Harriet Ritvo

Humans & humanists

"When I use a word," says Humpty Dumpty in *Through the Looking Glass*, "it means just what I choose it to mean – neither more nor less." Alice demurs on several grounds, appealing first to contrary popular consensus – "But 'glory' doesn't mean 'a nice knock-down argument'" – and then to the essential limits of language: "The question is . . . whether you *can* make words mean so many different things." Neither of Alice's objections fazes Dumpty, who countertheorizes that "the question is . . . which is to be master," then illustrates the practical benefits of his approach with a brilliant interpretation of "Jabberwocky," a poem whose vocabulary Alice had previously found impenetrable.[1] There is, of course, much to be said on both sides of this debate. Many people have, like Dumpty, recognized the power of vocabulary and made similar attempts to control definitional borders. If, again like Dumpty, they have neglected to acknowledge the alternative viewpoints represented by Alice and her ilk, they have usually found this easier said than done.

The term *human* has in recent years been the site of such contestation and struggle among humanist scholars, whose self-categorization may seem to beg such questions. Previously, although humanism itself has often been controversial, a fair amount of consensus existed among practitioners and critics about its denotation. This consensus has been notably durable. In the *Oxford English Dictionary* (*OED*), the first three senses of *human* distinguish "mankind" from animals, from "mere objects or events," and from "God or superhuman beings." All three of these senses emerged before 1600, and none has yet been labeled obsolete.[2] The *OED*'s definition of *humanist* is much more restricted, focusing on divisions among learned men, rather than among orders of creation. Its senses refer to the various subcategories of scholarship that humanists have chosen to explore; none of these senses has yet been labeled obsolete either.[3]

In 1976, the cultural critic Raymond Williams included *humanity* (as representing "a complex group of words, including human, humane, humanism, humanist, [and] humanitarian") in *Keywords*, his compendium of brief essays on common terms, the senses of which had altered or splintered as a result of cultural and political pressures that emerged during and after World War II. But a crude statistical calculation suggests that Williams did not consider this word or group of words as

among the most problematic or interesting in his collection: he allotted it only three pages. Words whose evolution he considered particularly compelling or important – *class, culture, democracy, masses, nature, realism, socialist,* and *structural* – commanded, in comparison, five pages or more. In his discussion, Williams took the limits of the human for granted, emphasizing instead the shades of moral connotation that distinguish *human* from *humane,* and the shades of intellectual connotation that distinguish the specialties of some "humanists" from those of others.[4] *Keywords* included no entry for *animal, beast,* or *monster* – or for *machine, god,* or *deity,* for that matter – and no such entries are planned for an updated version of the book currently under preparation. These editorial decisions may suggest that, in the view of many humanists, the boundaries between humanity and its abutting categories remain relatively unproblematic.[5]

Like the *OED* lexicographers, Williams chose most of the examples that illustrate his definitions from the literature of humanism, which may explain the narrowness of his disciplinary focus and his lack of attention to the unsettled borders that have begun to preoccupy at least some humanists. (It is not surprising to find Williams following the *OED*'s lead: it was his major primary source for *Keywords*.) But neither blurry edges nor strenuous attempts to clarify them are recent developments. As Humpty Dumpty discovered, to his cost, that he was not the only author of his own story, humanists have never been alone in their interest in the human. Certainly, they have never had the last word in defining it.

Categories and boundaries have long obsessed students of the natural world. The organization of information about animals, plants, and minerals into a coherent system was part of the core disciplinary, or protodisciplinary, agenda of eighteenth- and nineteenth-century naturalists. A taxonomic system was necessary for the practical purposes of retrieval and comparison, as knowledge about the world and its contents grew exponentially during the centuries of European exploration and expansion. More abstractly, especially in the wake of Newton, taxonomy constituted a vital component of naturalists' claim to intellectual respectability and prestige. Without system, they feared, natural history would be "but a confused, undisciplined crowd of subjects," and naturalists "mere collectors of curiosities and superficial trifles . . . , objects of ridicule rather than respect."[6]

