

## **Primate Communication A Multimodal Approach**

The Evolution of Social Communication in Primates Foundations of Affective Social Learning The Routledge Handbook of Philosophy of Animal Minds The Evolution of Exudatory in Primates Evolution, Ecology and Conservation of Lorises and Pottos' Primate Vocal Communication Original Knowing The Neural Bases of Multisensory Processes Monkeys, Apes, and Humans Altruism and Altruistic Love Primate Communication Primates in Perspective Growing Points Ethology Behaviour, Development and Evolution Studying Vibrational Communication Understanding how Young Children Learn Primate Hearing and Communication Conflict and Multimodal Communication Origins of Language Developments in Primate Gesture Research Multimodality in Chinese Interaction Essaying Metacommunication: A Survey and Contextualization of Communication Research The Gestural Communication of Apes and Monkeys A Brain for Speech The Real Chimpanzee Visual language Multimodal Communication Communication as The Missing Lemur Link Multimodal Metaphor APA Handbook of Nonverbal Communication Animal Communication Theory The Evolution of Emotional Communication Gestural Communication in Nonhuman and Human Primates Non-verbal Communication Animal Bodies, Human Minds: Ape, Dolphin, and Parrot Language Skills Origins of Human Language Speaking Our Minds Honest Signals 21st Century Anthropology: A Reference Handbook

### **The Evolution of Social Communication in Primates**

It has become accepted in the neuroscience community that perception and performance are quintessentially multisensory by nature. Using the full palette of modern brain imaging and neuroscience methods, *The Neural Bases of Multisensory Processes* details current understanding in the neural bases for these phenomena as studied across species, stages of development, and clinical statuses. Organized thematically into nine sub-sections, the book is a collection of contributions by leading scientists in the field. Chapters build generally from basic to applied, allowing readers to ascertain how fundamental science informs the clinical and applied sciences. Topics discussed include: Anatomy, essential for understanding the neural substrates of multisensory processing Neurophysiological bases and how multisensory stimuli can dramatically change the encoding processes for sensory information Combinatorial principles and modeling, focusing on efforts to gain a better mechanistic handle on multisensory operations and their network dynamics Development and plasticity Clinical manifestations and how perception and action are affected by altered sensory experience Attention and spatial representations The last sections of the book focus on naturalistic multisensory processes in three separate contexts: motion signals, multisensory contributions to the perception and generation of communication signals, and how the perception of flavor is generated. The text provides a solid introduction for newcomers and a strong overview of the current state of the field for experts.

### **Foundations of Affective Social Learning**

Written by experts in comparative, developmental, social, cognitive and cultural psychology, this book introduces the novel concept of affective social learning to

help explain why what matters to us, matters to us. In the same way that social learning describes how we observe other people's behaviour to learn how to use a particular object, affective social learning describes how we observe other people's emotions to learn how to value a particular object, person or event. As such, affective social learning conceptualises the transmission of value from a given culture to a given person and reveals why the things that are so important to us can be of no consequence at all to others.

### **The Routledge Handbook of Philosophy of Animal Minds**

I first became involved in research into primate behavior and ecology in 1968, over 40 years ago, driven by a quest for a better understanding of the natural context of primate evolution. At that time, it was virtually unknown that primates can exploit exudates as a major food source. I was certainly unaware of this myself. By good fortune, I was awarded a postdoctoral grant to work on lemurs with Jean-Jacques Petter in the general ecology division of the Muséum National d'Histoire Naturelle in Brunoy, France. This provided the launching-pad for my first field study of lesser mouse lemurs in Madagascar, during which I gained my initial inklings of exudate feeding. It was also in Brunoy that I met up with Pierre Charles-Dominique, who introduced me to pioneering observations of exudate feeding he had made during his field study of five loriform species in Gabon. This opened my eyes to a key feeding adaptation that has now been reported for at least 69 primate species in 12 families (Smith, Chap. 3) – almost 20% of extant primate species. So exudativory is now firmly established as a dietary category for p- mates, alongside the long-recognized classes of faunivory (including insectivory), frugivory, and folivory. Soon after I encountered Charles-Dominique, he published the first synthetic account of his Gabon field study in a French language journal (Charles-Dominique 1971).

