



Simple Liars, Damned Liars, Davenport the Expert, and Scientific Critics of Eugenics

Citation

Morgan, Thomas Matthew. 2024. Simple Liars, Damned Liars, Davenport the Expert, and Scientific Critics of Eugenics. Master's thesis, Harvard University Division of Continuing Education.

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Simple Liars, Damned Liars, Davenport the Expert, and Scientific Critics of Eugenics

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A Thesis in the Field of History
for the Degree of Master of Liberal Arts in Extension Studies

Harvard University

November 2024

Abstract

Eugenics, a term coined by Francis Galton in 1883, means “wellborn.” As Charles Darwin’s theory of evolution of species by natural selection gained currency in scientific and social circles, and as late nineteenth century scientific discoveries diffused into societies, a strong impulse arose to make human reproduction into a science of sorts. Progressives in the early twentieth century sought to apply scientific discoveries to most aspects of human life, and their quest for perfection motivated the meddling of experts in individual reproductive choices to promote the common good. Eugenic policies categorized individuals into those fit to reproduce, or not. As advances in antiseptic surgery and surgical technique made sterilization of males and females safer and more readily available, Progressives saw this as a tool to eradicate hereditary diseases. It was applied disproportionately to those less powerful people in society judged as unfit. However, scientists also criticized eugenics, and despite mythology to the contrary, eugenics was based neither on pseudoscience nor faulty scientific consensus. Rather, eugenics advocates (“damned liars”) teamed with “experts” to dismiss valid scientific criticism. The “expert” in the Progressive Era had outsized influence, emitting an aura of science but acting far beyond the epistemic bounds of the scientific method. This thesis tested and verified the hypothesis that an expert (Charles Davenport) and a rigorous scientist (Thomas Hunt Morgan) understood science in substantially the same way. Janus-faced Davenport was variably a sophisticated scientist or a scientific advocate in different contexts, depending on his personal and political interests.

Author's Biographical Sketch

Thomas Morgan, MD, received a bachelor's degree in biology from Boston University and Doctor of Medicine degree from Boston University School of Medicine via the Modular Medical Integrated Curriculum Program. For his medical school thesis under the direction of Dr. J. Worth Estes, "An economic history of physician supply in New England, 1920-1990," he was awarded Honorable Mention in the 1998 Osler Medal competition sponsored by the American Association for the History of Medicine, of which he is a life member. Dr. Morgan completed residency training in Family Medicine at Dartmouth Medical School, and in Clinical Genetics at Yale University School of Medicine, where he also completed the Robert Wood Johnson Clinical Scholars Program. In 2003 he published, in the Journal of the National Medical Association, "The education and medical practice of Dr. James McCune Smith (1813-1865), first Black American to hold a medical degree." Dr. Morgan is board-certified in family medicine, clinical genetics, and medical biochemical genetics. He has held faculty positions at Yale, Washington University in St. Louis, and Vanderbilt. He was formerly Head of Human Disease Genetics at Novartis Institutes for Biomedical Research, and now is Medical Director, Experimental Medicine, at BioMarin Pharmaceutical Inc. Dr. Morgan's focus is the history of science and medicine.

Dedication

To my son, Matheus, who encouraged me to pursue my passion for history, and to my dog, Drodie, who kept me company while I read books and wrote this thesis. To the late J. Worth Estes, MD, of Boston University School of Medicine, my first history mentor.

Acknowledgements

My thanks to the staff of the American Philosophical Society for invaluable assistance in my research, and to those who provided special help and guidance in the thesis process at Harvard Extension School. I thank Trudi Goldberg-Pires for expert technical assistance, Ariane Liazos for guidance as my research advisor, and Scott Podolsky for serving as my thesis mentor. Finally, I would like to thank the Harvard Extension School as a whole, for making it possible for me to study history, a passion deferred when I was swept up in my medical career.

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Chapter I.