Before any natural kind could be assigned its place in a system, it had to be described with sufficient precision to establish clear criteria for inclusion or exclusion. This was often problematic since, at the time, transportation was slow and uncertain, communication among specialists was difficult, and preservation techniques were often ineffective. In addition, although some organisms, like the giraffe, can be easily differentiated from all others, many plants and animals have relatives close enough to undermine the distinction between similarity and sameness. Extra study did not necessarily make things clearer; indeed, intensified examination of dubious cases often made them seem more difficult to describe and delimit. As Charles Darwin remarked of the differentiation of species and varieties, "[I]t is in the best-known countries that we find the greatest number of forms of doubtful value. . . . if any animal or plant . . . closely attract [human] attention, varieties . . . will almost universally

be found recorded."[7] Human beings fit both criteria. The territories where humans lived were inevitably very familiar and well documented, and most people found humans – themselves – to be the most fascinating of the earth's inhabitants. Consequently, many naturalists struggled to determine where their species fit in the natural order. One possibility – the one implied by *OED* definitions, as well as by the chain of being that descended from antiquity – was that humans occupied a position just outside or on top of the natural order.[8] But other possibilities existed, several of which suggested greater integration.

As the gap between humans and other creatures diminished, boundary confusion increased. Many naturalists followed the lead of Linnaeus, the Swedish taxonomist whose system of latinate binomials remains the foundation of botanical and zoological nomenclature. He first published his classification of the animal kingdom in *Systema Naturae* in 1735; it was expanded and revised through many subsequent editions, of which the tenth, published in 1758, is considered definitive. Unlike many of his contemporaries, Linnaeus had no doubt that people were a kind of animal, if an unusual kind. He embedded humans firmly within his taxonomic system, devising the primate order to accommodate four genera: *Homo*, *Simia* (monkeys and apes), *Lemur* (prosimians), and *Vespertilio* (bats). Linnaeus did not, however, treat humans and their ilk in quite the same way that he treated these structurally parallel categories. Instead, he signaled human distinctiveness in the brief characterizations that accompanied his schematic list of genera. For simians and prosimians he highlighted dentition; for bats, wings. With regard to *Homo* he identified no distinctive physical feature, but merely commented, "*nosce te ipsum*" – know thyself.[9]

Linnaeus's terse description left many questions unanswered, the most obvious of which was how to define *thyself*. At the next level of analysis, where he described each genus in greater detail and itemized its constituent species, Linnaeus offered some very suggestive answers. In his classification, *Homo* was not a monolithic taxon; it contained two species, of which *Homo sapiens*, the first and largest, was further subdivided into the conventional geographical races (American, European, Asiatic, and African), with additional categories for the wild children who occasionally turned up (*Ferus*) and for still more unusual kinds of people (*Monstrosus*).[10] According to Linnaeus's descriptions, those in *Homo* differed sufficiently in their physical and temperamental qualities to make it unlikely that the self-knowledge of members of one group, however comprehensive and accurate, would automatically illuminate the nature of the others. For example, *Homo Europaeus* was "sanguineus," while *Homo Afer* was "phlegmaticus." The other species within the genus *Homo* more severely challenged the limits of empathetic insight. Linnaeus's correspondence and his lectures at Uppsala University contained repeated suggestions that he found it difficult to establish a firm dividing line between humans and apes.[11] *Homo troglodytes* was not subdivided; its sole occupant was the orangutan.[12]

The evidence offered by this placement is ambiguous, however. The orangutan was also known as *Homo sylvestris*, or, "the wild man of the woods" (a translation from Malay, although not of the Malay word for the orangutan), and, at a time when the unity

of the human species was the subject of vigorous debate, there was widespread uncertainty about whether or not orangutans were human. In addition, naturalists had not yet clearly distinguished the orangutan of Southeast Asia from the chimpanzee of Africa, whose taxonomic placement, therefore, generated similar (or identical) uncertainty. In 1699, for example, the anatomist Edward Tyson had published a treatise entitled *Orang-Outang, sive Homo Sylvestris. Or, the Anatomy of a Pygmie compared with that of a Monkey, an Ape, and a Man*.[13] (By "ape" he meant baboon, and by "pygmie" he meant chimpanzee.) The human status of the quasi-mythical pygmies had, conversely, long been the subject of European speculation. Even at the end of the eighteenth century, naturalists could claim that the "race of men of diminutive stature," or "supposed nation of pygmies" described by the ancients, was "nothing more than a species of apes…that resemble us but very imperfectly."[14]