### **The Evolution of Exudativory in Primates**

Multimodal approach to primate communication with focus on its cognitive foundations and how this relates to theories of language evolution.

### **Evolution, Ecology and Conservation of Lorises and Pottos'**

This book explores the use of technology to detect, predict and understand social cues, in order to analyze and prevent conflict. Traditional human sciences approaches are enriched with the latest developments in Social Signal Processing aimed at an automatic understanding of conflict and negotiation.

Communication—both verbal and non-verbal, within the context of a conflict—is studied with the aim of promoting the use of intelligent machines that automatically measure and understand the escalation of conflict, and are able to manage it, in order to support the negotiation process. Particular attention is paid to the integration of human sciences findings with computational approaches, from the application of correct methodologies for the collection of valid data to the development of computational approaches inspired by research on verbal and multimodal communication. In the words of the trade unionist Pierre Carniti, "We should reevaluate conflict, since without conflict there is no social justice." With

this in mind, this volume does not approach conflict simply as an obstacle to be overcome, but as a concept to be fully analyzed. The philosophical, linguistic and psychological aspects of conflict, once understood, can be used to promote conflict management as a means for change and social justice.

### **Primate Vocal Communication**

Via 100 entries or 'mini-chapters,' the SAGE 21st Century Reference Series volumes on Anthropology will highlight the most important topics, issues, questions, and debates any student obtaining a degree in the field of anthropology ought to have mastered for effectiveness in the 21st century. The purpose is to provide undergraduate students with an authoritative reference source that will serve their research needs with more detailed information than encyclopedia entries but not so much jargon, detail or density as a journal article or a research handbook chapter.

### **Original Knowing**

The role of parents in shaping the characters of their children, the causes of violence and crime, and the roots of personal unhappiness are central to humanity. Like so many fundamental questions about human existence, these issues all relate to behavioural development. In this lucid and accessible book, eminent biologist Professor Sir Patrick Bateson suggests that the nature/nurture dichotomy we often use to think about questions of development in both humans and animals is misleading. Instead, he argues that we should pay attention to whole systems, rather than to simple causes, when trying to understand the complexity of development. In his wide-ranging approach Bateson discusses why so much behaviour appears to be well-designed. He explores issues such as 'imprinting' and its importance to the attachment of offspring to their parents; the mutual benefits that characterise communication between parent and offspring; the importance of play in learning how to choose and control the optimal conditions in which to thrive; and the vital function of adaptability in the interplay between development and evolution. Bateson disputes the idea that a simple link can be found between genetics and behaviour. What an individual human or animal does in its life depends on the reciprocal nature of its relationships with the world about it. This knowledge also points to ways in which an animal's own behaviour can provide the variation that influences the subsequent course of evolution. This has relevance not only for our scientific approaches to the systems of development and evolution, but also on how humans change institutional rules that have become dysfunctional, or design public health measures when mismatches occur between themselves and their environments. It affects how we think about ourselves and our own capacity for change.

### **The Neural Bases of Multisensory Processes**

Chimpanzee Behavior encapsulates the fascinating behaviour of wild chimps and discusses the differences observed in different populations across the species, and across the many levels of their social behaviour. It tells the story of why sex competition in a forest chimpanzee population made the females of the group

highly social and gave the males a high level of within-group solidarity, making them very xenophobic towards outsiders. Christophe Boesch brings back to the table the debate over ecological pressures and social organization, and the influence they have over issues such as the evolution of warfare, co-operation, altruism and the position of females. Writing for undergraduate and graduate students, he presents insightful views to give readers the background information to understand the struggle for survival of our closest living relative, the chimpanzee, and through this find some keys to the ever-so-intriguing question of what makes us human.

### **Monkeys, Apes, and Humans**

*Primates in Perspective* is the first edited volume to offer a comprehensive overview of primatology since 1987. Forty-four original essays--by fifty-nine leading researchers in the field today-- provide wide-ranging and contemporary coverage of all of the major areas of primatology. Arranged in six sections, the text begins with an introduction to primatology and a review of the natural history of the major taxonomic groups within the order Primates. It goes on to cover methodologies and research design for both field and captive settings; primate reproduction; primate ecology and conservation and their roles in the daily lives of primates; and such aspects of social behavior and intelligence as communication, learning, and cognition. The volume ends with a concluding chapter by the editors that discusses the future of primatological research. Ideal for introductory primatology courses, *Primates in Perspective* can also be used in upper-division behavior and conservation courses. Additionally, it is an invaluable reference tool for primate researchers.