Introduction

Recent historiography of eugenics has only superficially considered past scientific criticisms that undercut the validity of eugenic policies in the early twentieth century.¹ Historians have focused mainly on the moral and political objections, rather than scientific ones, that checked the momentum of eugenic policies outside Nazi Germany.² However, what role did science and scientific criticism have in the Eugenics Movement? Did proponents and opponents of eugenics differ in their understanding of science? Why were early scientific criticisms ultimately ignored?

Critics such as Nobel Laureate geneticist Thomas Hunt Morgan (1866-1945) made clear his “protest against the danger of premature conclusions drawn from insufficient evidence.”³ Yet such eminent scientific critics as Morgan exerted little influence over eugenicists. Why? What was the meaning of the rift between Davenport’s eugenics and Morgan’s genetics in 1915? In that year Morgan decried “the reckless statements and the unreliability of a good deal that is said” in the *Journal of Heredity*, and he vowed to “set a better standard” in genetic science.⁴ Did eugenic scientists

¹ Garland E. Allen, “Eugenics and Modern Biology: Critiques of Eugenics, 1910–1945,” *Annals of Human Genetics* 75, no. 3 (2011): 314–25, <https://doi.org/10.1111/j.1469-1809.2011.00649.x>.

² Philippa Levine, *Eugenics: A Very Short Introduction*, Very Short Introductions (Oxford]: Oxford University Press, 2017).

³ Thomas Hunt Morgan, *Some Possible Bearings of Genetics on Pathology* (Lancaster, Pa.: Press of the New era printing company, 1922), <https://catalog.hathitrust.org/Record/002081606>.

⁴ Thomas Hunt Morgan, “Thomas Hunt Morgan to Charles Davenport,” January 18, 1915, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 4, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

disagree with Morgan's criticism, or did they agree but not care about scientific integrity as Morgan did?

This thesis set out to test the hypothesis that there was no substantial difference between critics and proponents of eugenics in their understanding of the scientific basis and limits of eugenics, and that their differences were based on political philosophy and social values not epistemology or logic. The intent was to place eugenicists and their critics into three subcategories - advocate, expert, or scientist – so that sources of differences among “expert” eugenicists and scientific geneticist critics could be elucidated. Each individual's activities could be placed in separate categories.

However, the focus sharpened on arch-eugenicist Charles Benedict Davenport, who embodied all three categories, in relation to his scientific critics, with Thomas Hunt Morgan being his most intimate scientific friend and foil, when preliminary research suggested that Davenport was far more epistemologically sophisticated than most historians of science seemed to suggest. Davenport was the key figure in the eugenics movement; his friend Morgan was the preeminent experimental geneticist.

This tripartite classification – advocate, expert, scientist – represents categorical distinctions in fidelity to truth, which advocates obfuscated to win (like damned liars), experts twisted while acting disinterested, and scientists sought for its own sake, has been identified by historian Thomas C. Leonard as fundamental to the understanding of the Progressive Era in which eugenics thrived.⁵ Davenport was an exemplar of a nativist, pronatalist, “Anglo-Saxon” form of Progressivism in which science, expert scientism, advocacy, and outrageous falsehoods commingled to support eugenics public policy.

⁵ Thomas C. Leonard, *Illiberal Reformers: Race, Eugenics, and American Economics in the Progressive Era* (Princeton, NJ: Princeton University Press, 2016).

This thesis explores how scientism, in which eugenics “experts” like Davenport, mimicking the language of science and co-opting the authority of the scientific method for latent or overt social aims, in the sense conceived by F.A. Hayek,⁶ served propagandistic purposes, and to what extent they truly understood science. Though scientists playing the role of advocate or expert embraced scientifically baseless eugenics policies, as scientists, did they also know they had deviated from the logic of the scientific method?

Controversy over the role of scientist or physician as “expert” in courts, and courts of public opinion, raged in the Victorian Era,⁷ leading a “well-known lawyer” to rank prevaricators ordinally as “simple liars, damned liars, and experts.”⁸ Were all three types represented among eugenicists, and were they adept in the ways of seeking truth?

