

I, for one, think it unfortunate that Thornhill and Gangestad choose to call woman's midcycle sexuality "estrus." They acknowledge that they are modifying the definition of this word and explain their rationale, but it will needlessly antagonize readers, especially when the authors seem to forget that theirs is not the standard dictionary definition and assert that others' claims that humans lack estrus are "incorrect." But those who are annoyed by this—and I fear it may be many—really must set that aside and attend to the book's fascinating empirical content and interpretive arguments. No one could read this volume closely and fail to learn a great deal.

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DEATH FROM A DISTANCE AND THE BIRTH OF A HUMANE UNIVERSE: HUMAN EVOLUTION, BEHAVIOR, HISTORY, AND YOUR FUTURE.

By Paul M. Bingham and Joanne Souza. Stony Brook (New York): Paul M. Bingham and Joanne Souza. \$24.69 (paper). xviii + 685 p.; ill.; index. ISBN: 1-4392-5412-5. 2009.

In this volume, the authors put forth a novel explanation for the ability of humans—unique among animal species—to obtain ongoing cooperation among nonrelatives. For them, the key turning point in the evolutionary history of humans—from apes to what they refer to as "accidental apes"—was bipedalism and the concomitant freeing of the hands to launch missiles. This ability to create "death from a distance," according to Bingham and Souza, kept the "accidental apes" in line. As they ask in Chapter 7, where they lay out their theory in detail, would it not be evolutionarily more adaptive to be able to sling stones at a conspecific that attempted to take more than his share of meat than it would to have to attack him using only forelimbs and fangs like baboons do? Maybe, but hominids are apparently the only animals that do so on a regular basis, and all of the other animals seem to have done remarkably well in life despite this evolutionary "deficit."

Death from a Distance is a vexing book because the arguments read in part like just-so stories. There is no doubt that the authors—Bingham an evolutionary biologist and Souza a psychologist—know the subject of human evolution, as well as the relevant literature, but they tend to pick and choose the evidence they marshal in support of their arguments. Nonetheless, the volume is very well written and, for the most part, is jargon free. All levels of readers will enjoy at least sections of this rather long book, but for those who work at the professional level, I point out that despite

some words of praise from luminaries in the field of human evolution—colleagues of the authors—the volume is privately published. I do not mean imply that a privately published book does not belong on a professional's shelf, only that it is unclear whether this volume went through the kind of peer review that university presses and most commercial publishers demand. I have no knowledge of the publication history of *Death from a Distance*, but it undoubtedly would have received a fair amount of criticism from reviewers. I have to hand it to those scientists who are so committed to a new idea that they will see a project through to publication, no matter what the established view is in the field or what anyone says about their ideas.

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BEHAVIOR

LEADERS IN ANIMAL BEHAVIOR: THE SECOND GENERATION.

Edited by Lee Drickamer and Donald Dewsbury. Cambridge and New York: Cambridge University Press. \$115.00 (hardcover); \$49.99 (paper). viii + 624 p.; ill.; no index. ISBN: 978-0-521-51758-4 (hc); 978-0-521-74129-3 (pb). 2010.

This volume contains autobiographical essays from 21 researchers deemed, by their peers, to be leaders in the field of contemporary animal behavior. It is a fascinating collection of essays by a group who have all made (and many continue to make) significant contributions to this interdisciplinary field.

Leaders varied in their upbringing from being "the oldest of 11, [and] the son of a truck driver" (Michael Ryan, p. 465) to the son of a Nobel Laureate (John Krebs). Some were raised on farms and grew their own food (Richard Alexander), others in college towns (Jerram Brown, Stephen Emlen, and John Krebs), while others were raised in urban areas (Jeanne Altmann, Marian Stamp Dawkins, Bennett Galef, Sarah Blaffer Hrdy, Gordon Orians, Michael Ryan, and Mary Jane West-Eberhard). Many were avid birdwatchers as children, and some reared or rehabilitated animals (including an alligator that ended up biting the mailman!—Meredith West). Some were either trained as teachers, or taught in K-12 schools before becoming professional biologists (Jeanne Altmann, Patricia Adair Gowaty, and Michael Ryan), while others knew for a long time that they wanted

to be biologists. Some women discussed their experiences and solutions juggling family and profession, and others described how the birth of feminism influenced them and their research in what, up to then, was a largely male-dominated field.

