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Science and Politics in the History of Paleoanthropology

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I would suggest that, for many people, questions along the lines of "*What do you do for a living?*" or "*What are you studying?*" are a routine element of courteous conversation. I can imagine a gentleman waiting in line at the supermarket right this instant is using one of these neutral inquiries to pleasantly whittle away time. As conventional as these questions may be, my response is probably equally *un*conventional: "*I'm working on my Ph.D. in paleoanthropology… I specialize in the study of human evolution*". As you might imagine, my answer is frequently met with impassioned response. Some find my work fascinating and jealously conjure up images of life in the field straight from a scene out of *Lara Croft: The Tomb-Raider* or giggle about the hilarity of the Geiko "cave-man" commercials, then inquire with fascination if Neanderthals and humans could interbreed. Others seem indignant and ardently insist that evolution is fictitious and cite the complexity of natural structures such as the eye or rotary motors on bacterial flagellum as proof. These divergent responses illustrate the extraordinary variability in the United States of public perceptions regarding human evolution. To me, the one constant appears to be that whatever a person's opinion about the field of human evolution, it is expressed with fervor. Personal opinions surrounding the study of human evolution are obviously driven by both the politics of individuals and the current social milieu. However, I would argue that texts in human evolutionary research and theory are also a matter of individual politics and the social setting in which they are constructed. I collect books on human evolution for many reasons: partly for occupational necessity, partly for love of paleoanthropology, partly to satiate an obsessive drive to see how changing politics has influenced human evolutionary theory.

To some level, my collection of books on human evolution is an occupational necessity. I would argue, however, that my passion for the field more strongly drives my collection. I am fascinated with the anatomy of our fossil ancestors and, *as a result*, my research focus is anatomical comparisons of our earliest fossil human ancestors. Thus, my collection is driven by a mixture of necessity and passion. My obsession, however, is driven by a more powerful motivation. When I stroll by a used bookstore I feel an uncontrollable impulse to search their stacks. I walk into these shops with a fluttering heart, fantasizing that I might stumble upon ancient texts on paleoanthropology. Let me warn you that sixty years old would not categorize as "ancient" in the study of many fields. For instance, human anatomy has not changed much since Henry Gray published his first edition of *Gray's Anatomy* in 1858. In contrast, paleoanthropological books go out of date in a matter of a few years. Today my 10 year old copy of *Reconstructing Human Origins* (Conroy, 1997) does not mention several species and genera of fossil humans discovered since its publication (*Sahelanthropus*, *Kenyanthropus*, *Orrorin*, *Ardipithecus kadabba*, and *Homo floresiensis*, just to name a few). The hypothesized trees of relationships for fossil human species have been completely reorganized since the first edition. For undergraduate students trying to grasp the field, this may understandably seem to be a horror rivaled only by the bubonic plague. Yet this rapid change provides an amazing opportunity for an obsessed book collector. In fact, this ability to trace the evolution of paleoanthropology is what drives my obsession.

My book collection spans from 1949 to 2007 and illustrates how changes in politics and social perceptions through time drive changes in theory. The scientific method is designed to be objective, but interpretations and theoretical frameworks upon which

scientific research are built are often *anything but* objective. For instance, the infiltration of paleoanthropological theory by Western biblical creation stories is exemplified by my copy of Campbell's 1966 book titled *Human Evolution: An Introduction to Man's Adaptations*, which depicts a naked Adam and Eve each holding an apple on the cover. Clearly, this illustrative choice implies that the origin of humans entails some sort of fall from grace. This theme – that humans are born into sin – permeates many of my earliest texts and has long been evoked in human evolutionary explanations, pre-dating even Charles Darwin's *On the Origin of Species* (1859). My collection includes a copy of Robert Ardrey's *African Genesis*, which is an entire text devoted to convincing the public that human evolution is the process by which humans are born into sin and are evolved to be natural killers. The opening sentence of the book indicates its biblical theme: "Not in innocence, and not in Asia, was mankind born" (Ardrey 1961:12). Ardrey also writes "we are Cain's children" and continues "man is a predator whose natural instinct is to kill with a weapon" (Ardrey 1961:322). While religious references have diminished in paleoanthropological theory the same theories are elicited today in popular books, such as *Demonic Males: Apes and the Origins of Human Violence* (Wrangham and Peterson, 1996). Stripped of its rhetoric and put into its Western religious and philosophical moment, the book is simply a continuation of this deep-rooted theme. Repeatedly disproved, the continual reappearance of this notion of humans as inherent sinners and war-mongers indicates its great appeal to the public.

My collection of texts also demonstrates the first appearance of women in the history of paleoanthropological discussions. Although women make up slightly more than half of our species, they were long absent in discussions of human evolution. Females are first introduced into human evolution as essentially helpless baby-producing machines.

According to Buettner-Janusch "the helpless offspring which the primate female must carry with her, may have had an important effect upon emerging human social structure… a female with young who has a mate that brings her back part of the kill would no longer be at a disadvantage" (1966:359). Beyond similar brief references, I could not find discussion of the role of women in my book collection until I picked up the edited volume *Women in Human Evolution* (Hager, 1997). This was the first book that suggested the possibility that females may have played an important role in the evolution of our species. Heavily bathed in postmodernism and following on the heels of the feminist political movement in the United States, this is the ultimate feminist critique of paleoanthropology.

I am driven to collect human evolutionary texts because it allows me to trace how social movements drive theory. Philosophers of science have long pointed out that opposing explanations may be either the result of differences in empirical data or differences in theoretical frameworks. I hope that I'll make substantial contributions to my field someday – but my collection of paleoanthropological texts from the last 60 years tells me that no matter what I accomplish, I should remember that I am a product of my historical and social environment. My book collection also provides a strong warning to never over inflate my confidence concerning what *I think I know*. More importantly, my collection warns paleoanthropologists (and really all scientists) that as objective as our data may be, our questions and our interpretations are very subjective. Politics will change, followed by theories surrounding human origins and its driving forces. I collect books to trace this history; I strive to teach to pass along the importance of sociopolitical context and healthy skepticism to my students.

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