth centuries, when the city was the centre of the Islamic world. *A Forest Journey* by John Perlin, which traces the role of wood in the development of civilization, is now published in paperback by Harvard University Press at \$14.95, £11.95. □

not only on "scientific grounds" but also for "raising one's own consciousness": and the scientific community will have to decide whether Trivers's ideas are more conveniently (and quite nonjudgmentally) termed the 'Californian' or the 'Franciscan hypothesis'.

The chapters are not all as enjoyable as Trivers', but he is in many ways representative. The book's main (but certainly not universal) theme is behavioural ecology; all the chapters should be intelligible to the non-specialist; many are highly personal in style (Michael Robinson's, in the extreme, is pure autobiography); most are resolutely nonempirical. Thus J. H. Crook, who has been not merely to California but up the Himalayas, provides a chapter on consciousness that is even more 'spaced-out' than Trivers'; and Richard Dawkins concludes an elegant chapter (which includes, by the way, good material on evolution and the second law of thermodynamics) by inviting "empirically minded, white-coated, and gum-booted biologists" all to equip themselves with armchairs. They should then be able to draw rather less parochial conclusions — conclusions indeed that "do not require us actually to know any facts at all".

On humans, Helen Fisher's chapter reviews the evidence on divorce. She has compiled data from a number of societies, and together they suggest that the frequency of divorce peaks about four years after marriage. She connects this with the four-year interbirth interval known from several hunter-gatherer societies, and tentatively conjectures that human monogamy may be serial: couples may stay together to produce one offspring and then change partners. The argument, as presented, has too many gaps to convince, and the analysis is incomplete; but it may become an

important study. In his chapter, Richard Potts synoptically outlines modern work on the time at which the uniquely hominid characteristics evolved, and includes his own views on hunter-gatherers: he believes the hunter-gatherer phase of our evolution originated only about 700,000 years ago, rather than over two million years ago.

Even by the standards of the genre, *Man and Beast Revisited* is a mixed bag. It contains 21 chapters; but this number includes some remarkably slight offerings by senior scientists — as if the book is intended to commemorate the symposium rather than contribute to the literature. The other longer chapters include three on pets, one (by Phyllis Dolhinow) on the promising topic of 'tactics of primate immaturity' (that is, how to behave if you are a young monkey), and a chapter by Restak, who lists several (unconvincing to me) differences between brains and computers. If that is not variety enough, the mainly biological core is sandwiched between a final chapter by the climatologist Stephen Schneider on global warming and an opening chapter, by the astrophysicist Irwin Shapiro, on the origin of the Universe. There is also a dyspeptic preface (or "personal note") by Thomas Sebeck, which is out of character with the rest of the book. "It should be noted", he notes, "that many animal behaviourists continue to habitually confound three radically different concepts: communication, language, and speech." Well, we must know different animal behaviourists. *Man and Beast Revisited* is one of those books that make us grateful for the photocopying machine and the nonenforcement of the copyright laws. □

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