⁶ F. A. Hayek, *The Counter Revolution Of Science* (The Free Press., 1955), <http://archive.org/details/counterrevolution030197mbp>.

⁷ Christopher Hamlin, “Scientific Method and Expert Witnessing: Victorian Perspectives on a Modern Problem,” *Social Studies of Science*, Film ID 59-6, 16, no. 3 (1986): 485–513, <https://doi.org/10.1177/030631286016003004>.

⁸ Norman Lockyer, ed., “The Whole Duty of a Chemist,” *Nature* 33, no. 836 (November 26, 1885): 74.

Chapter II.

Background

The context of the scientific debate about eugenics in the early twentieth century has drawn limited attention from some historians. The history of eugenics, even when written by scientists or historians of science, tends to emphasize it as a “pseudoscience” that swept up the whole scientific community.⁹ It was indeed a mass political movement. What proponents did, “*In the Name of Eugenics*,”¹⁰ to use the title of the seminal book by Kevles, understandably gets the attention. But scientific criticism gets short shrift.

Historian of science Gar Allen argued that early scientific criticism was more robust than social histories of eugenics tend to imply. This thesis explores beyond Allen’s admonition that, “It was not the case that nearly everyone in the early twentieth century accepted eugenic conclusions as the latest, cutting-edge science.”¹¹ Scientists accepted eugenic policies, knowing that their scientific basis was shaky, rationalizing that policy implementation is a pseudo-experimental social science, if outcomes are assessed. The overwhelming evidence that many scientists were involved in the eugenics movement creates the impression of a “scientific consensus” on the soundness of eugenic policies. However, many such scientists merely anticipated that implementation of policies would produce data, the basic units of observation needed for the scientific method, understanding that data-driven policy is distinct from science, as I will show in the case of founding eugenicist Charles Davenport.

⁹ Frederick Chen and Christopher Donohue, “The History of Physicians and the American Eugenics Movement,” March 19, 2024, <https://edhub.ama-assn.org/science-medicine-public-health/audio-player/18862697>.

¹⁰ Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (Berkeley: University of California Press, 1986).

¹¹ Allen, “Eugenics and Modern Biology, 314.”

Allen, like Bentley Glass before him,¹² challenged the blanket indictment of the scientific community for its supposed complicity in lending credibility to eugenics. Glass reviewed *In the Name of Eugenics*.¹³ “Eugenics is, and always was, a mixture of idealistic social policy and premature, uncautious scientific opinion,” Glass asserted, referring to a “maze of enthusiasm, wild claims, reservations, and outright skepticism and opposition” through which Kevles and other historians must wend their way.¹⁴

Eugenics can readily be derided as a pseudoscience by historians who tread one of the misleading straight paths within the maze. Many proponents made wild claims that exceedingly complex traits such as criminality, pauperism, and alcoholism had a simple Mendelian genetic basis.¹⁵ Such obviously socially influenced traits appeared to “run in families” in a pseudo-Mendelian fashion. Barely veiled bigotry was behind schemes to stop such “low-grade” families from out-reproducing and replacing their supposed social betters. Lost on eugenicists was the irony that “survival of the fittest,” in evolutionary terms, measures fitness by relative reproductive success. Yet eugenicists arrogated themselves as “fitter” than all the rest. Reproductive mixing with “fecund” races was deemed inadvisable by such prominent geneticists as Harvard Professor Edward East.¹⁶

Given the prominence and prevalence of scientists who supported, vocally or silently, such inane claims, investigating them only sloppily, a superficial or selective analysis can brand eugenics as a pseudoscience that taints the reputation of science itself. But that’s simplistic. Scientists involved in eugenics were too epistemologically

¹² Bentley Glass, “Geneticists Embattled: Their Stand against Rampant Eugenics and Racism in America during the 1920s and 1930s,” *Proceedings of the American Philosophical Society* (United States: American Philosophical Society, 1986), <https://www.jstor.org/stable/987094>.

¹³ Bentley Glass, “Eugenics and the Misuses of Human Heredity,” *The Quarterly Review of Biology*, 1986, <https://www.jstor.org/stable/2829086>.