With regard to the orangutan (or chimpanzee), Linnaeus hedged his taxonomic bets. On the one hand, he extended the human genus in the direction of apes – or toward the dark side, to use his own terminology: he described *Homo sapiens* as *H. diurnus*, while *Homo troglodytes* was *H. nocturnus*. On the other, he reserved a place for them at the head of the simians, in the species *Simia satyrus* (the name of which evokes a more imaginative direction in which the boundary of the human could be problematic).[15] Linnaeus had good reason to equivocate. Despite his iconic status as a systematizer, in his own time as well as subsequently, his inclusive primate order was frequently rejected. Not everyone, whether serious naturalist or casual observer of nature, enjoyed being placed firmly within the animal kingdom, even if at the head of it; the closer juxtaposition within the genus *Homo* was inevitably even more troubling. According to the British naturalist Thomas Pennant, "[M]y vanity will not suffer me to rank mankind with *Apes*, *Monkies*, *Maucaucos*, and *Bats*"; a colleague further asserted, "[W]e may perhaps be pardoned for the repugnance we feel to place the monkey at the head of the brute creation, and thus to associate him…with man."[16]

Some dissenters simply proposed their own counter-taxonomies, which implicitly posited a much wider separation. Thus, early in the nineteenth century the anatomist William Lawrence suggested that "the principles must be incorrect, which lead to such an approximation" between humans, apes, and monkeys within the primate order; instead, he argued that "the peculiar characteristics of man appear to me so very strong, that I not only deem him a distinct species, but also…a separate order."[17] Naturalists who recognized this exclusively human order normally designated it "Bimana," which stressed the erect posture and purpose-built feet characteristic of people, in contrast with the four-handed apes and monkeys who were segregated in the order "Quadrumana."[18] As the author of one mid-nineteenth-century guidebook to the Mammalia enthusiastically put it, "Man! Privileged in every other aspect, is zoologically distinguished by possessing hands on the anterior extremities alone."[19] A contemporary more forcefully asserted, "[M]inute examination shows us that even these highest forms of the brute creation are separated by a vast interval from him to whom was originally delegated the dominion over them all."[20]

Nevertheless, such assertions were rearguard efforts and, at least among specialists, Linnaeus's primate order

ultimately triumphed. By the middle of the nineteenth century, most zoologists had accepted it, although some maintained the two-hand/four-hand division at a lower level of taxonomic discrimination. Even Louis Agassiz, who emerged as one of the most prominent opponents of Darwin's theory of evolution by natural selection, argued that "as man is related to animals by the plan of his structure, so these are related to him by the character of those very faculties which are so transcendent in man as to point at first to the necessity of disclaiming for him completely any relationship with the animal kingdom." (He further speculated that because the absence of other animals from the afterlife would involve a "lamentable loss," they were likely to share with people something like a soul.)[21] But even within Agassiz's generous embrace, similarity did not imply identity. Like the animal companions that he feared to miss in heaven, apes and monkeys remained outside the human taxon.

Among the general public, the possibility that apes might actually be people lingered in various ways. Illustrations in books of popular natural history often portrayed apes as particularly human in both appearance and behavior, showing them assuming erect posture, using human tools (frequently a walking stick), and approximating human proportions in the torso and limbs.[22] Still more strikingly, this visual tradition was not confined to the page or the canvas; it was also constantly reenacted in the displays of the chimpanzees and orangutans that constituted popular components of nineteenth-century zoos and menageries. Show apes ate with table utensils, sipped tea from cups, and slept under blankets. One orangutan who lived in London's Exeter Change Menagerie amused herself by carefully turning the pages of an illustrated book. At the Regent's Park Zoo in London, a chimpanzee named Jenny regularly appeared in a flannel nightgown and robe. Consul, a young chimpanzee who lived in Manchester's Belle Vue Zoological Gardens at the end of the nineteenth century, greeted the public dressed in a jacket and straw hat, smoked cigarettes, and drank his liquor from a glass.[23] At about the same time, the London Zoo routinely dressed a chimp named Mike to impersonate Captain Cuttle, a character from Dickens's *Dombey and Son*. Even apes with no public role to play tended to behave in a distinctively human manner. For example, a chimpanzee acquired by the Earl Fitzwilliam in 1849 was reported to walk "perfectly erect" and handle "everything like a human being"; in addition, its food was "choice, and wine a favorite beverage."[24]

