

HUMAN SEXUAL BEHAVIOR: WHERE WE'VE BEEN AND WHERE WE'RE GOING

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A Review of the Book

***Evolution and Human Sexual Behavior*, Peter Gray and Justin Garcia. 2013.
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“It is absurd to talk of one animal being higher than another” – C. R. Darwin (1837)

With the help of evolutionary theory and comparative methods to explicate patterns in sexual behavior that run deeper than species distinctions, Peter Gray and Justin Garcia explore human sexuality throughout the lifespan in their recent book, *Evolution and Human Sexual Behavior*. This work provides a fresh perspective on human sexuality and sexual behaviors, placing human animals within a larger historical context, and gives readers the opportunity to perceive human sexuality as malleable, a product of thousands of years of change.

Viewing sexual behaviors through an evolutionary lens, Gray and Garcia (2013) explore the relative costs and benefits associated with a particular aspect of an organism's sexual behaviors, therein relating sexual behaviors to Hamilton's rule (Hamilton, 1963). That is, to be favored by the forces of natural and sexual selection, a particular behavior or cognitive process must provide more benefits than costs to the organism in the domains of survival and reproduction. For example, a cognitive process that improves an organism's ability to locate genetically compatible mates — individuals with more dissimilar genes tend to produce fitter offspring (Gray & Garcia, 2013) — without too high of a cost for that organism in terms of mate search time or cognitive effort. Interestingly, Gray and Garcia turn these investigative mechanisms on the most fundamental aspects of sexual behavior and sexuality; the existence of sexual reproduction and biological sex differentiation. This questioning of central and evolutionarily ancient aspects of sexual behavior is intriguing, and largely absent from many other recent publications on the topic of sexual behavior and evolution. While it may seem intuitive, questioning why are there males and females of a particular species is

actually considered to be a bit of a paradox in theoretical biology; “theoreticians [have been challenged] ... to understand the adaptive significance of sex” (Daly, 1978, p. 771). The appearance of sexual reproduction in the evolutionary timeline, and therein two biological sexes, is somewhat paradoxical in that it does not seem to provide sufficient benefits to the organism given the considerable costs associated with it. Compared to asexual reproduction, sexual reproduction involves the added costs of time and resources spent seeking out, evaluating and attracting mates, the risks associated with competing for mates, and the sacrifice of half of your own reproductive output (i.e., offspring only carry half of each parent’s genetic information). The development of sexual reproduction from asexual beginnings was first explored by Darwin (1837) in his B notebook:

Two kinds of generation, the coeval kind, all individuals absolutely similar, for instance fruit trees, probably polypi, gemmiparous propagation, bisection of Planaria ... [and] the ordinary kind, which is a longer process, the new individual passing through several stages, typical or shortened repetition of what the original molecule has done. (p. 1)

Gray and Garcia support Darwin’s assumption that sexual reproduction (and therefore biological sex differentiation) developed due to the advantages associated with increased genetic diversity, or as they term it, “shuffling.” As they explain, “sexual reproduction enables a shuffling of the genetic deck, creating novel combinations that may prove beneficial in the face of shifting selective pressures” (p. 3). In this application of evolutionary theory, along with many others, Gray and Garcia make this theoretical approach accessible to those unfamiliar with the key concepts, yet still manage to explore sexual behavior and adaptation with considerable depth, creating a text which is more than adequate for the evolutionary novice, but is advanced and innovative enough to satisfy those who are more versed in evolutionary theory.

Gray and Garcia’s (2013) use of evolutionary theory to explore sexual behavior is far from limited to basic, foundational concepts; *Evolution and Human Sexual Behavior* also provides a cross-cultural perspective on diverse sexual practices, such as zoophilia, masturbation, prostitution, and polygamy. The importance of cross-cultural work in applications of evolutionary theory cannot be overstated, as identifying the contextual factors that produce reliable cultural differences in human behavior is central to modern conceptions of the nature/nurture debate. The outcome of the debate is that the influences of “nature” and “nurture” on an organism’s behavior are inextricably intertwined. Indeed, if an adaptation is to produce optimal behavior in a given evolutionarily relevant context, it should be sensitive to aspects of the environment.