¹⁴ Glass, 230.

¹⁵ Allen, “Eugenics and Modern Biology.”

¹⁶ Glass, “Eugenics and the Misuses of Human Heredity.”

sophisticated for that. In addition, some scientists scathingly criticized eugenics on scientific grounds, irrespective of their sociological opinions or moral qualms. Elite eugenicists responded not with demagoguery but in the *lingua franca* of science.¹⁷

Critics trotted out the hypothesis of “euthenics” – the science of environments in which human beings can thrive – to counter the tropes of simplistic eugenics, checkmating Charles Davenport, but he answered by admitting euthenics while denigrating environmental improvement as a social engineering strategy.¹⁸ They sharply dissected methodology and execution of pedigree studies, picking apart the definition of “feeble-mindedness” and other imprecise traits. They proposed statistically advanced gene-by-environment interaction models to supplant simplistic unit-character Mendelian oversimplifications, while attacking the statistical shortcomings of the eugenicists.¹⁹

Critics also showed that naïve eugenic schemes to rid society of recessive “feeble-mindedness” were mathematically hopeless, even if the Mendelian model were true, taking more than 8,000 years to eliminate mutations from the gene pool.²⁰ Taciturn critics, such as Morgan in laboratory genetics or Archibald Garrod in medical genetics, also led by example, undertaking painstaking research needed to understand biological and medical intricacies of genetics and inborn errors of metabolism.²¹ Though Garrod has not yet been recognized as a “critic,” his close connection with Bateson and Haldane, and

¹⁷ Hamish G. Spencer and Diane B. Paul, “The Failure of a Scientific Critique: David Heron, Karl Pearson and Mendelian Eugenics,” *The British Journal for the History of Science* 31, no. 4 (1998): 441–52, <https://doi.org/10.1017/S0007087498003392>.

¹⁸ Charles Benedict Davenport, *Heredity in Relation to Eugenics*, (New York: H. Holt and company, 1915), <https://hdl.handle.net/2027/hvd.32044062493366>, 255.

¹⁹ Allen, “Eugenics and Modern Biology.”

²⁰ R. C. Punnett, “Eliminating Feeble-mindedness,” *The Journal of Heredity* 8, no. 10 (1917): 464–65, <https://doi.org/10.1093/oxfordjournals.jhered.a111653>.

²¹ Archibald E. (Archibald Edward) Garrod, *Garrod’s Inborn Factors in Disease : Including an Annotated Facsimile Reprint of The Inborn Factors in Disease by Archibald E. Garrod* (Oxford [England] ; New York : Oxford University Press, 1989), <http://archive.org/details/garrodsinbornfac0000garr>, 216.

studious eschewing of eugenic language regarding the patients and families that he studied, checked the encroachment of eugenics on medicine.²²

Historians ought not, absent evidence, interpret silence as complicity. Ostracism and private conversation to the faces or behind the backs of eugenicists may have been deemed more effective than getting dragged into public dogfights with them. Morgan, writing to Bateson, militated against “the geneticist being seen as the tail to the eugenic kite,” and Bateson reproached himself for previously “dabbling in taboo waters.”²³

The rigorous scientific critiques of American eugenics by elite geneticists may have been obfuscated by the sophistry of eugenicists, undersold by the politicized popular press, not well understood or amplified by secular or religious lay critics, and insufficiently promulgated by the elite geneticists themselves. They may have deemed it a lost cause not worth extended distraction from more productive scientific work, or not worth offending pro-eugenic funding agencies and/or politicians.²⁴ However, the emphasis, in current scholarship, on the supposed “universality” of eugenics and its rootedness in Western science, ignores previous historical scholarship on criticism of eugenicists by their scientist peers.²⁵ This thesis will fill gaps in the understanding of such criticism in the historical context of early twentieth century science. First, however, we must outline the history and historiography of eugenics in the chapter III, as well as

²² Alan Cock, *Treasure Your Exceptions: The Science and Life of William Bateson*, 1st ed. 2008. (New York, NY: Springer New York : Imprint: Springer, 2008); R. D. Harvey, “Pioneers of Genetics: A Comparison of the Attitudes of William Bateson and Erwin Baur to Eugenics,” *Notes and Records of the Royal Society of London* 49, no. 1 (1995): 105–17, <https://doi.org/10.1098/rsnr.1995.0007>.