Rumor persistently whispered that these visual analogies might represent more substantial and productive connections. Thus one seventeenth-century report featured a "poor miserable fellow" who had copulated with a monkey, "not out of any evil intention . . . but only to procreat a Monster, with which he might win his bread."[25] At the end of the eighteenth century, the surgeon and naturalist Charles White reported that orangutans "have been known to carry off negro-boys, girls and even women . . . as objects of brutal passion"; more than sixty years later the Anthropological Society republished Johann Friedrich Blumenbach's summary of travelers' accounts that "lascivious male apes attack women."[26] White recorded rumors "that women have had offspring from such connection" and proposed that "supposing it to be true, it would be an object of inquiry, whether such off-

spring would propagate, or prove to be mules."[27] Blumenbach, more cautious, asserted "that such a monstrous connection has any where ever been fruitful there is no well-established instance to prove."[28] Addressing the same concern, in his pioneering account of chimpanzee anatomy, Edward Tyson had gone out of his way to assure his readers that "notwithstanding our *Pygmie* does so much resemble a *Man* . . . yet by no means do I look upon it as the Product of a *mixt* generation."[29]

Outside the community of experts, claims could be less restrained, or more enthusiastic. A Victorian impresario, for example, advertised the merely hairy Julia Pastrana as "a hybrid, wherein the nature of woman predominates over the ourang-outangs."[30] And there were other ways of positing similarly concrete connections between people and the non-human animals most nearly allied to them by anatomy. Well into the nineteenth century, physicians explained many kinds of birth defects as the unfortunate consequences of what was termed maternal imagination or impression – that is, an expectant mother's fascination with an external object that somehow influenced the development of her unborn child. Where the object was animate, the fascination could occasion a kind of mental hybridization: a child whose parentage involved more than one species. Thus in 1867 the *Lancet* attributed the dense fur covering an unfortunate girl's back to the fact that her mother had been frightened during pregnancy by an organ grinder's monkey.[31] In addition, because the evolutionary theories that gained currency in the late Victorian period assumed the existence of extinct forms intermediate between humans and apes, at least in the sense of having given rise to both modern groups, the rhetoric of evolution could be deployed to suggest that human-ape mixtures existed in the present, as well as in the ancestral past. For example, a Laotian girl named Krao was exhibited in 1883 as "Darwin's missing link," not only because she was unusually hairy, but because she allegedly possessed prehensile feet and could pout like a chimpanzee.[32]

Even among scientists, the conviction that apes were not people did not exclude the possibility that some people might be apes. Indeed, over the course of the nineteenth century this possibility loomed increasingly large, as specialists focused more intensely on ways to subdivide the human species. The discriminations could be very fine. For example, John Beddoe, the author of *The Races of Britain*, deemed it possible to distinguish between the appearance of people who lived in Boston and those who lived in Lincoln (towns separated by approximately thirty miles), and further speculated that some of the differences between the Saxon and the Celtic components of the British population could be explained by the persistence of "Mongoloid" and African traces persisting in the latter group.[33] And the stakes could be high, both intellectually and politically. During the 1860s, the nascent British anthropological community was riven by a struggle between so-called ethnologicals, generally evolutionists and monogenists (believers in the common descent of all human varieties), and the anthropologicals, generally anti-Darwinians and polygenists (believers in the independent origin of human varieties).[34] In the presidential address that inaugurated the Anthropological Society of London in 1863, which was billed as a consideration of "the station to be assigned to [the Negro] in the genus *Homo*," James Hunt argued that

"there is as good a reason for classifying the Negro as a distinct species from the European, as . . . for making the ass a distinct species from the zebra." After a series of disparaging characterizations, Hunt concluded that "the Negro race can only be humanised and civilised by Europeans."[35]

As displays of great apes suggested their latent humanity, the anthropoid qualities of derogated human groups could be indicated concretely as well as in words. Museums frequently exhibited the remains of non-European humans in ways that underlined their difference from Europeans, or suggested their greater affinity with other animals. In 1766, a traveling collection of "curiosities" grouped a "Negro Child" with a "Monstrous Cat with 8 legs," a "Chicken's Foot with 6 Toes," a sloth, and an armadillo. A century later the Cambridge University anatomical collection listed separate entries for the "Tegumentary System or Skin" of the "Human" and the "Negro."[36] If twentieth-century natural history museums included displays of human artifacts, or dioramas showing human activity, they were much more likely to feature people who could be characterized as exotic or primitive than people who wore business suits and carried briefcases. The political consequences of such explicit and implicit taxonomic juxtapositions have been demonstrated repeatedly, whether human groups are associated with fellow primates or, as in the rhetoric of the Nazis, resurrected in the recent Rwandan genocide, with insects whose similarities are purely metaphorical.

