



The Ascent of Man and the Politics of Humanity's Evolutionary Future

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Throughout the twentieth century, contemporary understandings of evolutionary theory were tightly linked to visions of the future freighted with moral consequence. This essay traces the origins and legacy of this scientific commitment to a universal family of man in postwar evolutionary theory, and elaborates how evolutionary scientists sought to reframe the politics of human evolution by claiming that the principles governing the physical past of humanity differed fundamentally from those that would matter in the coming decades, centuries, or even millennia. Education and public engagement embodied the moral importance of actively participating in the creation of that better, future world.

In 1962, twenty-seven men of science gathered in London to discuss “Man and His Future.” Biologists of various stripes, including geneticists, molecular biologists, agriculturalists, zoologists, and biochemists, exchanged their visions of the future. The conference, and the volume it spawned, spoke to a common nervousness about the new nuclear age in which they lived, regardless of whether we might now classify their political perspectives as conservative, liberal, or socialist. One reviewer of the published proceedings found the volume fascinating, provocative, and “fun to ‘listen’ to, especially when they are having at one another with verbal broadswords.”¹

Underpinning these varied visions of the future were different answers to questions like, do all humans share a common nature? and if so then, what makes us human? Definitions of a universal human nature acquired particular potency after the Second World War as American biologists and anthropologists struggled to make sense of the violence they had witnessed in the previous decade and continued to see around them. Even if they did not study humanity directly, the rhetoric of universal evolutionary principles allowed experts on the behavior of birds, the genetics of fruit flies and plants, even the paleontological history of non-human animals to assert their authority as potential experts on human nature with professional standing equal to that of anthropologists who did take humanity as their special realm of expertise. These scientists invested themselves with the responsibility to use their professional positions to cor-

rect ostensibly popular misunderstandings about human nature, wrest the legacy of evolution from any association with eugenics, and construct a public vision of an equitable world for all peoples.² Establishing a universal human nature that distinguished us from other animals thus became an intellectual project invested with moral import.

This essay traces the origins and legacy of this scientific commitment to a universal family of man in postwar evolutionary theory, and elaborates how scientists—including population geneticist Theodosius Dobzhansky, biologist J. B. S. Haldane, ethologist and statesman of science Julian Huxley, and paleontologist George Gaylord Simpson—sought to reframe the politics of human evolution by claiming that the principles governing the physical past of humanity differed fundamentally from those that would matter in the coming decades, centuries, or even millennia. They argued that when humans became human, a new form of evolutionary process came into being. Our capacity for culture, language, and ability to manufacture complex technologies, signaled a pronounced break with the past and necessitated a new set of conceptual, scientific tools for thinking about humanity's possible evolutionary futures.³ Whether they called it cultural, creative, or social evolution, liberal scientists endowed humanity's escape from our physical past with hope and self-determination. Even their book titles sparkled with promise, from Dobzhansky's *The Biological Basis of Human Freedom* to Jacob Bronowski's *The Ascent of Man*.⁴

Scientific understandings of human evolution thus entailed visions of our possible futures. Throughout the twentieth century, contemporary understandings of evolutionary theory were tightly linked to visions of the future freighted with moral consequence. We can sort changes in this relationship into three loose historical phases. In the

² Vassiliki Betty Smocovitis, “Humanizing Evolution: Anthropology, the Evolutionary Synthesis, and the Prehistory of Biological Anthropology, 1927–1962,” *Current Anthropology* 53, no. S5 (2012): S108–S125; Tracy Teslow, *Constructing Race: The Science of Bodies and Cultures in American Anthropology* (New York: Cambridge University Press, 2014). Literary figures, too, wrestled with these fundamental questions, see Mark Greif, *The Age of the Crisis of Man: Thought and Fiction in America, 1933–1973* (Princeton: Princeton University Press, 2015).

³ Reinhart Koselleck, *Futures Past: On the Semantics of Historical Time*, trans. Keith Tribe (Cambridge, MA: MIT Press, 1985); James Secord, *Visions of Science: Books and Readers at the Dawn of the Victorian Age* (Chicago: University of Chicago Press, 2015).

