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Book Review

THE HUMAN EVOLUTION AND THE NATURE OF SOCIETIES

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A Review of the Book

Human Nature and the Evolution of Society
by Stephen K. Sanderson. 2013**.**
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"Audacious," said my student when she saw Stephen K. Sanderson's new book, *Human Nature and the Evolution of Society* for the first time. I must admit that this was also my first reaction, which made me very excited about reading the book. This reaction was because, using 14 chapters, Sanderson's book covers almost every relevant aspect of human nature: ways of living, food, mating, parenting, marriage, status, power, race, violence, religion and the arts. I have never seen a book with such a broad scope, which is indeed, more than ever, necessary to try to connect different topics and approaches. In 2006, in the introduction of *Missing the Revolution*, Jerome Barkow mentioned that there are sociologists who have begun to apply an evolutionary approach to the subject matter of their discipline. Barkow then cited Stephen K. Sanderson and his (2001) work, *The Evolution of Sociality,* as an example of a sociologist who uses the evolutionary paradigm at least in part. Now, 8 years later, with this new book, it would be incorrect to say that he only *partly* uses the evolutionary paradigm, because he had succeeded in writing 14 chapters using evolutionary theory, and includes topics like religion and the arts, which is relatively rare even for standard evolutionary psychology textbooks.

The book has its strengths and weaknesses; I first focus on its strengths to encourage people to read it, particularly teachers in Humanities and Social Sciences, Biology, and Psychology. I then focus on its weakness to help to increase a critical debate raised by the new book.

Besides of its broad scope, I was impressed by Sanderson's presentation of interesting research on a spectrum of human social organizations, both from WEIRD (Western, Educated, Industrialized, Rich, and Democratic; Henrich, Heine & Norenzayan, 2010) and, more importantly, nonWEIRD populations. The book is thus not only a good introduction of behavioral sciences to students of humanities, but also a great introduction of anthropology, history, sociology and geopolitics relevant to students of biological and psychological sciences, and the lay public in general. He connects apparently disparate disciplines extremely well using a clear and engaging writing style. Also, the organization of the book makes it a perfect introductory handbook for classroom use. Every chapter begins with an overview, and ends with a summary of key points and discussion questions. The content is presented with an easy to understand logic and includes useful tables and figures. The end of the book contains a glossary of terms.

Sanderson is aware of many misunderstandings that newcomers' experience when first encountering ideas about biological factors of human behavior (for a review see Varella et al., 2013). Thus, he explicitly mentions and corrects some of them, such as the naturalistic fallacy and confusion between proximate and ultimate causations, in an effort to increase the efficacy of the reader's understanding and hopefully decrease potential resistance towards biological approaches to studying human behavior and society.

In terms of weaknesses, some parts of the book are unnecessary and rest on a self-damaging level of triumphalism in at least three ways. First, the author's triumphalism over cultural relativism/social constructionism is contra-conciliatory. Rather than endorse ideas that have been shown to be wrong (Pinker, 2004, for a review), he could have envisioned an integrative approach (for one attempt, see Ridley, 2003), or at least left the door open for some consilience among social researchers. Secondly, there is anthropocentric content, in particular in chapter 2 (about human evolution), where he falls for old-school traps about humans being unique and special because of language, of 'big bang' of culture in Europe, and of 'big' brain evolution (see Herculano-Houzel, 2012, for a review on brain myths). In chapter 5 (about finding mates), he even gives the impression that non-human primates are as 'primitive' as our ancestors: "(…) Chimpanzees are different in that it is the females rather than males who disperse. Nevertheless, the point still holds: primates are mating with individuals outside their own group… if a behavior pattern that is virtually universal in humans is also widely found in our prehuman ancestors, there is a strong presumptive case that we have inherited that tendency from those ancestors. Look to the animals" (p. 112). The importance of a comparative approach is not clear (as compared to, for example, Zuk, 2003), and more examples from other species would be helpful. Escaping the human exceptionalism mistake, which has been present in the scientific discourse since the great chain of beings, is difficult, given that we are humans, but it is crucial to fostering interdisciplinary connections between biological and human/social sciences (see Taylor,

2013). Thirdly, his triumphalism appears in using the old Eurocentric anthropological school of classifying societies as primitive ones versus modern/advanced ones. This happens particularly in chapter 9 (about status), where he refers to Western societies as "modern societies" reaching a "more complex stages of social evolution" (p. 252). He writes as if social evolution was unidirectional with existing tribal societies as primitive, or having a primitive leisure class. Rather than avoid comparisons of cultures, which currently happens in ethnography, a stronger solution may be to use an approach from phylogeneticists. That is, no living species is primitive, but some species might have more plesiomorphic (i.e., similar to the ancestral state of the trait) than apomorphic (i.e., less similar to the ancestral state of that trait) states of some features.