Although it has never been difficult to distinguish between people and cockroaches, human uniqueness has come under increasing taxonomic challenge. Beginning with the nineteenth-century discovery of Neanderthal remains,[37] paleoanthropologists have exhumed and identified species after species, so that *Homo sapiens* is now surrounded by a crowd of ghostly parents, grandparents, aunts, uncles, and cousins, some of them only very recently extinguished. In this respect, if not in others, humans are now more like the cat than like the giraffe. *Homo neanderthalensis* and *Homo sapiens* coexisted for millennia in parts of Europe and southwest Asia.[38] Remains of small-bodied and small-brained humans discovered on the Indonesian island of Flores in 2004 have been classified as a separate species (*Homo floresiensis*) that lived there until about 17,000 years ago.[39]

The phylogenetic relationship between people and the other great apes has also become better and better documented, making any classification that groups chimpanzees, gorillas, and orangutans together, while leaving humans in splendid isolation, primarily a case of wishful thinking. Although the fine points of ape taxonomy are still subject to debate, it has become clear that orangutans, rather than humans, are the outliers. In one recent formulation, the family Hominidae contains three subfamilies: Ponginae (orangutans), Gorillinae (gorillas), and Hlarger Hominidae (chimpanzees, bonobos, and humans).[40] And if the claim embedded in the title of Jared Diamond's book *The Third Chimpanzee* still seems provocative, a more generic version of it is definitely ready for prime time.[41] A publicity release for the *Nova* television program's episode "Ape Genius" begins, "Congratulations: You are an ape."[42] I have visited zoos that provide a mirror in which visitors can admire one last specimen as they leave the great ape house.

This increasing convergence has destabilized the assumptions on which the

dictionary definitions of *human* and *humanist* have been based. If people are apes, then they must understand and justify their preeminence in novel ways, or, if they are committed to traditional understandings of human distinctiveness, they must at least find new evidence to support them. As evidence of physical difference has become less persuasive, evidence from the behavioral, intellectual, or spiritual sphere has gained prominence. Nineteenth-century naturalists uneasy about the human-ape connection frequently posited an alternative alliance. They reasoned that if non-primate animals resembled humans more closely than apes, then they would necessarily displace apes from their awkward proximity. Such displacement required that qualities other than physical resemblance be identified as the most significant for purposes of comparison. Animal mental ability was defined as different in kind from that of humans; most highly esteemed were qualities that produced good servants. This metric was unlikely to privilege apes or monkeys. In 1881, for example, George J. Romanes, a close friend and colleague of Darwin's with a special interest in animal behavior, celebrated the "high intelligence" and "gregarious instincts" of the dog, which, he claimed, gave it a more "massive as well as more complex" psychology than any member of the monkey family.[43] And since the competing closeness so constructed was clearly figurative, the whole animal creation was thereby implicitly removed to a more comfortable distance.

Temperament, of course, is hard to pin down; as with Linnaeus's characterization of human types, it is often in the eye of the beholder. The more that we have come to know about the dispositions of chimpanzees and other primates, the harder it has become to maintain a firm separation. Many characteristics that once seemed exclusively or at least distinctively human, including moral intuition, oppressive patriarchy, internecine strife, and cannibalism, turn out to be more widely distributed.[44] Intelligence has proved a weak reed for similar reasons. None of the intellectual barriers erected to isolate people has proved reliably robust. In *Sartor Resartus*, Thomas Carlyle chose "Tool-using Animal" as a definition that emphasized human uniqueness, noting that "Man is called a Laughing Animal, but do not the apes also laugh, or attempt to do it."[45] In the wake of Jane Goodall's pioneering observations of chimpanzees, tool creation has been observed in several primate species (and many kinds of animals are capable of using found tools).[46] The obstacles to speech in other primates are located in their vocal tracts rather than in their brains.[47] In any case, parrots can talk, as can a few other kinds of birds; some of them, like the recently deceased Alex, arguably make sense.[48] And it has become clear that, with the aid of sign language, computers, or other accessories, apes and dolphins can breach the final barrier, that of symbolic communication.[49]

