

Comparative Psychology: A Handbook

Edited by Gary Greenberg and Maury M Haraway (1998). Garland Publishing: New York and London. 914pp. Hardback. Obtainable from, Afterhurst Mail Ordering Service, c/o the Book Ordering Dept, Taylor & Francis Ltd, Rankine Rd, Basingstoke, Hants RG24 8PR (ISBN 0815312814). Price £97.00.

This multi-authored book covering a vast range of material is a curious mixture. However, my dominant feeling is that it represents a very valuable contribution and is something of a landmark. The editors are to be congratulated on their efforts in assembling (and disciplining?!) such a wide range of authors in a book mercifully free of errors. In effect, it consists of several books in one. In part, it is a valuable source of insight and reference on the entire spectrum of ethology and comparative psychology. No matter what the topic or species of interest to the reader, there is likely to be something useful to be found here. In part, it is a welcome and much-needed attempt to stand back, reflect upon and question comparative psychology and its historical and scientific roots.

Applied ethology and welfare issues are not directly a major concern of the book, although they are represented, eg by R Bryan Jones' chapter on 'Alleviating fear in poultry' and Donna Fitzroy Hardy's on 'Research in zoos and aquariums'. However, more indirectly, its consideration of the psychology of different species and the theoretical bases of the study of behaviour is of importance to those concerned with welfare.

The book consists of a number of what one might call 'straight' chapters on such things as mating strategies, sleep and visual perception. Introductory courses for UK undergraduates would benefit from the book. Genetic and environmental determinants of behaviour are discussed fully and very well, doing justice to the complexities of interacting determinants. Causation and function are each well discussed, and one is tempted to send the book as a Christmas present to those who have tried so hard to Balkanize ethology into distinct schools. Thus, Klopfer and Podos (p 82) discuss: '...how behavioural ecology is now turning back to the other disciplines within behavioural biology, from which it arose'. By consensus, some of the heroes of the authors clearly emerge as Gottlieb, Schneirla, Lerner, Tobach and Maier.

More controversially, the ethos of part of the book is set by a radical critique of the more hard-nosed reductionist and sociobiological perspectives, as evidenced by the remark of Partridge and Greenberg (p 150) that in psychology 'reductionism impedes progress'. Surely, the most naïve reductionism does this – but intelligent qualified reductionism has a place alongside holism. It would be difficult to claim that all knowledge of neural systems has impeded rather than enhanced psychology. Here, I felt more balance was needed. Similarly, this tone is also set by the choice of Mae-Wan Ho to write the chapter on evolution, where I could hear myself thinking 'Come back Lamarck – all is forgiven'. Although she makes some fascinating challenges to orthodoxy, my feeling was that this critique might have been better placed in a more orthodox context. There are even chapters on dialectical processes and a Euro-Marxist perspective! Frankly, here I was lost in places such as to the meaning and the relevance to comparative psychology of the quote of Sartre (p 102) '[s]cientific knowledge destroys itself in order to become the world'. Such material is at a different level and perspective from most of the other chapters. However, in fairness, other chapters give a sociobiological perspective and in Swenson's I found myself believing in God.

There is an interesting chapter entitled 'History of comparative psychology in biographical sketches' by Nancy K Innis. This gives a welcome human angle to the subject that enables scientific positions to be contextualized, as do personal references made in other chapters. However, I was surprised to find Hull included but Skinner omitted. This emphasis

on a personal angle makes it all the more surprising and frustrating that the only institutional affiliation one can find for the contributors to the book themselves is to its editorial advisory board rather than for its editors or authors.

Overall, this is a book to be strongly recommended, provided that the distinct perspective of some contributors is taken into account.

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Attitudes to Animals: Views in Animal Welfare

Edited by Francine L Dolins (1999). Cambridge University Press: Cambridge. 262pp. Hardback and paperback. Obtainable from the publishers, The Edinburgh Bldg, Shaftesbury Rd, Cambridge CB2 2RU, UK; or for North American orders from, 40 West 20th St, New York, NY1011-4211, USA (ISBN 052147342X hardback or 0521479061). Price £40.00/US\$64.95 hardback or £14.95/US\$23.95.

According to Francine Dolins, the book's editor, the purpose of this collection of essays is to inform and provide a foundation from which to make ethical choices about animals. Dolins has a long-time commitment to animal welfare, as have the 20 or so contributors. She is a psychologist with research experience in spatial cognition and in both field and captive primate populations. She is currently the Program Officer for Research in the Animal Research Issues Section of The Humane Society of the United States. Other contributors include well-known animal advocate scholars such as James Serpell, Donald Broom, Françoise Wemelsfelder, Mary Midgley, David Dewhurst, Robert Young and Henk Verhoog, to mention just a few. The authors are primarily British and American, with some representation from Canada and the Netherlands.

A wide range of topics are covered, ranging from animal awareness, environmental enrichment, the behavioural requirements of farm animals, reverence for life, the future of wildlife, to endangered species. Some provocative questions are asked, such as: What is a human and what is an animal? Should we stop keeping any animals captive? The nature of the discussion ranges through philosophical, ethical, and scientific perspectives.

Among the chapters that I particularly enjoyed was that of Wemelsfelder on the problem of animal awareness. She addresses the issue of whether animals are indeed subjectively aware of their own situation, or whether we just project our human values and feelings upon them. Some studies involving measurements of animal awareness are described and she presents suggestions for starting points for the scientific measurement of chronic suffering in captive animals.

Another chapter provides some fascinating data on factors that affect brain development. Susan Healy and Martin Tovée discuss findings from neurophysiological research showing that sensory impoverishment and enrichment affect an animal's brain organization. In the period following birth, impoverished environments have a deleterious affect on normal brain development. The complexity of the visual environment in which an animal lives affects normal neurological development. Investigations have been made of the effects of modifying spatial features such as cage size on the morphology of the hippocampus – the area of the brain involved with higher-order processing, learning and memory. Research suggests that the size of the hippocampus may be affected by the area in which an animal regularly moves around (such as a cage or territory). This finding comes from data comparing hippocampus size between domesticated and ancestral wild races. Hippocampus size, (and that of the