Perhaps one of the greatest strengths of Gray and Garcia’s (2013) *Evolution and Human Sexual Behavior* is their use of narrative. Through storytelling and direct quotations, the authors explain various concepts relevant to sexual behavior and sexuality, such as the distinctions between physical and emotional intimacy in long-term pair bonds and the use of play in primate sexual development. Their style of writing transforms the presentation of theoretical and empirical findings regarding human sexual behavior (including Sternberg’s (1988) Triangular Theory of Love, Trivers’ (1972) Parental Investment Theory, Masters and Johnson’s (1966) stages of sexual arousal and response, and Fisher’s (1998) stages and brain systems associated with phases of human relationships) from the dense, verbose explanations found in many sexual behavior

textbooks to engaging, relatable narrative. This approach is especially desirable given that past attempts often over-represent a public health perspective (Bancroft, 2009; Rosenthal, 2012; Yarber, Sayad, & Strong, 2012) , while neglecting comparative psychology and evolutionary theory. For example, while emphasizing the importance of social learning in sexual development, Gray and Garcia (2013) apply Frank Marlowe's (2010) experiences with the Hadza tribe in Tanzania:

Hadza girls and boys begin 'playing house' literally, building little huts, around the age of 7 or 8. There is some sex play when they enter the huts... Once, several Hadza and I watched two girls about 8 years old hugging and rolling around on the ground, clearly enjoying themselves in a sexual way. (p. 168)

The use of narratives has been recently championed in educational contexts, due to their ability to integrate the perspectives of diverse groups (hooks, 1994) and to provide greater structure to the classroom and student engagement (Shavelson, Phillips, Towne, & Feuer, 2003).

Gray and Garcia (2013) also increase the relevance (and therefore engagement and readability) of their work through the inclusion of emerging issues in the field of sexual behavior and sexuality. For example, Gray and Garcia present the growing social security and public health issue of population implosion, which is the dramatic falling of birth rates, in some cases reaching below-replacement levels. They explore this phenomenon and its likely future consequences: "With lower fertility... women's health demands and expenditures will tilt more toward preventing children (through greater access to fertility control) than having children... A higher fraction of people's economic expenditures will be dedicated to "mating effort" over "reproductive effort"" (p. 305). Gray and Garcia provide their readers a glimpse into the future of sexual behavior, by exploring contemporary sexual issues such as decreasing fertility rates (and the associated changes in female political and social power), increased access to supernormal erotic stimulation (via the Internet), and the sexual implications of the obesity epidemic (hormonal, fertility, and libido changes). *Evolution and Human Sexual Behavior* provides an insightful review of sexual behavior and sexuality across species, across history, and across the individual lifespan with an evolutionarily informed perspective.

This fascinating text put forth by Gray and Garcia (2013) is pleasurable for the layman reader interested in the evolutionary underlining of human sexuality, as well as the advanced evolutionary scholar. *Evolution and Human Sexual Behavior* is more than an easily digestible pop-evolutionary text; this book can be successfully applied in academic contexts, and bring a fresh perspective to evolutionary psychology and human sexuality courses.

ABOUT THE AUTHOR

Lora E. Adair is a fourth-year graduate student at Kansas State University. While she has been published (and am currently pursuing a research program) within the domain of human sexuality (e.g., mate choice, fertility decision making, and mating intelligence), her experiences that most directly apply to this review are in teaching. Lora Adair has used Gray and Garcia's (2013) text in her Psychology of Sexual Behavior class with great success. Specifically, she has found that their book was well-received by students, and

included many explanations and explorations of human sexual behavior that were not offered in alternative sexual behavior textbooks.

REFERENCES

- Bancroft, J. H. (2009). *Human sexuality and its problems*. Cambridge, MA: Elsevier Health Sciences.
- Daly, M. (1978). The cost of mating. *The American Naturalist*, 112(986), 771-774.
- Darwin, C. R. (1837). Notebook B: Transmutation of species. Retrieved from <http://darwin-online.org.uk/content/frameset?viewtype=side&itemID=CUL-DAR121.-&pageseq=38>
- Fisher, H. E. (1998). Lust, attraction, and attachment in mammalian reproduction. *Human Nature*, 18, 355-364.
- Hamilton, W. D. (1963). The evolution of altruistic behavior. *The American Naturalist*, 97, 354-356.
- Hock, R. R. (2007). *Human sexuality*. Saddle River, NJ: Prentice Hall.
- hooks, b. (1994). *Teaching to transgress: education as the practice of freedom*. New York, NY: Routledge.
- Marlowe, F. (2010). *The Hadza: Hunter-gatherers of Tanzania*. Berkeley, CA: University of California.
- Masters, W. H., & Johnson, V. E. (1966). *Human sexual response*. Boston, MA: Little, Brown and Company.
- Rosenthal, M. (2012). *Human sexuality: From cells to society*. Independence, KY: Cengage Learning
- Shavelson, R. J., Phillips, D. C., Towne, L., & Feuer, M. J. (2003). On the science of education design studies. *Educational researcher*, 32(1), 25-28.
- Sternberg, R. J. (1988). *The Triangle of Love: Intimacy, Passion, Commitment*. New York, NY: Basic Books.
- Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man 1871-1971 (136-179)*. Chicago: Aldine
- Yarber, W. L., Sayad, B. W., & Strong, B. (2012). *Human Sexuality: Diversity in Contemporary America*. New York, NY: McGraw-Hill