



Book Reviews

Primate Psychology. Edited by DARIO MAESTRIPIERI.
Cambridge, Massachusetts: Harvard University Press
(2003), Pp. ix + 619. Price \$65.00.

What is psychology? If I look at the contents page of a typical psychology textbook, I come across the usual suspects; learning and memory, personality, psychobiology, development, sensation and perception, thought, language, emotion, abnormal psychology and social cognition. Such subjects constitute what is perceived as the common usage of psychology, the study of how the mind works. However, half of the book *Primate Psychology* reads more like a textbook on primate behaviour than on primate psychology, with chapters on aggression, conflict resolution, sexuality, parenting, affiliation, and nonvocal and vocal communication. The rest of the book reviews more traditional topics of psychology, with chapters on cognitive development, social cognition, personality, emotion, language, neuropsychology and psychopathology.

That psychology and behaviour refer to the same thing is a long-held but incorrect assumption at the heart of this book, which somewhat clouded my judgement of it. Psychology, by definition, attempts to understand the thought processes involved in behaviour, whereas behaviour may be influenced by an animal's psychology but is not constrained by it. Indeed, an animal's behaviour can be irrational, without recourse to conscious thought processes, being entirely at the whim of hormones or the autonomic nervous system. Another difference between psychology and behaviour is that 'psychology' is an anthropocentric term. Throughout the history of comparative psychology and animal learning theory, the aim has been to understand the psychology of the human animal, even when studying nonhuman animals. Whether experiments in these areas were focused on principles of learning shared by all vertebrates or the competence of animals tested on traditional human traits, such as tool use or language acquisition, the comparison species was always *Homo sapiens*. In contrast, studies of behaviour have been concerned predominantly with understanding how animals interact with conspecifics, heterospecifics and their environment within the constraints of evolution.

Yerkes (1943, page 3) made this distinction clear: 'The study of other primates may prove the most direct and economical route to profitable knowledge of ourselves, because, in them, basic mechanisms are less obscured by cultural influence. Certainly it is unwise to assume that human biology can be advanced only by the study of man himself. This could be true only if he existed as a unique organism, lacking genetic relations to other types of creatures'.

Research into the mental life of monkeys and apes has benefited and been plagued in equal measure by such an anthropocentric approach. Bering & Povinelli (chapter 8) highlight this problem by suggesting that the 'argument by analogy' (i.e. the argument that primates possess the same mental capacities as humans because they are closely related to us, and because the form they take resembles ours behaviourally) is incorrect, and that all previous data must be reinterpreted with this in mind. This argument carries less weight when applied to studies of more distantly related taxa, such as birds and fish.

This book also does not seem to know whether it wants to be a book on primate behaviour (e.g. DeVore 1965; Loy & Peters 1991), or a book on primate psychology (e.g. Tomasello & Call 1997). It also does not seem to know whether to be a traditional edited volume, in which individual authors largely describe their own work, or a textbook surveying the entire field. As a book on primate behaviour, it has more than achieved its aims. It contains a number of wonderful, contemporary chapters whose authors present excellent overviews of their respective areas, particularly those on aggression (Higley), sexuality (Wallen), parenting (Fairbanks) and attachment (Maestriperi). It is a pity that it succeeds less well as a textbook on primate psychology, because Tomasello & Call's (1997) authoritative book on primate cognition is in increasing need of updating, and, unlike the present book, it does not cover all psychological fields.

Despite these few shortcomings, there is a lot to enjoy and think about in this book. Overall, the standard of the chapters is very high. Maestriperi has assembled a stellar cast of primatologists who write with authority about their subjects. Many of these subjects, such as personality and psychopathology, have not been reviewed in earlier volumes, and their inclusion says much about the modernization of primatology. Gosling, Lilienfeld & Marino's chapter on personality is particularly useful; the data and methodology that they present demonstrate that animal personality is a sufficiently established subfield to make important contributions to understanding the mental capacities of primates and nonprimates alike. The theoretical framework of this chapter will be essential reading for any researcher starting personality research in non-human animals.