²³ Cock, *Treasure Your Exceptions*, 437.

²⁴ Allen, “Eugenics and Modern Biology.”

²⁵ Diane B. Paul, “Reflections on the Historiography of American Eugenics: Trends, Fractures, Tensions,” *Journal of the History of Biology* 49, no. 4 (2016): 641–58, <https://doi.org/10.1007/s10739-016-9442-y>; Diane B. Paul, *Controlling Human Heredity, 1865 to the Present*, Control of Nature (New Jersey: Humanities Press, 1995); Spencer and Paul, “The Failure of a Scientific Critique”; Allen, “Eugenics and Modern Biology.”

the history of science in the early twentieth century in chapter IV, so that the definition of science and prevailing practice of scientific method in that era can be understood. Only with that background is it possible to judge whether Davenport and Morgan had a shared understanding of science in relation to eugenics.

Chapter III.

History of Eugenics

By publishing *Inquiries into Human Faculty* (1883) Francis Galton introduced the term “eugenics” to a wide audience of English language science readers.²⁶ He had previously termed it “viriculture,”²⁷ which implies husbandry of men and women to produce “better” babies. Galton is acknowledged by the *Oxford English Dictionary* (*OED*) to have coined the term eugenics, which means “well-born” in Greek.²⁸ The serious medical study of heredity, facilitated by formation of children’s hospitals, public passion for genealogy, and initial stabs at racial classification, began in the first half of the nineteenth century.²⁹ Into this milieu entered Darwin and his half cousin Galton, both grandsons of Erasmus Darwin.

Charles Darwin published *On the Origin of Species* in 1859, establishing natural selection as the main mechanism by which humans, other animals, and all organisms evolved into species adapted to survive and reproduce in their ancestral environments.³⁰ Herbert Spencer popularized the concept of the “survival of the fittest,” applying it to

²⁶ Francis Galton, *Inquiries into Human Faculty and Its Development* (New York: Macmillan & Co., 1883), <https://catalog.hathitrust.org/Record/100240238>.

²⁷ Galton, 25.

²⁸ OED, “Eugenics, n. : Oxford English Dictionary,” accessed February 25, 2023, <https://proxy.bostonatheneum.org:2262/view/Entry/86532712?redirectedFrom=eugenics&>.

²⁹ James Whitehead, *On the Transmission, from Parent to Offspring, of Some Forms of Disease, and of Morbid Taints ...* (J. Churchill, 1857), <http://archive.org/details/ontransmissionf00whitgoog>.

³⁰ Charles Darwin, *On the Origin of Species by Means of Natural Selection, or, The Preservation of Favoured Races in the Struggle for Life*, Harvard Botany Libraries--Biodiversity Heritage Library Digitization Project (London: John Murray, 1859), <http://www.biodiversitylibrary.org/bibliography/68064>.

sociology.³¹ Galton then sought to transform human reproduction into a social science, shifting from unsupervised “natural selection” to supervised “artificial selection,” as for domestic animals, to make humans fitter and society better.³² By 1819, British surgeon William Lawrence (1783-1867) saw prospects for breeding “ideal” humans, writing, “The hereditary transmission of physical and moral qualities, so well understood and familiarly acted on in the domestic animals, is equally true of man. A superior breed of human beings could only be produced by selections and exclusions similar to those so successfully employed in rearing our more valuable animals.”³³

Galton’s scientific breeding experiment sought to progressively perfect humanity, freeing it from “moral monsters,” hereditary disease, and frailties of body and mind.³⁴ However, would the ends justify the means, or not? By 1904, Galton conceded “hopeless difficulties” in the definition of morality in various cultural contexts.³⁵ Others would not give it up, crassly taking criminality as a proxy for immorality.