### **Altruism and Altruistic Love**

Unpublished doctoral dissertation, Indiana University, Bloomington IN, February 1978

### **Primate Communication**

This book meets the demands of scholars of Chinese linguistics as well as researchers on multimodality from a cross-linguistic and comparative perspective. It sheds new light on the traditional study of Chinese discourse and grammar. The volume brings together leading scholars working on the state-of-the-art research on this topic from all over the world, contributing to the understanding of the multimodal nature of human interaction at large.

### **Primates in Perspective**

Presents a comprehensive review of nonhuman primate audition and vocal communication. These are obviously intimately related topics, but are often addressed separately. The hearing abilities of primates have been tested experimentally in a large number of species across the primate order, and these studies have revealed both consistent patterns as well as interesting variation within and between taxonomic groups. Recent studies have shed light on how

variation in anatomical structures along the auditory pathway relates to variation in auditory sensitivity. At the same time, ongoing studies of vocal communication in wild primate populations continue to reveal new insights into the social and environmental contexts of many primate calls, and the range of known primate vocalizations has increased dramatically with the development of more sophisticated and accessible auditory equipment and software that enables the recording and analysis of higher-fidelity and broader-band recordings, including documenting very high frequency (i.e. ultrasound) vocalizations. Historically the relative importance of primate calls has been evaluated qualitatively by the perception of the researcher, but new methods and approaches now enable a greater appreciation for how signals are used and perceived by the primates in question. The integration of anatomical and behavioral data on acoustic communication and the environmental correlates thereof has significant potential for reconstructing behavior in the fossil record. This confluence of factors and accumulating evidence for the sophistication and complexity in both the signal and its interpretation indicate that a book synthesizing this information across primates is warranted and represents an important contribution to the literature.

### **Growing Points Ethology**

Human beings are born to learn. During the last few decades, developmental science has exploded with discoveries of how, specifically, learning happens. This provides us with an unprecedented window into children's minds: how and when they begin to think, perceive, understand, and apply knowledge. Wendy Ostroff builds on this research and shows you how to harness the power of the brain, the most powerful learning machine in the universe. She highlights the processes that inspire or propel learning--play, confidence, self-regulation, movement, mnemonic strategies, metacognition, articulation, and collaboration--and distills the research into a synthesis of the most important takeaway ideas that teachers will need as they design their curriculum and pedagogy. Each chapter has suggested activities for exactly how teachers can put theory into practice in the classroom. When you understand how your students learn, you will know how to teach them in ways that harness the brain's natural learning systems. Dr. Wendy L. Ostroff is Associate Professor in the Program for the Advancement of Learning at Curry College.

### **Behaviour, Development and Evolution**

The Gestural Communication of Apes and Monkeys is an intriguing compilation of naturalistic and experimental research conducted over the course of 20 years on gestural communication in primates, as well as a comparison to what is known about the vocal communication of nonhuman primates. The editors also make systematic comparisons to the gestural communication of prelinguistic and just-linguistic human children. An enlightening exploration unfolds into what may represent the starting point for the evolution of human communication and language. This especially significant read is organized into nine chapters that discuss: \*the gestural repertoire of chimpanzees; \*gestures in orangutans, subadult gorillas, and siamangs; \*gestural communication in Barbary macaques; and \*a comparison of the gestures of apes and monkeys. This book will appeal to psychologists, anthropologists, and linguists interested in the evolutionary origins of language and/or gestures, as well as to all primatologists. A CD insert offers

video of gestures for each of the species.

### **Studying Vibrational Communication**

Communication is both a prerequisite and manifestation of social organization and in this sense several chapters of this volume are aimed to investigate the way vocal communication serves its ultimate function of maintaining social organization. Although manifold parallels exist to vocal communication in birds, additional mechanisms of vocalization are found in primates. Treating the various psychological, ecological, behavioral, and neurobiological aspects of vocalization this book provides an interdisciplinary approach for the understanding of biocommunication in primates including humans. Conceptual as well as methodological considerations are given in a balanced way. The addition of a comprehensive glossary gives an overview also to nonspecialists in this field.

