
PREFACE TO THE
REVISED EDITION

I didn't expect I'd be updating *The Red Ape*. Although, as you'll read, there were a few moments when the possibility of humans being more closely related to orangutans than to chimpanzees might have been taken seriously, this suggestion has long been dismissed. Then, one day a few years ago, the editor Karl Yambert thought it would be interesting from a historical and philosophical perspective to bring the issues in *The Red Ape* up to date. I knew this wasn't going to be easy, not only because of the time that had passed but also because of the almost universal acceptance of a close human-chimp relationship. There was even a rumor that I'd rejected the human-orang theory both in print and in conversation with colleagues.

But here I am, writing the preface to a revision of *The Red Ape*. It's been a daunting but interesting task. First, I had to confront how much time had passed since the original publication in 1987 and realize that that version needed to be recast almost as ancient history – something I hadn't anticipated when I told Karl, "Sure, I'd love to do a revision." Second, I had to confront my own aging, of which I was reminded every time the cover fell open to the "photograph of the author." "Who was that young guy who thought he was so old and learned?" Third, though, was the combined feelings of excitement and anxiousness that emerged as I set to reading my own work, as well as the many publications of others, with an eye toward seeing how my original thoughts stood up after so many years.

I know that by disagreeing with the "accepted" theory of human evolutionary relationships – closest to the chimpanzee and bonobo, then to the gorilla, and least of all the large apes to the orangutan – I expose myself to my colleagues' criticisms. But, unexpectedly, the task of revision resulted in a theory of human-orangutan relatedness that is much more robust than when I first proposed it in the early 1980s. Of course, this raises questions of the molecular analyses that spearheaded the shift in thinking to the currently popular human-chimp theory of relatedness. I've tried to approach this "disagreement"

from the perspective of the history and philosophy of science: What are the underlying assumptions of any approach to generating theories of evolutionary relatedness?

Many thanks to John Grehan, director of science at the Buffalo Museum of Science, for continually pushing me to confront my own evolutionary assumptions, and to Malthe Ebach, Natural History Museum (London), for using different computer programs to reanalyze data from studies I cite to illustrate that the algorithm and assumptions one chooses do make a difference to the end result. Also, thanks to my colleagues in the Department of History and Philosophy of Science at the University of Pittsburgh, especially Jim Lennox (who commented on the original *The Red Ape*), for accepting me into their intellectual fold all these years. Although I sometimes find myself at the end of their critical "stick," their primary interest in questioning received wisdom has been an important source of encouragement to me. I have not communicated with Colin Groves about this revision, but I owe him a nod of gratitude, too. We've disagreed in the past, and probably always will about something or other. But even though my interpretation of the data may differ radically different from Colin's, this revision would have been quite different had he not reviewed *The Red Ape* as well as authored and co-authored various articles on comparative primate anatomy I refer to. Colin also pointed out my lapsus with regard to the Rh factor, which is now corrected, thanks to input from my father and pediatrician, Jack Schwartz. Although I discuss alternative interpretations of molecular data, I wouldn't have thought about some of these issues were it not for the patience of M. Hasegawa, with whom I met many times in the early 1990s to discuss our differing views. On one of these visits, S. Horai also joined in the debate. I may not agree with everything colleagues conclude, but that doesn't reflect a lack of respect or mean I didn't learn something from them (although it probably wasn't what they intended to impart). My understanding of genetics and development has expanded by collaborating with the molecular biologist, Bruno Maresca, and ideas about "genes" roughed up at workshops on "gene concepts" organized by the philosophers of science Karola Stotz and Paul Griffiths. My first-hand knowledge of the human fossil record derives from an almost-decade-long and unique collaboration with my "oldest" colleague, Ian Tattersall. Thanks to my brother, Laurens Schwartz, for invaluable advice on the final edit of the manuscript.

Thanks also to S. Gaulin, D. Haring, W. Kinzey (through his widow, Julie), J. Mitani, H. Rijksen, and P. Rodman for again letting me use their photographs, and to J. C. Anderton for permission to reproduce his drawings. I am grateful to Tim D. Smith for providing new drawings and amending some of the originals. Bill Parsons graciously undertook revision after revision of our new reconstruction of "Lucy" and has kindly allowed me to publish his reconstruction sketches here. Thanks also to curators at The American Museum of

Natural History; the Department of Anatomy, University of Witwatersrand; the National Museum of Ethiopia; and the National Museum of Kenya for allowing me to photograph specimens used here. For those of you who read the original version, you'll notice that "orang-utan" is now spelled "orangutan" in the text (but not in all figures). The hyphen is not typically used these days. I must also point out that, although they are not cited in the text as is in traditional scientific articles and books, all the references I used are listed in the bibliography, plus many more I read along the way. I provide enough information to locate and identify each relevant publication. Although I define terms throughout, I also put together a glossary.

Mostly, though, I want to thank my wife, the poet Lynn Emanuel, for enduring both my absences during the many years I was off studying human fossils and the seemingly endless days I've spent glued to articles and my computer revising *The Red Ape*. It turned out (fortunately) that the former project was more important to this revision than I could have imagined. But I've promised Lynn that I'll never again undertake two such enormous projects at the same time.

Jeffrey H. Schwartz
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