I was less convinced by some of the other 'pure' psychology chapters. Bering & Povinelli present their oft-repeated 'reinterpretation hypothesis' suggesting that apes do not represent unobservable phenomena, such as mental states or gravity; Call & Tomasello's chapter takes an opposite position. This is not the place to go into the arguments of both camps; however, I was disappointed that Bering & Povinelli did not adhere to their remit by

discussing cognitive development in a broader context than just their own work with a small group of young chimpanzees. This was a missed opportunity to place nonhuman primate cognitive development in the context of human cognitive development, such as Piaget's sensorimotor stages.

Many recent books on primate behaviour have focused predominantly on behavioural ecology and socioecology, specifically on results from long-term field studies. *Primate Psychology* is perhaps the first book to attempt a synthesis of psychological studies of primates that are not solely dedicated to cognitive aspects of behaviour (as in Tomasello & Call 1997), so this volume is a welcome addition to the literature and one that I see myself delving into time and again. Is the question of how primates think and feel still an important one? The answer depends on the approach. From the perspective of those investigating the biological roots of human disease, the complexities of the human brain or the evolution of human behaviour (the unabashed anthropocentric approach), nonhuman primates are still the best models. However, for those interested in the evolution of intelligence and the limits of cognition, work in nonhuman primates is not as fashionable as it once was. This is possibly because primates have become increasingly difficult to study in the laboratory. Perhaps more significantly, studies of the cognitive abilities of other taxa, such as birds, have started to challenge the long-held view that primates are alone in their advanced intellectual abilities (e.g. Emery & Clayton 2004). Maestripietri's book, although focused entirely on primates, contains many methodological and theoretical tools to examine the psychology of both primates and non-primates so that they can be compared. Perhaps the greatest challenge for primate psychology in the future is to study not how nonhuman primates relate to *Homo sapiens*, but how they relate to other aspects of the natural world.

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Principles of Animal Behavior. Edited by LEE ALAN DUGATKIN.
New York: Norton (2004), Pp. xx + 596. Price \$80.00.

In Dugatkin's new text, *Principles of Animal Behavior*, John Krebs suggests: 'If, for example, you were trying to find the best textbook of animal behaviour, the rule of thumb "read it if it is by Dugatkin" might bring you close enough to the optimal solution' (page 375). That suggested course of action does not fall far from the truth. Dugatkin's text is up to date, highly integrative and richly illustrated. It thus merits serious consideration by anyone looking for a textbook to support undergraduate offerings in animal behaviour or behavioural ecology. This is not to say, however, that everyone will, or even should, make this the sole or primary text for their course, considering the many excellent texts available (e.g. Krebs & Davies 1997; Alcock 2001; Goodenough et al. 2001; Drickamer et al. 2002), each with a different approach and different suite of strengths and weaknesses.

In the preface, Dugatkin promises to integrate insights from questions of proximate and ultimate causation to avoid compromising the 'beauty' of the interwoven 'tapestry' that defines animal behaviour. In delivering on that promise, Dugatkin offers a text that provides a unique introduction to the field, effectively occupying a middle ground between the more psychologically oriented (e.g. Drickamer et al. 2002), and biologically oriented (e.g. Alcock 2001) texts that currently dominate the market. Although not as encyclopaedic as Goodenough et al. (2001), Dugatkin's book offers an unparalleled balance in explaining contributions of genetics, individual learning and cultural transmission to the development and expression of behaviour. That balance transcends proximate and ultimate causation, however, because he has incorporated examples from both vertebrates and invertebrates, and in a refreshing tack, has integrated explanations of both human and nonhuman animal behaviour.

The text's style will appeal to students: rich with personal anecdotes, stories and case studies that Dugatkin acknowledges are geared to 'entertain', and thereby to capture student interest. Students will both enjoy and benefit from the personal perspectives offered in brief, often surprisingly candid interviews with well-recognized researchers that accompany each of the book's 17 chapters. Instructors will appreciate the ancillary Norton Media Library CD-ROM, which includes all of the figures and many of the photographs from the text in a format allowing ready incorporation of those visuals into classroom presentations and web pages. Both the index and the glossary of terms are useful, as are the summaries, discussion questions and suggested readings at the end of each chapter. Care has been taken to maintain the narrative flow of the book, although each topical chapter retains its integrity in the absence of preceding chapters, so instructors will be able to assign readings in an order that suits their own course offering.