### **Understanding how Young Children Learn**

The first book to present the latest discoveries on the behaviour, ecology and evolutionary biology of lorises and pottos.

### **Primate Hearing and Communication**

Metaphor pervades discourse and may govern how we think and act. But most studies only discuss its verbal varieties. This book examines metaphors drawing on combinations of visuals, language, gestures, sound, and music. Investigated texts include advertising, political cartoons, comics, film, songs, and oral communication. Where appropriate, the influence of genre and cultural factors is thematized.

### **Conflict and Multimodal Communication**

This book discusses evolution of the human brain, the origin of speech and language. It covers past and present perspectives on the contentious issue of the acquisition of the language capacity. Divided into two parts, this insightful work covers several characteristics of the human brain including the language-specific network, the size of the human brain, its lateralization of functions and interhemispheric integration, in particular the phonological loop. Aboitiz argues that it is the phonological loop that allowed us to increase our vocal memory capacity and to generate a shared semantic space that gave rise to modern language. The second part examines the neuroanatomy of the monkey brain, vocal learning birds like parrots, emergent evidence of vocal learning capacities in mammals, mirror neurons, and the ecological and social context in which speech evolved in our early ancestors. This book's interdisciplinary topic will appeal to scholars of psychology, neuroscience, linguistics, biology and history.

### **Origins of Language**

The aim of this volume is to bring together the research in gestural communication in both nonhuman and human primates and to explore the potential of a

comparative approach and its contribution to the question of an evolutionary scenario in which gestures play a significant role.

### **Developments in Primate Gesture Research**

This volume explains the key ideas, questions and methods involved in studying the hidden world of vibrational communication in animals. The authors dispel the notion that this form of communication is difficult to study and show how vibrational signaling is a key to social interactions in species that live in contact with a substrate, whether it be a grassy lawn, a rippling stream or a tropical forest canopy. This ancient and widespread form of social exchange is also remarkably understudied. A frontier in animal behavior, it offers unparalleled opportunities for discovery and for addressing general questions in communication and social evolution. In addition to reviews of advances made in the study of several animal taxa, this volume also explores topics such as vibrational communication networks, the interaction of acoustic and vibrational communication, the history of the field, the evolution of signal production and reception and establishing a common vocabulary.

### **Multimodality in Chinese Interaction**

This book proposes a detailed picture of the continuities and ruptures between communication in primates and language in humans. It explores a diversity of perspectives on the origins of language, including a fine description of vocal communication in animals, mainly in monkeys and apes, but also in birds, the study of vocal tract anatomy and cortical control of the vocal productions in monkeys and apes, the description of combinatorial structures and their social and communicative value, and the exploration of the cognitive environment in which language may have emerged from nonhuman primate vocal or gestural communication.

### **Essaying Metacommunication: A Survey and Contextualization of Communication Research**

### **The Gestural Communication of Apes and Monkeys**

Lemurs share a common distant ancestor with humans. Following their own evolutionary pathway, lemurs provide the ideal model to shed light on the behavioural traits of primates including conflict management, communication strategies and society building and how these aspects of social living relate to those found in the anthropoid primates. Adopting a comparative approach throughout, lemur behaviour is cross-examined with that of monkeys, apes and humans. This book reviews and expands upon the newest fields of research in lemur behavioural biology, including recent analytical approaches that have so far been limited to studies of haplorrhine primates. Different methodological approaches are harmonised in this volume to break conceptual walls between both primate taxa and different disciplines. Through a focus on the methodologies behind lemur behaviour and social interactions, future primate researchers will be

encouraged to produce directly comparable results.

### **A Brain for Speech**

In *Communication as: Perspectives on Theory*, editors Gregory J. Shepherd, Jeffrey St. John, and Ted Striphas bring together a collection of 27 essays that explores the wide range of theorizing about communication, cutting across all lines of traditional division in the field. The essays in this text are written by leading scholars in the field of communication theory, with each scholar employing a particular stance or perspective on what communication theory is and how it functions. In essays that are brief, argumentative, and forceful, the scholars propose their perspective as a primary or essential way of viewing communication with decided benefits over other views.

