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0521580277 - The Mentalities of Gorillas and Orangutans: Comparative Perspectives

Edited by Sue Taylor Parker, Robert W. Mitchell and H. Lyn Miles

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The Mentalities of Gorillas and Orangutans

Comparative Perspectives

Research on the mental abilities of chimpanzees and bonobos has been widely celebrated and used in reconstructions of human evolution. In contrast, scant attention has been paid to the abilities of gorillas and orangutans. This volume aims to complete the picture of hominoid cognition by bringing together the work on gorillas and orangutans and setting it in comparative perspective. The introductory chapters set the evolutionary context for comparing cognition in gorillas and orangutans to that of chimpanzees, bonobos, and humans. The remaining chapters focus primarily on the kinds and levels of intelligence displayed by orangutans and gorillas compared to other great apes, including performances in the classic domains of tool use and tool-making, imitation, self-awareness, social communication, and symbol use. The final chapter suggests that many of the abilities commonly attributed exclusively to chimpanzees and bonobos were already present in the common ancestor of all the great apes. All those wanting more information on the mental abilities of these neglected, but important primates will find this book a treasure trove.

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Preface

The title *The mentalities of gorillas and orangutans: Comparative perspectives* was inspired by Köhler's famous book *The mentality of apes* (1927), in which apes were implicitly equated with chimpanzees. This book focuses on two other great apes that were less known in Köhler's day. It is the fourth in a related series of edited volumes on cognition of great apes. The first volume, *"Language" and intelligence in monkeys and apes* (Parker & Gibson, 1990), emphasized the importance of using models from developmental psychology to compare the cognitive and symbolic abilities of monkeys, apes, and humans. The second volume, *Self-awareness in animals and humans* (Parker, Mitchell, & Boccia, 1994), used developmental frameworks to compare manifestations of self-awareness in monkeys, apes, and humans. It was aimed at broadening the scope of research in this subject to extend beyond the classical mark test for mirror self-recognition. The third volume, *Reaching into thought* (Russon, Bard, and Parker, 1996), focused on cognitive abilities of great apes using models from developmental psychology, but extended the scope to include studies in wild populations.

This most recent volume continues the tradition of using models from developmental psychology to compare the cognitive abilities of great apes, and that of including studies from both captive and wild populations. It also expands the preview to include studies of taxonomy and phylogeny (Begun, this volume) and the brain (Semendeferi, this volume). It differs from the other volumes in focusing primarily on gorillas and orangutans. The aim of this volume is to redress the chimpocentric imbalance in attention to chimpanzees and bonobos at the expense of the other great apes. This bias follows in part from the greater availability of chimpanzees in captivity and the greater number of field studies of chimpanzees in the wild. It also arises from the greater appeal of studying our closest relatives, and, finally, from our fascination with another species that hunts, uses tools, and engages in territorial patrols and warfare. Conversely, the relative neglect of gorillas and orangutans follows from their rarity in captivity which has led to studies of single subjects rather than the multiple subjects favored in experimental research. Also, of course, the apparent lack of tool use, hunting, and warfare in these apes has made them less intriguing to those focused on human evolution.

The current volume includes recent discoveries revealing that orangutans use a variety of tools in the wild (Fox, Sitompul, & Van Schaik this volume), and that gorillas regularly use a variety of tools in captivity (Boysen, Kuhlmeier, Halliday, & Halliday and Parker et al., this volume). It reveals that gorillas and orangutans show the same rate

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of mirror self-recognition as chimpanzees (Swartz, Sarauw, & Evans, this volume), and the same kinds of deception (Mitchell, this volume). It also reveals that – like that of chimpanzees – early sign-language development in gorillas parallels that of human infants (Bonvillian & Patterson, and Miles, this volume). Other studies in this volume focus on the abilities of orangutans to imitate gestures and tool use (Call, and Russon, this volume).

The overall conclusion of this volume is that understanding of human evolution requires systematic comparison of ourselves with all the great apes not just with bonobos and chimpanzees (as well as with more distantly related primates). Only through systematic comparison of these ingroup and outgroup species can we reconstruct the emergence of bigger brains, longer childhoods, and longer lives, let alone such behaviors as intelligent tool use, mirror self recognition, imitation of novel behaviors, and intentional deception (Parker & Mitchell, this volume). In sum, we hope this work will help overcome the chimpocentric approach to comparative studies (Beck, 1982).

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