Galton’s eugenics was embraced in America, first by social reformers such as Loring Moody in the form of the Institute of Heredity, in Boston,³⁶ and then by the Progressive Era’s public health movement, to get at the root cause of social pathology as frustration from lack of collective progress grew.³⁷ The germ and gene theories of disease were like conjoined twins born into that era, semi-separable but only with delicate

³¹ Nicholas W. Gillham, *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics* (Oxford ; New York: Oxford University Press, 2001).

³² Gillham.

³³ Sir William Lawrence, *Lectures on Physiology, Zoology, and the Natural History of Man: Delivered at the Royal College of Surgeons* (J. Callow, 1819), 459.

³⁴ Francis Galton, “Eugenics: Its Definition, Scope and Aims,” 1904, <https://galton.org/essays/1900-1911/galton-1904-am-journ-soc-eugenics-scope-aims.htm>.

³⁵ Galton, 45.

³⁶ Elizabeth Thompson and Loring Moody, *Heredity : Its Relations to Human Development* (Boston : New York ; The Institute of Heredity, 1882), <http://archive.org/details/heredityitsrelat00thom>.

³⁷ H. S. Jennings, “Public Health Progress and Race Progress--Are They Incompatible?,” *Science (American Association for the Advancement of Science)* 66, no. 1698 (1927): 45–50, <https://doi.org/10.1126/science.66.1698.45>.

dissection.³⁸ Both theories incorporated “the silent carrier” into them, the potential spreader of disease to others who might be protected from harm by government-guided scientific management of social hygiene.

The rise of scientific medicine, throughout the nineteenth century and beyond, foisted innumerable choices on people and governments.³⁹ Advances in surgical technique and safety of vasectomies and salpingectomies in the early twentieth century, along with lobbying by eugenicists and surgeons to have legislatures enact sterilization laws, altered utilitarian cost-benefit analyses of sterilizations.⁴⁰ In-groups with power, once they finally could, urged sterilization of underpowered out-groups. Fateful laws were passed, and preventative measures were implemented, including forced sterilization.⁴¹

There have been several historiographical camps of eugenics in the past half century.⁴² By the 1970s, eugenics had been treated by historians of science as policy not science, divorced from experimental and medical genetics, an aberrant fad that effectively ended in the 1930s in the United States, though carried to diabolical extremes by Nazi Germany.⁴³

Ludmerer’s explicit focus was social history of genetics, specifically attitudes towards eugenics. He dated the emergence of eugenics to the preaching of John

³⁸ Amir Teicher, “Medical Bacteriology and Medical Genetics, 1880–1940: A Call for Synthesis,” *Medical History* 64, no. 3 (2020): 325–54, <https://doi.org/10.1017/mdh.2020.18>.

³⁹ Irvine Loudon, *Western Medicine: An Illustrated History* (Oxford ; New York: Oxford University Press, 1997).

⁴⁰ Philip Reilly, *The Surgical Solution: A History of Involuntary Sterilization in the United States* (Baltimore: Johns Hopkins University Press, 1991).

⁴¹ Reilly.

⁴² Paul, “Reflections on the Historiography of American Eugenics.”

⁴³ Alfred Henry Sturtevant, *History of Genetics* (Harper, 1966); Donald K. Pickens, *Eugenics and the Progressives* (Nashville: Vanderbilt University Press, 1968); Kenneth M. Ludmerer, *Genetics and American Society: A Historical Appraisal* (Baltimore: Johns Hopkins University Press, 1972).

Humphrey Noyes in 1848, finding in that moment potential for Galton to absorb the message.⁴⁴ Ludmerer cited 1915 as a historical turning point in the enthusiasm of experimental geneticists for the idea of eugenics. He judged Thomas Hunt Morgan's involvement to be nominal, at most.⁴⁵ The outbreak of the biometrician-Mendelian feud, and Morgan's decision to turn his back on the American Breeders' Association in 1915 were cited as turning points prior to WWI, and in the 1920s and 1930s the "repudiation of eugenics" was the dominant theme of scientific geneticists.