### **The Real Chimpanzee**

This 1976 volume is a collection of essays by some of the most prominent and active ethologists. It is organised into four sections: motivation and perception, function and evolution, development, and human social relationships. The essays are forward looking and identify areas of importance for the study of behaviour.

### **Visual language**

The book is a themed, mutually referenced collection of articles from a very high-powered set of authors based on the workshop on "Current developments in non-human primate gesture research", which was held in July 2010 at the European University Viadrina, Frankfurt (Oder), Germany. The motivation for this book was following on from the motivation for the workshop series was to present the state of the art in non-human primate gesture research with a special emphasis on its history, interdisciplinary perspectives, developments and future directions. This book provides, for the first time in a single volume, the most recent work on comparative gestural signaling by many of the major scholars in the field, such as W.D. Hopkins, D. Leavens, T. Racine, J. van Hooff, and S. Wilcox (in alphabetical order).

### **Multimodal Communication**

An exploration of key concepts in the study of animal communication, covering case studies as well as more theoretical issues.

### **Communication as**

Several books chronicle attempts, most of them during the last 40 years, to teach animals to communicate with people in a human-designed language. These books have typically treated only one or two species, or even one or a few research projects. We have provided a more encompassing view of this field. We also want to reinforce what other authors, for example Jane Goodall, Sue Savage-Rumbaugh, Penny Patterson, Birute Galdikas, and Roger and Deborah Fouts, so passionately convey about our responsibility for our closest animal kin. This book surveys what

was known, or believed about animal language throughout history and prehistory, and summarizes current knowledge and the controversy around it. The authors identify and attempt to settle most of the problems in interpreting the animal behaviours that have been observed in studies of animal language ability.

### **The Missing Lemur Link**

Sverker Johansson has written an unusual book on language origins, with its emphasis on empirical evidence rather than theory-building. This is a book for the student or researcher who prefers solid data and well-supported conclusions, over speculative scenarios. Much that has been written on the origins of language is characterized by hypothesizing largely unconstrained by evidence. But empirical data do exist, and the purpose of this book is to integrate and review the available evidence from all relevant disciplines, not only linguistics but also, e.g., neurology, primatology, paleoanthropology, and evolutionary biology. The evidence is then used to constrain the multitude of scenarios for language origins, demonstrating that many popular hypotheses are untenable. Among the issues covered: (1) Human evolutionary history, (2) Anatomical prerequisites for language, (3) Animal communication and ape "language", (4) Mind and language, (5) The role of gesture, (6) Innateness, (7) Selective advantage of language, (8) Proto-language.

### **Multimodal Metaphor**

How understanding the signaling within social networks can change the way we make decisions, work with others, and manage organizations. How can you know when someone is bluffing? Paying attention? Genuinely interested? The answer, writes Alex Pentland in *Honest Signals*, is that subtle patterns in how we interact with other people reveal our attitudes toward them. These unconscious social signals are not just a back channel or a complement to our conscious language; they form a separate communication network. Biologically based "honest signaling," evolved from ancient primate signaling mechanisms, offers an unmatched window into our intentions, goals, and values. If we understand this ancient channel of communication, Pentland claims, we can accurately predict the outcomes of situations ranging from job interviews to first dates. Pentland, an MIT professor, has used a specially designed digital sensor worn like an ID badge—a "sociometer"—to monitor and analyze the back-and-forth patterns of signaling among groups of people. He and his researchers found that this second channel of communication, revolving not around words but around social relations, profoundly influences major decisions in our lives—even though we are largely unaware of it. Pentland presents the scientific background necessary for understanding this form of communication, applies it to examples of group behavior in real organizations, and shows how by "reading" our social networks we can become more successful at pitching an idea, getting a job, or closing a deal. Using this "network intelligence" theory of social signaling, Pentland describes how we can harness the intelligence of our social network to become better managers, workers, and communicators.