The implications of these snowballing recognitions are more than abstract or theoretical. In the preface to *The Great Ape Project*, the editors argue that the "sphere of moral equality" to which we all belong should be based not on reductive taxonomy – membership in the species *Homo sapiens* – but on "the fact that we are intelligent beings with a rich and varied social and emotional life." Since these "are qualities that we share . . . with our fellow great apes," the boundary of the sphere should be redrawn so that they are included, too.[50] Contributors

include scientists who study apes in the wild, scientists who study apes in captivity, and specialists in language, philosophy, and law, among other disciplines. They all subscribe to the "Declaration on Great Apes," which specifies that, for human beings, chimpanzees, gorillas, and orangutans, the right to life, the protection of individual liberty, and the prohibition of torture should all be enforceable by law.[51]

Since not all humans enjoy these legal protections, it is not surprising that apes remain outside the "sphere of moral equality." Some recent developments in Europe suggest the possibility of future change, especially the resolution adopted in 2008 by a committee of the Spanish parliament giving great apes the rights formulated in *The Great Ape Project*.[52] But such change will certainly be slow, and in any case most apes do not live in Europe (at least not yet). Nor do they live in the United States, where the legal system, as well as the culture at large, seems less sympathetic. A *New York Times* commentator on the Spanish resolution pointed out the failings of extremists on both sides, but came down on the side of the apes: "Critics object that recognizing rights for apes would diminish human beings. But it seems more likely that showing respect for apes would elevate humans at the same time."[53]

These developments reflect the evolution of an argument that has been going on for centuries. In comparison, most humanists have just begun to wonder about the limits and limitations of the human. We might, indeed, wonder whether the label "humanist" has always carried a certain amount of hubris (or at least tunnel vision), as well as what it would take to become "post-human." Perhaps the liberation of all the apes now held in captivity (not to speak of all the other animals)? As Humpty Dumpty might have said, "There's a nice knock-down argument for you."

ENDNOTES

1 Lewis Carroll [Charles Lutwidge Dodgson], *Through the Looking Glass,* in *The Annotated Alice,* ed. Martin Gardner (1865; New York: Bramhall House, 1960), 269–272.

2 *Oxford English Dictionary Online,* s.v. "human."

3 *Oxford English Dictionary Online,* s.v. "humanist."

4 Raymond Williams, *Keywords: A Vocabulary of Culture and Society*, rev. ed. (New York: Oxford University Press, 1983), 11–13, 148–151.

5 Author's personal communication with Jonathan Arac.

6 William Borlase, *Natural History of Cornwall* (Oxford: W. Jackson, 1768), viii; Richard Pulteney, *A General View of the Writings of Linnaeus* (London: J. Mawman, 1805), 11.

7 Charles Darwin, *On the Origin of Species,* ed. Ernst Mayr (1859; Cambridge, Mass.: Harvard University Press, 1964), 50.

8 Harriet Ritvo, *The Platypus and the Mermaid, and Other Figments of the Classifying Imagination* (Cambridge, Mass.: Harvard University Press, 1997), 23, 28–31.

9 Carolus Linnaeus, *Systema Naturae: Regnum Animale* (1758; London: British Museum, 1956), 18.

10 Ibid., 20–23.

[11] Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge, Mass.: Harvard University Press, 1999), 87–88.

[12] Linnaeus, *Systema Naturae*, 24.

[13] Edward Tyson, "Preface," in *Orang-Outang, sive Homo Sylvestris. Or, the Anatomy of a Pygmie compared with that of a Monkey, an Ape, and a Man* (London: Thomas Bennet, 1699).

[14] *An Historical Miscellany of the Curiosities and Rarities in Nature and Art . . .*, vol. III (London: Champante and Whitrow, ca. 1800), 288–289.

[15] Linnaeus, *Systema Naturae*, 25.

[16] Thomas Pennant, *History of Quadrupeds* (London: B. and J. White, 1793), iv; William Wood, *Zoography; or the Beauties of Nature Displayed* (London: Cadell and Davies, 1807).

[17] William Lawrence, *Lectures on Comparative Anatomy, Physiology, Zoology, and the Natural History of Man; delivered at the Royal College of Surgeons in the Years 1816, 1817, and 1818* (London: R. Carlile, 1823), 127, 131.

[18] See, for example, Richard Owen, "On the Anthropoid Apes and their relations to Man," *Proceedings of the Royal Institution of Great Britain* 2 (1855): 41.

[19] Charles Hamilton Smith, *Introduction to the Mammalia* (Edinburgh: W. H. Lizars, 1846), 93.