⁴ Theodosius Dobzhansky, *The Biological Basis of Human Freedom* (New York: Columbia University Press, 1956); Jacob Bronowski, *Ascent of Man* (Boston: Little, Brown, 1973).

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¹ Louis Lasagna, “Man and His Future. Ciba Foundation Volume. Gordon Wolstenholme,” *The Quarterly Review of Biology* 40, no. 2 (1965): 229; Gordon Wolstenholme, ed., *Man and His Future* (Boston: Little, Brown, & Company, 1963).

first decades of the century, a simplistic application of Darwinian principles to human evolution led eugenicists to imagine controlling humanity's future in ways that reinforced contemporary prejudices—especially the idea that races differed constitutionally from each other. After the Second World War and deeply embedded in the American struggle for Civil Rights, scientists reacting against eugenic theories imagined a plurality of progressive futures for humanity as a unified whole.⁵ Finally, Cold War technological fears intervened, presenting instead a vision of humanity unprepared to face the challenges of rapid technological proliferation. Thus, by the end of the 1970s, hopeful visions of human nature came increasingly under fire from across the political spectrum as scientists and laypeople alike questioned whether a long future for humanity could be realized.⁶

In each phase, scientists renewed their commitment to communicating knowledge of humanity's past and theories of its future to the reading public. Their conceptions of human evolution were, time and again, tied to the politics of the era in which they lived, thought, and wrote. In tracing this history, this essay reveals the future's irresistible lure and inescapable moral implications for postwar evolutionary scientists.

Eugenic Natures

To understand later transformations in biologists' conception of humanity's past and future, we must begin before the Second World War. Eugenics movements across the world arguably constituted one of the most public manifestations of the rising authority of biomedicine in the first decades of the twentieth century.⁷ As eugenicists appropriated evolutionary and genetic language (if not the intricacies of the logic, theories, and data that created them), "mate choice," often articulated as marriage choice, served as a powerful tool in which eugenicists sought to craft their biological futures. Women's choice in husbands—separated from the chains of economic necessity—and men's choice in wives could lead to healthier, more numerous babies with the right attributes and thus ensure the biological future of the race (however defined). Eugenic conceptions of

health and Christian bodily cultures also emphasized connections between physical fitness, mental acuity, and promising futures.⁸

In the 1920s, entomologist Vernon Kellogg wrote that for the layman, "evolution" meant *human* evolution and even professional biologists, he suggested, were "more interested in humankind than in any other kind of creature."⁹ As a consequence, he noted three important things that the biologist and reader alike should keep in mind. First, Kellogg enumerated, the future of humanity fundamentally depended on different causal factors—one biological and one societal. Second, the biological evolution of humanity could be largely directed through societal evolution. Third, societal evolution, and therefore the future of humanity, depended on the decisions and efforts of the present.¹⁰ For Julian Huxley—then working in the zoology department at Oxford University—the key to the future of human evolution similarly lay in processes like mate selection that could be governed by "true or conscious purpose" rather than unconscious factors like "survival and the production of offspring," which had been so important during pre-human evolution.¹¹ Speaking before the Society for Sex Psychology in October of 1922 about the evolution of human courtship, Huxley described the development with-in a variety of "higher animals" of a connection between the "sex instinct," emotional reactions induced by members of the opposite sex, and the perception of beauty. From there, he speculated, evolved so much of the natural splendor we observe in the organic world. Huxley asserted that the "mind has thus been the sieve through which variations in courtship characters must pass if they are to survive."¹² In humans, these associations had been strengthened through the complex mental life of individual people.¹³ This gave humans, by means of conscious purpose, the power to enact new values in devising methods for ensuring the future progress of society and improve upon the "dilatatory," "wasteful," and "cruel" methods of natural selection.¹⁴

This idea had a long tradition. Even Charles Darwin, in *On the Origin of Species*, had drawn his readers' attentions to the mating behavior of animals by distinguishing between natural and sexual selection.¹⁵ Sexual selection, he