### **APA Handbook of Nonverbal Communication**

While philosophers have been interested in animals since ancient times, in the last few decades the subject of animal minds has emerged as a major topic in philosophy. The Routledge Handbook of Philosophy of Animal Minds is an outstanding reference source to the key topics, problems, and debates in this exciting subject and is the first collection of its kind. Comprising nearly fifty chapters by a team of international contributors, the Handbook is divided into eight parts: Mental representation Reasoning and metacognition Consciousness Mindreading Communication Social cognition and culture Association, simplicity, and modeling Ethics. Within these sections, central issues, debates, and problems are examined, including: whether and how animals represent and reason about the world; how animal cognition differs from human cognition; whether animals are conscious; whether animals represent their own mental states or those of others; how animals communicate; the extent to which animals have cultures; how to choose among competing models and explanations of animal behavior; and whether animals are moral agents and/or moral patients. The Routledge Handbook of Philosophy of Animal Minds is essential reading for students and researchers in philosophy of mind, philosophy of psychology, ethics, and related disciplines such as ethology, biology, psychology, linguistics, and anthropology.

### **Animal Communication Theory**

Traditionally, research on human language has taken speech and written language as the only domains of investigation. However, there is now a wealth of empirical studies documenting visual aspects of language, ranging from rich studies of sign languages, which are self-contained visual language systems, to the field of gesture studies, which examines speech-associated gestures, facial expressions, and other bodily movements related to communicative expressions. But despite this large body of work, sign language and gestures are rarely treated together in theoretical discussions. This volume aims to remedy that by considering both types of visual language jointly in order to transcend (artificial) theoretical divides, and to arrive at a comprehensive account of the human language faculty. This collection seeks to pave the way for an inherently multimodal view of language, in which visible actions of the body play a crucial role. The 19 papers in this volume address four broad and overlapping topics: (1) the multimodal nature of language; (2) multimodal representation of meaning; (3) multimodal and multichannel prosody; and (4) acquisition and development of visual language in children and adults.

### **The Evolution of Emotional Communication**

How did social communication evolve in primates? In this volume, primatologists, linguists, anthropologists, cognitive scientists and philosophers of science systematically analyze how their specific disciplines demarcate the research questions and methodologies involved in the study of the evolutionary origins of social communication in primates in general and in humans in particular. In the first part of the book, historians and philosophers of science address how the epistemological frameworks associated with primate communication and language evolution studies have changed over time and how these conceptual changes affect our current studies on the subject matter. In the second part, scholars provide cutting-edge insights into the various means through which primates communicate socially in both natural and experimental settings. They examine the

behavioral building blocks by which primates communicate and they analyze what the cognitive requirements are for displaying communicative acts. Chapters highlight cross-fostering and language experiments with primates, primate mother-infant communication, the display of emotions and expressions, manual gestures and vocal signals, joint attention, intentionality and theory of mind. The primary focus of the third part is on how these various types of communicative behavior possibly evolved and how they can be understood as evolutionary precursors to human language. Leading scholars analyze how both manual and vocal gestures gave way to mimetic and imitational protolanguage and how the latter possibly transitioned into human language. In the final part, we turn to the hominin lineage, and anthropologists, archeologists and linguists investigate what the necessary neurocognitive, anatomical and behavioral features are in order for human language to evolve and how language differs from other forms of primate communication.

### **Gestural Communication in Nonhuman and Human Primates**

The APA Handbook of Nonverbal Communication provides scholarly reviews of state-of-the-art knowledge in the areas of nonverbal communication and nonverbal behaviors. It includes an entire section devoted to new and improved methodologies and technologies that allow for the recording, capture, and analysis of nonverbal behaviors. The primary audience for the book is researchers in the area, as well as students in graduate-level classes on nonverbal communication or behavior. The handbook is organized around four broad themes. The first concerns the history of the field. The second concerns the factors of influence of nonverbal communication and encompasses the main theoretical and conceptual frameworks within which research on nonverbal communication occurs. The third theme presents the separate sources of nonverbal communication and behavior. The fourth theme concerns advances in research methodologies.

### **Non-verbal Communication**

Social scientists discuss and compare the systems of non-verbal communication used by animals and man