Ludmerer, focused on social history, did not elaborate in detail on criticism of eugenics. Alfred Sturtevant, who worked under Morgan in the Fly Lab at Columbia University, in his 1965 history of genetics, deemed Davenport a shoddy scientist, and Sturtevant relegated scientific interest in eugenics to not much more than a footnote, a brief period of hubris during which there was naïve enthusiasm about the potential for eugenics to prevent very serious genetic syndromes.⁴⁶

In the mid-1980s Kevles effected a merger of the history of science with cultural, social, and political history to more fully explain what was done "*In the Name of Eugenics*," and he covered the criticisms of eugenics by Thomas Hunt Morgan and his acolytes in considerable detail. This rich work of history was mainly about the attitudes of "mainline eugenicists" and their misdeeds, in the context of then-present concerns about potential abuses of genetic engineering and the emergence of a "neo-eugenics" fringe movement led by Physics Nobel Laureate William Shockley.⁴⁷

⁴⁴ Ludmerer, *Genetics and American Society*, 10.

⁴⁵ Ludmerer, 43.

⁴⁶ Sturtevant, *History of Genetics*.

⁴⁷ Kevles, *In the Name of Eugenics*.

Shockley's upwelling of atavistic eugenic notions alarmed many social historians. Debates about intelligence, race, and social class raged into the 1990s and beyond, manifesting right-wing anxiety over the "dysgenic implications" of being reproductively subsumed by "lower" social classes, despite forceful criticism of such a crass, prejudicial approach to social science.⁴⁸ Eugenics indeed sought a "powerful union of science and social policy."⁴⁹ Reproductive freedom is so fundamental that it stokes primal fear.

Fear of eugenics relapse remains palpable in academic circles. This may explain disproportionate attention to its proponents and downplaying of opponents. Social history, not history of science, is the present preoccupation of most eugenics historians. The thrust is to root out evidence of past institutional complicity with eugenic ideology as well as policies that served to institutionalize racism in the United States and around the world.⁵⁰ Modern anti-eugenic scholarship is a strain of anti-racist historiography. It may serve to raise social consciousness. However, an early scientific anti-eugenic scholarship also existed alongside early eugenics, as this thesis will establish.

An up-to-date exposition of rigorous academic eugenics scholarship was recently published in the *The New England Journal of Medicine (NEJM)* by eminent historian of eugenics Paul Lombardo.⁵¹ The stated aim of the *NEJM* series of articles by independent historians is to focus "on biases and injustice that the *Journal* has historically helped to

⁴⁸ Richard J. Herrnstein, *The Bell Curve: Intelligence and Class Structure in American Life* (New York: Free Press, 1994); Russell Jacoby, Naomi Glauberman, and Richard J. Herrnstein, *The Bell Curve Debate: History, Documents, Opinions*, 1st ed. (New York: Times Books, 1995).

⁴⁹ Levine, *Eugenics*.

⁵⁰ Benedict Ipgrave et al., "From Small Beginnings: To Build an Anti-Eugenic Future," *The Lancet (British Edition)* 399, no. 10339 (2022): 1934–35, [https://doi.org/10.1016/S0140-6736\(22\)00882-0](https://doi.org/10.1016/S0140-6736(22)00882-0); Marius Turda, "Legacies of Eugenics: Confronting the Past, Forging a Future," *Ethnic and Racial Studies*, October 2022, <http://www.tandfonline.com/doi/abs/10.1080/01419870.2022.2095222>.

⁵¹ Lombardo Paul A., "'Ridding the Race of His Defective Blood' — Eugenics in the Journal, 1906–1948," *New England Journal of Medicine* 390, no. 10 (March 6, 2024): 869–73, <https://doi.org/10.1056/NEJMp2307346>.

perpetuate,” with the explicit purpose of learning from the past to prevent future mistakes.⁵² The essay is Lombardo’s personal work, but it arguably accords with a prominent or even consensus, if not unanimous, contemporary academic view. Scrutinizing it carefully for the role of medical science in eugenics reveals several themes.