⁵ On ideas of progress in evolutionary theory, start with Peter Bowler, *The Invention of Progress: The Victorians and the Past* (Cambridge, MA: B. Blackwell, 1989), Matthew Nitecki, ed., *Evolutionary Progress* (Chicago: University of Chicago Press, 1988), Robert J. Richards, *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior* (Chicago: University of Chicago Press, 1987), Michael Ruse, *Monad to Man: The Concept of Progress in Evolutionary Biology* (Cambridge, MA: Harvard University Press, 1996), and Vassiliki Betty Smocovitis, *Unifying Biology: The Evolutionary Synthesis and Evolutionary Biology* (Princeton, NJ: Princeton University Press, 1996).

⁶ The decline of arguments for an evolutionarily-grounded progressive future resonates with the rise of "human rights" discourse in the 1970s; Samuel Moyn, *The Last Utopia: Human Rights in History* (Cambridge, MA: Harvard University Press, 2012). See, too, Donna Haraway's periodization in *Modest-Witness@Second-Millennium.FemaleMan-Meets-OncoMouse: Feminism and Technoscience* (New York: Routledge, 1997), 219–229, and Marianne Sommer's tripartite division of *History Within: The Science, Culture, and Politics of Bones, Organisms, and Molecules* (Chicago: University of Chicago Press, 2016).

⁷ Nathaniel Comfort, *The Science of Human Perfection: How Genes Became the Heart of American Medicine* (New Haven, CT: Yale University Press, 2012), Daniel Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (New York: Alfred A. Knopf, Inc., 1985), Susan Lindee and Dorothy Nelkin, *The DNA Mystique: The Gene as a Cultural Icon* (New York: W. H. Freeman and Company, 1995), Staffan Müller-Wille and Hans-Jörg Rheinberger, *A Cultural History of Heredity* (Chicago: University of Chicago Press, 2012), and Diane Paul, *The Politics of Heredity: Essays on Eugenics, Biomedicine, and the Nature-Nurture Debate* (Albany: SUNY Press, 1998).

⁸ R. Marie Griffith, *Born Again Bodies: Flesh and Spirit in American Christianity* (Berkeley: University of California Press, 2004); John Hoberman, *Testosterone Dreams: Rejuvenation, Aphrodisia, Doping* (Berkeley: University of California Press, 2005); Laura Lovett, *Conceiving the Future: Pronatalism, Reproduction, and the Family in the United States* (Chapel Hill: University of North Carolina Press, 2007).

⁹ Vernon Kellogg, *Evolution: The Way of Man* (New York: D. Appleton and Company, 1925), 218. See Mark Largent, "Bionomics: Vernon Kellogg and the Defense of Darwinism," *Journal of the History of Biology* 32, no. 3 (1999): 465–88.

¹⁰ Vernon Kellogg, *Evolution: The Way of Man* (New York: D. Appleton and Company, 1925), 218. See Mark Largent, "Bionomics: Vernon Kellogg and the Defense of Darwinism," *Journal of the History of Biology* 32, no. 3 (1999): 278.

¹¹ Julian Huxley, "Preface," in *Essays of a Biologist* (New York: Alfred A. Knopf, 1929 [1923]), xi. See C. Kenneth Waters and Albert van Helden, eds., *Julian Huxley, Biologist and Statesman of Science* (Houston, TX: Rice University Press, 1992).

¹² Julian Huxley, "The Courtship of Animals" [originally published in *The Forum*, July 1926], reprinted in *The Uniqueness of Man* (London: Chatto and Windus, 1941), 190–206.

¹³ Julian Huxley, "Sex Biology and Sex Psychology," in *Essays of a Biologist* (ref. 11), 160–65, originally read before the Society for Sex Psychology, October 1922.

¹⁴ Julian Huxley, "Uniqueness of Man," in *The Uniqueness of Man* (ref. 12), 1–33, on 32.

¹⁵ Charles Darwin, *On the Origin of Species by Means of Natural Selection* (London: John Murray, 1859), 88–90. On Darwin, see Janet Browne, *Charles Darwin: A Biography*, 2 vols. (New York: Knopf, 1995–2002).

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