Another improvement would be further integration between particular chapters, an issue which is a by-product of having such a diversity of discussed topics. For example, Sanderson has separate chapters about Finding Mates (chapter 5), Family and Marriage (chapter 6) and Parenthood (chapter 7) but there is not much overlap presented. For instance, there is no mention of how parents and close kin can indirectly influence partner preferences via parental imprinting (Bereczkei, Gyuris, & Weisfeld, 2004) or directly influence mate choice (Apostolou, 2007). In Family and Marriage (chapter 6), he shows that the sex ratio in a society influences the type of marriage system: the more male skewed a population, the more polyandrous unions. However, in the chapter on Finding Mates (chapter 5), he does not mention how this same variable also influences cultural differences in sociosexual propensities. For example, cultures with fewer males are more unrestricted (i.e., more prone to casual sex) and cultures with fewer females are more restricted (i.e., less prone to casual sex), according to Schmitt (2005). Another example of a missed opportunity for integration concerns the neglected female biased sex differences in artistic propensities and its evolutionary implications (for a detailed discussion, see Varella, Valentova, Fernandez, submitted). Sanderson cites all the necessary elements to reach this conclusion (e.g., women have greater sensory sensitivity, including to music, and greater fine motor skill p. 188, women score higher in artistic and creative job interests, p. 230). In the chapter about the Arts (14), instead of following the presented literature he endorses the non-empirical statement of Brown (2000): "In most societies, women make musical contributions that are equal to those of men. Music is not sexually dimorphic trait" (371 p.), and ends up dismissing possible influences of sexual selection on music and the arts altogether.

A more systemic concern is that Sanderson uses a mixture of sociobiology, behavioral ecology, a little of gene-culture coevolution, and Santa Barbara's school of evolutionary psychology. What is curious is that he writes about evolutionary psychology without any reference to the cognitive revolution (see, Levitin, 2002), mind or mental processes, and instead he mentions 'innate psychology' or much more often 'brain modules', as if 'hardware' and 'software' were synonymous. No version of evolutionary psychology would focus on the "modular nature of the brain" (6 p.), as it would instead focus on the modular nature of mind. Cognition is not left behind even when an evolutionary approach meets neuroscience (see Krill et al, 2007).

In the end of the book, when Sanderson approaches the meaning of existence, he nicely offers four sensible options which are not exclusive. He then considers the 'anthropic principle' from intelligent design as something real, not as something which should be included as another mythology in the chapter 13, Religion. In the chapter on religion, instead of approaching more extensively how old and new religious groups always renew their attempts to control politics, reproduction/sexual life, education and science, he misprizes the new atheism as a futile endeavor since, according to him, religion is an evolutionary adaptation which cannot be removed from human brain and society. He fails to connect his precise discussion about infant mortality and female empowerment, as crucial factors influencing the number of offspring from chapter 7 (Parenthood), with religion, and he thus naïvely concludes that religion is adaptive because religious people have higher reproductive success than atheists! If Sanderson had paid more attention to the importance of the cognitive component of evolutionary psychology, his chapter about religion would be updated. Using more recent theory, he could easily separate religiosity (i.e., the cognitive component underlying religious thoughts) which is the proper candidate for a psychological adaptation (see Sosis, 2009), from religion itself (i.e., polytheistic and monotheistic ones). Likewise, his chapter about the arts also fails to differentiate cognitive artistic propensities (i.e., artisticality, Varella, Valentova, Fernandez, submitted), which are the proper candidate for a psychological adaptation, from the arts as a product, which is what people and societies do with their artistic tendencies. Unfortunately, the occurrence and propagation of this type of mistake is greatly muddling the evolutionary debate about important topics of humanities, such as religion (Sosis, 2009) and the arts. Curiously, in the chapter 5 (Finding Mates) where Sanderson nicely talks about homosexuality, despite correctly separating the psychological components (i.e., homosexual attraction) from the behavioral component (i.e., homosexual behavior), he fails to present any of the possible evolutionary explanations about it (for one attempt, see Vasey & VanderLaan, 2014).

After critically reading this book, it is easy to have reservations and to take issue with the "Human Nature" part of the book's title because of its association with a vague innatism, which is typical for pre-cognitive revolution, instead of a modern cognitive notion. It is also easy to see how the "Evolution of Society" from the title can be problematic, given possible associations with progressive thinking of ranking societies from early Anthropology. All that said, I think that a different title, such as "Human Evolution and the Nature of Societies," would better reflect the strong overall content of this new book appropriately. Nevertheless, it is a remarkable book.

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