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Book Review

Understanding the Role of Hormones in Social Relationships

A review of Peter T. Ellison and Peter B. Gray (Eds.), *Endocrinology of Social Relationships*. Harvard University Press: Cambridge, MA, 2009, 512 pp., US$49.95, ISBN 978-0-674-03117-3 (hardcover).

Maryanne Fisher, Department of Psychology, St. Mary's University, Halifax, NS, Canada. Email: mlfisher@smu.ca.

The editors (Peter Ellison and Peter Gray) and authors of the 16 chapters within *Endocrinology of Social Relationships* should be very happy with themselves. The book they have produced is a comprehensive review of the recent developments within the field of hormones and social relationships. Let there be no mistake, however; this book is not one that would make for an easy read on a Sunday afternoon. It is densely packed with details and is not for the faint-hearted. This said, it is an incredible resource for anyone who has studied or ever wondered about the biological underpinnings of human's (or even non-human's) social interactions, and would be excellent for a graduate course on applied endocrinology. In the past 15 years, there have been many studies published on the topic of hormones' roles in social relationships, but never before has there been one definitive volume that reviews the entire area with such a high degree of accuracy. Given that some developments within this area have been recent, the book represents a formidable effort to collect the modern work into one volume, and as a result, it will serve as a "go-to" text for many years.

One noteworthy strength of the book is that it strikes the perfect balance of diversity and homogeneity. The chapters deal with various hormones, various mammals, and different forms of relationships at different life stages. However, all of the chapters pertain to social relationships, whether they are relationships parents have with their offspring, or interactions with extended kin, mates or friends. There are also two additional unifying elements. First, all the contributors emphasize the need for integrative explanations; that is, they seek to merge the social with the biological, and ultimately, examine how hormones impact on and support the initiation, development, and maintenance of social relationships that are central to one's life. Second, the chapters strive to answer big questions: how do the sex hormones cause one to initiate a new romantic relationship? What is the role of hormones in mothering? This focus on addressing larger issues than simply, for example, how one hormone reacts in a specific, rarely-occurring situation, makes the book unique and informative.

The span of the chapters, and of the book itself, is intriguing. *Endocrinology* is divided into three sections. The first is theoretical and empirical in nature; it includes an examination of

the evolution and ecological diversity in mating and parenting systems (by Phyllis Lee) and reproductive ecology (Peter Ellison), for example. The second section pertains to the endocrinology of social relationships in nonhuman animals, such as rodents (Sue Carter et al.), biparental monkeys (Toni Ziegler and Charles Snowdon), group living monkeys (Lynn Fairbanks) and apes (Melissa Emery Thompson). The third part, which is the longest, deals with humans' social relationships. The topics vary but include, for example, the role of hormones on the initiation of mating relationships (James Roney), men's testosterone's influence on pair-bonding and fatherhood (Peter Gray and Benjamin Campbell), maternal care (Alison Fleming and Andrea Gonzalez), and diversity in adult partnering (Sari van Anders). There are several other chapters I have not mentioned that are equally as interesting and I omit them here only for brevity.

Although readers might not agree with all the contributors on every point, which is common with any text, readers will certainly grow intellectually from engaging with this book. This said, it will likely be a difficult book for someone with a background that deviates widely from the study of hormones. This text is aimed at an academic audience, particularly one with some background in, or working knowledge of, endocrinology. However, it would be possible for a lay reader to work through it at a relaxed pace, especially if they have read one or two other more approachable books first. It would probably be best for a lay reader to start by reading a book such as Peter Ellison's *On Fertile Ground: A Natural History of Human Reproduction*, or Richard Bribiescas' *Men: Evolutionary and Life History*. Both of these books introduce key ideas in a more basic, introductory way (such as how natural selection works, the basic role of hormones, how hormones and fertility are intertwined) within the same framework as presented in *Endocrinology*. Similarly, an introductory or low-level course on endocrinology could start with one of the above named books and then students could work through the chapters of *Endocrinology* as needed.

In most collected works, it is common to recognize a weak chapter (or more) that either does not fit the mission of the book or is simply inferior in quality to the others. *Endocrinology* is exceptional in that the quality of the chapters is consistently high, concepts are very well argued, and the presentation of ideas is logical and well-explained. This consistency could reflect the diligent work of the editors, or possibly the positive synergy the contributors and editors created together. Either way, the end result is a powerful volume.

References

Bribiescas, R. G. (2008). *Men: Evolutionary and life history*. Cambridge, MA: Harvard University Press.

Ellison, P. T. (2003). *On fertile ground: A natural history of human reproduction*. Cambridge, MA: Harvard University Press.