
As I was beginning to think about preparing this review, a colleague picked up Tom Tyler’s *CIFERAE* off my desk and began flipping through its pages. A few moments later, he put it back down and expressed some bewilderment about its title and chapter headings, which include such mysteries as “On the Ring Finger a Ram’s Testicles” and “The Thumb Is a Little Hand, Assistant to the Greater”—each of the five chapter titles evoking one of the fingers of the hand. What, he asked, is this book supposed to be about? I can now give a straightforward answer: this book investigates and rejects the idea that epistemological anthropocentrism is a necessary component of realist, relativist, and pragmatist philosophies of knowledge. It also makes a less straightforward and possibly more interesting point about how philosophers can and should engage with nonhuman animals. And it does so precisely through its inscrutable titles and playful design, which includes 101 (CI in Roman numerals) illustrations of more or less wild animals (*ferae*). What might at first appear to be postmodernist obscurantism and needless noodling around turns out to be neither postmodernist nor needless, and indeed essential to Tyler’s project. First, the straightforward argument. Tyler is concerned with what he calls “first-and-foremost anthropocentrism” or “epistemological anthropocentrism,” which he defines as the notion that humans “are stopped up, as if within a bleak, restricting container, unable to access the wider world except through the translucent but necessarily distorting sides of their prison” (p. 3). His focus is therefore not on that kind of anthropocentrism that has been called *speciesism*, which simply asserts the superior importance and moral status of humanity, but rather on the more subtle claim that knowledge as such is “inevitably . . . determined by the human nature of the knower” (p. 21). After an introductory discussion, Tyler dedicates one chapter each to realism, relativism, and pragmatism. For each of the three philosophical approaches, he investigates the ontology, utility, and validity of knowledge: that is, what knowledge is (either “mediating representation” or “immersive practice”), what it does (“explanation of the world” or “interpretations of a worldview”), and what it claims (“transcendental truth” or “partial perspective”) (p. 210). He concludes with a chapter on the figure supposedly at the center of knowledge—*anthropos, Homo sapiens*, humanity, “man”—and on
one of its allegedly defining attributes, the hand. This admittedly rigid scheme leads Tyler through an eclectic menagerie of Western thinkers, not all of them philosophers, and through the aforementioned 101 *ferae*.

It will probably come as no surprise that the pragmatists have the best of it. Try rolling each of the following terms around on your tongue: “naïve realism,” “naïve relativism,” “naïve pragmatism.” The last probably feels a bit awkward; we are more accustomed to offhand dismissals of the first two. To be fair, although Tyler admits to some Procrustean snipping and stretching to fit particular philosophers into the three beds he has made, he gives them all a respectful hearing. Although pragmatism comes off as the most reasonable option and the one most helpful for getting over the human/animal divide, his main aim is to disassociate all three schools from any necessary connection to epistemological anthropocentrism. Among the thinkers that appear in the book, certain ones emerge as particularly vital. These include, in no particular order, Ludwig Wittgenstein, Georges Bataille, Immanuel Kant, G. E. Moore, Richard Dawkins, William James, Ferdinand de Saussure, Martin Heidegger, Charles Darwin, Michel Foucault, Benjamin Whorf, Richard Rorty, and—just beating out Kant for the longest entry in the index—Friedrich Nietzsche. The realists and relativists are criticized for their commitment to representationalism, the pragmatists praised for their focus on knowledge as practice. But whatever your personal preference may be, Tyler argues, none of these positions necessarily entails epistemological anthropocentrism. Moreover, the very concept of *anthropos* built into anthropocentrism is suspect. As Tyler argues in his chapter on the hand and the human, only a certain chauvinism prevents us from recognizing that if we are bound to see the world through any particular lens, it is the lens of the apes-in-the-making that we have always been.