### **Animal Bodies, Human Minds: Ape, Dolphin, and Parrot Language Skills**

Why do we think that we can understand animal voices - such as the aggressive barking of a pet dog, and the longing meows of the family cat? Why do we think of deep voices as dominant and high voices as submissive. Are there universal principles governing our own communication system? Can we even see how close animals are related to us by constructing an evolutionary tree based on similarities and dissimilarities in acoustic signaling? Research on the role of emotions in acoustic communication and its evolution has often been neglected, despite its obvious role in our daily life. When we infect others with our laugh, soothe a crying baby with a lullaby, or get goose bumps listening to classical music, we are barely aware of the complex processes upon which this behavior is based. It is not facial expressions or body language that are affecting us, but sound. They are present in

music and speech as "emotional prosody" and allow us to communicate not only verbally but also emotionally. This groundbreaking book presents a thorough exploration into how acoustically conveyed emotions are generated and processed in both animals and man. It is the first volume to bridge the gap between research in the acoustic communication of emotions in humans with those in animals, using a comparative approach. With the communication of emotions being an important research topic for a range of scientific fields, this book is valuable for those in the fields of animal behaviour, anthropology, evolutionary biology, human psychology, linguistics, musicology, and neurology.

### **Origins of Human Language**

(tentative) What bring about biodiversity are not always genes. As is the case with humans, cultural diversity of non-human animals has also been found. Most of well-known examples of animal cultures are those of food acquisition behaviors, such as sweet-potato-washing by Japanese macaques and nut-cracking by chimpanzees. First author, Naofumi Nakagawa, introduces cultural diversity of social behaviors in wild Japanese macaques, such as the embracing behaviors between adult females in a wild group in each population of Yakushima, Kinkazan, and Shimokita. The subtle local difference in embracing can be identified as the first evidence for social customs in wild Japanese macaques. The next author, Michael A. Huffman, introduces the self-medicative behavior in non-human primates, which is a relatively new study in primatology. Parasites cause a variety of diseases that affect the behavior and reproductive fitness of an individual. He classifies health maintenance and self-medicative behaviors observed in non-human primates into four levels. Not only humans but also apes and monkeys are maintaining their health. The third authors, Hiroo Imai, Masaki Tomonaga, and Yasuhiro Go, are promoting comparative cognitive sciences of primates including human and chimpanzees. Recently, human personal genome projects progresses as related to the phenotypes including cognition, while there was no similar project for non-human primates. They started personal genome and transcriptome projects of chimpanzees in Primate Research Institute, Kyoto University, years ago. They introduce recent progresses of the project and related results based on the primate genome sciences.

### **Speaking Our Minds**

Language is an essential part of what makes us human. Where did it come from? How did it develop into the complex system we know today? And what can an evolutionary perspective tell us about the nature of language and communication? Drawing on a range of disciplines including cognitive science, linguistics, anthropology and evolutionary biology, *Speaking Our Minds* explains how language evolved and why we are the only species to communicate in this way. Written by a rising star in the field, this groundbreaking book is required reading for anyone interested in understanding the origins and evolution of human communication and language.

### **Honest Signals**

Did Lucy know God? Could Neanderthals talk? Was Ardi self-conscious? These are the strange new breed of questions emerging as we discover more and more about our prehistoric origins--questions about knowing. While fossil digs and carbon dating tell a remarkable story about the bones and times of our ancient ancestors, we cannot help wondering what they knew, and when. Exploring such questions Original Knowing takes contemporary science as seriously as religious tradition and searches for the story behind this odd creature who senses more to the universe than meets the eye. In limestone bluffs and butterfly migrations, from Stone Age tool-making to Sumerian beer-making, clues are sought to better understand this strange mind that ponders the origins of its own existence. When do babies point, and why does it matter? What does throwing a Frisbee reveal about our distant ancestors? Is language the key to our minds as many believe? Or perhaps the heart of knowing rests in something more basic, in a smile, and the powerful social abilities at work allowing us to sense a depth to life--to our own lives--a depth that our minds help us glimpse if only through a glass darkly.

### **21st Century Anthropology: A Reference Handbook**

The concept of altruism, or disinterested concern for another's welfare, has been discussed by everyone from theologians to psychologists to biologists. In this cutting edge book, evolutionary, neurological, developmental, psychological, social, cultural, and religious aspects of altruistic behavior are examined by renowned researchers. The result is a collaborative and provocative look at one of humanity's essential and defining characteristics.

[ROMANCE](#) [ACTION & ADVENTURE](#) [MYSTERY & THRILLER](#) [BIOGRAPHIES & HISTORY](#) [CHILDREN'S](#) [YOUNG ADULT](#) [FANTASY](#) [HISTORICAL FICTION](#) [HORROR](#) [LITERARY FICTION](#) [NON-FICTION](#) [SCIENCE FICTION](#)