Many were involved in the birth of behavioral ecology. At times I felt that I was present in those heady days in Oxford, hanging out with Niko Tinbergen and David Lack's groups, or at Madingley in Cambridge—two important hubs for the field's development. There are many links among these contributors, and many refer to each other; the field is a tight network.

I really enjoyed this book and would encourage anyone who wants a historical perspective on the field to read it. It would make a great starting point for a graduate seminar that traces the history of the development of major ideas in animal behavior and behavioral ecology since the 1960s.

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THE ROLE OF PLAY IN HUMAN DEVELOPMENT.

By Anthony D. Pellegrini. Oxford and New York: Oxford University Press. \$49.95. ix + 278 p.; ill.; index. ISBN: 978-0-19-536732-4. 2009.

Why play? This has been a vexing question that has taxed the minds of many researchers for over 100 years. Moreover, for those studying the phenomenon in humans, there has been an almost willful disregard for all things biological. This book is a major step forward in bringing to bear insights derived from biologically oriented studies of non-human animals on understanding the play of children. The author has decades-long experience in studying the play of children, ranging from forms of play that are near to being unique to humans, such as fantasy play, to forms of play that are near universal to all species that play, such as rough and tumble play. In addition, he has been at the forefront of integrating biological theories, especially those derived from evolutionary biology, to psychological phenomena in humans. All of these threads come together in this book. Without shortchanging the complexity of development or of cultural influences, time and again we are shown how order can be brought to perplexing phenomena by judicious use of biologically derived theories, such as sexual selection.

This is not to say that the book excels in all ways. By covering such complex ground, there are many places where some matters are overlooked. For me, the biggest failing is that by focusing on similarities, differences among species are not dealt with. Of course, to cover everything would lead to

an encyclopedic tome with little appeal to a wide audience. Importantly, the volume delves deeply enough on several aspects of play so as to generate many new and interesting hypotheses that will spawn a new generation of research. For example, historically, play has vacillated from being seen as a waste of time to an essential experience for proper development. This book charts a middle ground—sometimes play is but one avenue to achieve suitable developmental outcomes and sometimes it is a crucial component of such outcomes. The plea is for society to make policy based on the empirical evidence. This volume is a must read for all who study or have to deal with young animals, human or other.

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BIOLOGICAL FOUNDATIONS AND ORIGIN OF SYNTAX. *Based on a meeting held in Frankfurt am Main, Germany, 13–18 July 2008. Strüngmann Forum Reports.*

Edited by Derek Bickerton and Eörs Szathmáry. Published by MIT Press, Cambridge (Massachusetts), and Frankfurt Institute for Advanced Studies, Frankfurt (Germany). \$45.00. xviii + 471 p.; ill.; subject index. ISBN: 978-0-262-01356-7. 2009.

Despite all the attention lavished on animal communication, the gulf separating human language from animal “languages” is simply vast. Animal communication consists almost entirely of nouns and emotion-laden grunts and howls. Humans are the only species whose language has structure, and that structure—syntax or compositionality—is what gives our language its infinite variety using a relatively small number of discrete elements or words. No other animal even comes close. Bickerton and Szathmáry have assembled a wonderfully informative and readable set of chapters on this foundational subject for human languages. The editors themselves contribute to chapters that provide a primer to syntax and give musings on its biological background. A section on Syntax lays out the elements and ways of thinking about this technical subject—what syntax is and how should we categorize and measure it. The Evolution and Modeling sections include thoughts on possible biological and genetic origins of syntax, but counter those with an influential view that sees syntax arising principally out of the need for languages to adapt to our brains and be learnable, expressible, and informative. Chapters on the Brain explore how syntax might be coded into our neural circuitry.

This is a refreshingly clear volume on what is a technical but important subject. Even those who only have a passing interest in language will find it to be