About those inscrutable headings and the 101 animals that crowd into *CIFERAE* from the margins. Tyler is at pains to distance his deployment of animals from the way that they have typically been used and abused by philosophers from Aristotle to Austin, who have tended to render them into mere *ciphers*—“docile placeholders” (p. 29) that serve some argumentative purpose without regard for their particularities as species or individuals. He seeks instead to use animals as *indices*: “moving, breathing, living beings [that] retain their distinctive, individual qualities” (p. 45) and point things out to us that we would not have noticed on our own. Although it took me some time to get used to the constant movement between the body of the text and the illustrations and extensive captions in the margins, I eventually found the alternation rewarding. The inclusion of mermaids as a category in Jorge Luis Borges’s fanciful Chinese encyclopedia, for example, serves as an opportunity to introduce an image of manatees, supposed to be the origin of the mermaid legend and therefore a good example of the classificatory confusions discussed in the last chapter (p. 245). But is the image more than an illustration? How wild are Tyler’s *ferae* in the end? Wild enough to serve the purpose, I think. There is an excess in the figures and captions that prevents them from being completely domesticated to the argument. The caption tells us that manatees are very distantly related to elephants, that they are mostly hairless and entirely herbivorous, that females use their flippers to hold their infants against their breast while suckling. Lines of flight open up from these details into other strata besides the one in which Tyler’s argument moves. In this sense, the book’s heavy reliance on illustration and its allusive headings are signs of a pragmatic refusal to completely instrumentalize its animal subjects.

In addition to a significant amount of new material, this book incorporates in slightly revised form a number of articles and chapters in edited volumes that
Tyler has published over the past decade or so. Scholars on a tight budget might be able to get a sense of the style and substance of the argument from these already-published pieces, but they would be missing out both on the effort put into weaving everything together into a coherent whole and on the book’s usually illuminating and sometimes quite funny dialog between image and text. One lacuna tempered my appreciation: namely, a lack of engagement with feminist arguments about embodiment, situated knowledges, and the nature of “man” that would seem to be very relevant to the questions at hand. Not being a philosopher myself, I cannot judge whether the chapters on realism, relativism, and pragmatism make a significant mark on those deeply furrowed fields. Nonetheless, for scholars in science studies and animal studies, CIFERAE offers a thought-provoking and entertaining opening onto a question of central importance: whether and how our membership in the human species, or in any other species, determines what we can know.

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One predictable move within the science and religion debate that overflows public-intellectual forums is for the defenders of “faith” to accuse the scientific worldview, if such a tidy unity is even tenable, of materialism. In Modern Physics and Ancient Faith, Catholic physicist Stephen Barr offers a typical example of this, what he calls “so-called scientific materialism”: it is the “basic tenet . . . that nothing exists except matter, and that everything in the world must therefore be the result of the strict mathematical laws of physics and blind chance” (p. 1). Framed in this way, such reductionism does indeed seem ill-suited to the heterogeneous complexity of our biological world and its conscious and conscientious human inhabitants. With the straw man duly hung from the rafters, Barr proceeds to pummel it into dust.

Ronald Schleifer’s Intangible Materialism is a compelling rejoinder, noteworthy for both its breadth and rigor, to such reductions of materialism to “mechanical or physicalist reduction”—to mere laws of physics and blind chance (p. 6). Drawing on insights from a wide range of disciplines that includes evolutionary theory, neurobiology, cognitive linguistics, philosophies of language, mind, and science, musicology, information theory, literary criticism, and, crucially, semiotics in the traditions of Charles Sanders Peirce and Algirdas Greimas, Schleifer presents a thesis that winningly complicates the simplistic “opposition between matter and spirit” that is characteristic of dualistic accounts of human consciousness—accounts that trace their intellectual pedigree back to René Descartes and that find contemporary proponents in the likes of David Chalmers and E. O. Wilson. “[W]e can talk usefully, scientifically, and above all, materially,” Schleifer writes, “about three levels of understanding: the positive science of physics, the ‘environmental’ sciences (or context-dependent interactions) of biology and