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## **Dario Maestriperi (ed): Primate psychology**

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This book is a very good handbook for young behavioral scientists or psychologists. Consisting of an introduction and 15 chapters contributed by 29 researchers, it is very helpful to scientists who work with nonhuman animals as well as those who study human behavior or psychology. Every chapter reviews work on both human and nonhuman primates and tries to integrate the two areas, so that researchers in either field will learn about new work in the other area.

*Primate psychology* is also a great reference book. It includes a long reference list constituting 131 pages, and listing 1,985 articles and books. The list of both historical works from the nineteenth century and very recent works will be helpful not only to young scientists but also to anybody having an interest in behavioral sciences in human and nonhuman primates.

The book begins by providing a definition of psychology and by explaining the significance of behavioral study in nonhuman animals. According to the editor, the human mind, as well as human language and culture, is unique to the species. Therefore, the creation of an integrative discipline that studies the mind and behavior of all primates is an important first step toward understanding the mind. Next, a brief history of primate psychology is given, starting with Charles Darwin. Researchers will find that current topics in the book are based on the foundations laid by pioneers such as Wolfgang Köhler, Robert Yerkes, Harry Harlow, and Robert Hinde.

The editor writes that the goal of this book is to integrate the behavioral research on humans with that on nonhuman primates and to encourage communication between students of primate and human behavior. The emphasis of this book is on social processes that vary greatly between species and that are expected to have evolved especially in human and nonhuman pri-

mates. Therefore, aspects of behavior and cognition that are not strictly social (e.g. foraging, spatial cognition) are not presented. The editor hopes that this book will encourage researchers studying all primate species to relate their work to human behavior.

A brief summary of the chapters follows. In Chap. 2, J. Dee Highly gives a discussion of aggressive behavior and its neurobiological substrates in primates and humans. In Chap. 3, Peter Judge tries to synthesize and integrate research on conflict resolution, focusing on both similarities and differences across species and contexts. This chapter emphasizes the perspective of social processes and suggests a “process model” to depict the factors involved in dyadic conflict resolution and the circular nature of conflicts. In Chap. 4, Kim Wallen and her colleagues focus on primate sexuality and address sex differences in behavioral development, as well as the social and neuroendocrine aspects of sexual behavior and sexual motivation in adolescence and adulthood. In Chap. 5, Dario Maestriperi, the editor of the book, discusses the conceptual premises of attachment theory and the parallels between attachment processes in primates and humans. He encourages a complementary effort on the part of those studying human attachment to incorporate the comparative and biological perspectives provided by primate research into their work. In Chap. 6, Lynn Fairbanks takes an evolutionary approach to the study of parenting and emphasizes the adaptive value of individual differences in parenting styles. This chapter presents evidence of trade-offs in mother–offspring interactions as they change over time, in the role of fathers in infant care, and in the effects of social and demographic factors influencing maternal care such as the mother’s age, the presence of grandmothers, and the family’s status. In Chap. 7, James Roney and Dario Maestriperi contrast biological and social perspectives on behavioral development, including the effects of parenting styles on development and the determinants of behavioral sex differences. The authors also compare different approaches to studying altruistic interactions and the

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relationship between affiliations and social structures. In Chap. 8, Jesse Bering and Daniel Povinelli address cognitive development from a comparative and evolutionary perspective and discuss the evidence for and against the hypothesis that chimpanzees can form concepts about abstract things such as mental states or cause-and-effect relationships. In Chap. 9, Josep Call and Michael Tomasello provide a different perspective on primate cognition, with particular emphasis on social processes and theory of mind abilities. In Chap. 10, Samuel Gosling and his colleagues conduct one of the first systematic attempts to discuss personality research from a comparative perspective. They review and attempt to integrate the research on personality in non-human primates. In Chap. 11, Filippo Aureli and Andrew Whiten discuss studies on the subject of emotions, suggesting the principal ways in which the topic of animal emotions can be approached as a valid and rigorous subject appropriate for scientific enquiry. In Chap. 12, Lisa Parr and Dario Maestripieri review prior work on face recognition and facial expressions. They also address some conceptual issues concerning the study of nonvocal communication in primates and humans. In Chap. 13, Michael Owren and his colleagues draw specific parallels between primate calls and human nonlinguistic vocalizations, focusing especially on experiments on the function of human laughter, to advance the hypothesis that vocal communication in

primates serves nonlinguistic purposes. In Chap. 14, Duane Rumbaugh and his colleagues review decades of research on language acquisition in the great apes. They list 16 questions about defining language and provide answers for them at the end of the chapter, emphasizing the role of the environment in language acquisition. In Chap. 15, the focus is on comparative aspects of cerebral dominance or hemispheric specialization in human and nonhuman primates. William Hopkins and his colleagues review the evidence for neuroanatomical and behavioral asymmetries in primates and discuss it in relation to the evolution of language and other forms of human communication and behavior, including handedness. In Chap. 16, Alfonso Troisi addresses the issue of defining normal and abnormal behavior in primates and humans and identifying diagnostic criteria for psychopathology that might have cross-species validity.

In summary, this book covers most of the areas involved in the behavioral and psychological research for both human and nonhuman primates. It is worthwhile reading and reference for people who want to acquire general and recent knowledge in each area. On the other hand, it may not satisfy readers who expect the latest results and theories in a specific area. As a whole, however, I am sure that this will be a good handbook and reference book. Readers will likely find clues for their own works in this book.