[20] P. H. Gosse, *Natural History: Mammalia* (London: Society for Promoting Christian Knowledge, 1848), 3.

[21] Louis Agassiz, *Essay on Classification*, ed. Edward Lurie (1857; Cambridge, Mass.: Harvard University Press, 1962), 75–76.

[22] See, for example, the illustrations in Thomas Bewick's popular *A General History of Quadrupeds* (Newcastle-Upon-Tyne, 1790).

[23] C. V. A. Peel, *The Zoological Gardens of Europe: Their History and Chief Features* (London: F. E. Robinson, 1903), 205–206; "In Memory of Consul," pamphlet in the Belle Vue collection, Chetham's Library, Manchester.

[24] William Bingley, *Animal Biography; or, Authentic Anecdotes of the lives, manners, and economy, of the animal creation, arranged according to the system of Linnaeus*, vol. I (London: 1803), 45–50; Edward Jesse, *Gleanings in Natural History*, 2nd series (London: John Murray, 1834), 40; William Broderip, *Zoological Recreations* (London: Henry Colburn, 1847), 250; "Importation of Another Specimen of the Chimpanzee," *Zoologist* 7 (1849): 2379.

[25] Quoted in Dudley Wilson, *Signs and Portents: Monstrous Births from the Middle Ages to the Enlightenment* (London: Routledge, 1991), 56–67.

[26] Charles White, *An Account of the Regular Gradation in Man, and in Different Animals and Vegetables; and from the Former to the Latter* (London: C. Dilly, 1799), 34; Johann Friedrich Blumenbach, *The Anthropological Treatises . . .*, ed. and trans. Thomas Bendyshe (London: Longman, Green, Longman, Roberts and Green/The Anthropological Society, 1865), 73.

[27] White, *An Account of the Regular Gradation in Man*, 34.

[28] Blumenbach, *The Anthropological Treatises*, 80–81.

[29] Tyson, *Orang-Outang*, 2.

[30] Jan Bondeson and A. E. W. Miles, "Julia Pastrana, the Nondescript: An Example of Congenital Generalized Hypertrichosis Terminalis with Gingival Hyperplasia," *American Journal of Medical Genetics* 47 (1993): 199.

[31] *Lancet* (1867).

[32] *Nature*, May 12, 1882, cited in Martin Howard, *Victorian Grotesque: An Illustrated Excursion into Medical Curiosities, Freaks, and Abnormalities – Principally of the Victorian Age* (London: Jupiter Books, 1977), 56–57.

[33] John Beddoe, *The Races of Britain: A Contribution to the Anthropology of Western Europe* (Bristol: J. W. Arrowsmith, 1885), 9, 11.

[34] W. Stocking, Jr., *Victorian Anthropology* (New York: Free Press, 1991), 248–254; for the subsequent evolution of this debate, see Douglas Lorimer, "Theoretical Racism in Late-Victorian Anthropology, 1870–1900," *Victorian Studies* 31 (1988): 405–430.

[35] James Hunt, "On the Negro's Place in Nature," *Memoirs Read before the Anthropological Society of London* 1 (1863–1864): 1, 51–52.

[36] *Catalogue of a Great Variety of Natural and Artificial Curiosities, Now Exhibiting at the Large House, the Corner of Queen's Row, facing the Road, at Pimlico* (London, 1766), 4; G. M. Humphrey, *Analysis of the Physiological Series in the Gallery of the Museum of Comparative Anatomy* (Cambridge, 1866), 9.

[37] See A. Bowdoin Van Riper, *Men among the Mammoths: Victorian Science and the Discovery of Human Prehistory* (Chicago: University of Chicago Press, 1993).

[38] Ian Tattersall, *The Fossil Trail: How We Know What We Think We Know about Human Evolution* (Oxford: Oxford University Press, 1995), 180–182, 224, 244–245.

[39] Adam Brumm et al., "Early Stone Technology on Flores and Its Implications for *Homo floresiensis*," *Nature* 441 (2006): 624–628.

[40] See, for example, the website for a physical anthropology class at Palomar College, a community college in California: http://anthro.palomar.edu/primate/prim_8.htm.

[41] Jared Diamond, *The Third Chimpanzee: The Evolution and Future of the Human Animal* (New York: HarperCollins, 1992).

[42] http://www.pbs.org/wgbh/nova/apegenius/human.html.

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