First, according to Lombardo, “From the first decade of the twentieth century until well after World War II, the “new science” of eugenics was a constant topic in the *Journal*, as it was in medical journals all over the United States.” The placement of “new science” in quotes indicates controversy over the extent to which, if at all, eugenics was a science. “Readers were reminded that Galton’s ‘views on heredity’ became the ‘foundation of the science of eugenics.’”⁵³

Second, Lombardo dates the dwindling of eugenics to the World War II era, criticizes the *Journal* for lionizing Charles Davenport and not mentioning the “growing chorus of critique” around his work. “Even in the early 1940s, as references to eugenics began to decrease, a review of the textbook *Medical Genetics and Eugenics* continued to describe lead author Charles Davenport, then director emeritus of the ERO, as ‘the distinguished human geneticist,’ while it made no mention of the growing chorus of critique that surrounded Davenport’s legacy.”⁵⁴

In the context of presentist concerns about racism and the urgent need to acknowledge and remedy past misdeeds, there is a danger of overlooking or underemphasizing evidence of anti-eugenic scientific criticism very early in the eugenics movement. An example is the *NEJM* (then *Boston Medical and Surgical Journal* – “The

⁵² Lombardo Paul A, 869.

⁵³ Lombardo Paul A, 870.

⁵⁴ Lombardo Paul A, 872.

Official Organ of the Massachusetts Medical Society”) editorial on February 18, 1915 expressing serious misgivings about eugenics. “In spite of all the optimism of the eugenists it is obvious that, much as it might be desired on scientific grounds, the methods of the stock-farm are inapplicable to human beings.”⁵⁵ The author of the editorial, Robert M. Green (1880-1955) became the Editor-In-Chief of the *Journal* in 1915.⁵⁶ The editorial asserted, “It is not merely jurists or laymen who are opposed to sterilization. Many very prominent scientists have expressed opposition to this practice on the ground that it is unscientific.”⁵⁷

Moreover, the *Journal* warned, “The opponents of sterilization contend that until something more definite is learned of the method of hereditary transmission, sterilization as a public welfare procedure is not justified.”⁵⁸ The editors also cautioned physicians who would allow themselves to be agents of the state in issuance of medical licenses, “the examining physician would be held under the gravest suspicion—and the integrity and competence of the whole profession might fall into disrepute.”⁵⁹

It may be argued that, in a series devoted to excavating, exhibiting, and finding ways to fix historical injustices,⁶⁰ it is appropriate to focus only on what was done wrong, leaving whatever may have been done right for others to chronicle. However, if history writing is too freighted with present concerns, the historiographical record can become imbalanced in ways that distort understanding. If presentism is taken to an extreme,

⁵⁵ Robert M. Green, “Eugenic Legislation,” *Boston Medical and Surgical Journal* CLXXII, no. 7 (February 18, 1915): 268–70.

⁵⁶ Massachusetts Medical Society, “Robert Montraville Green (1880-1955),” *New England Journal of Medicine* 253, no. 1 (July 7, 1955): 39–40, <https://doi.org/10.1056/NEJM195507072530113>.

⁵⁷ Green, “Eugenic Legislation.”

⁵⁸ Green.

⁵⁹ Green.

⁶⁰ Rubin Eric J. et al., “Recognizing Historical Injustices in Medicine and the Journal,” *New England Journal of Medicine* 389, no. 23 (December 6, 2023): 2202–2202, <https://doi.org/10.1056/NEJMe2311317>.

charges of bias can undermine the best efforts of historians to inform important debates. If the aim is to prove institutional complicity with eugenic policy, exceptional individuals who criticized eugenics should be highlighted to show that malefactors knew, or reasonably should have known, the reasons for criticism and the option of a better moral choice. Lombardo did not underemphasize anti-eugenic arguments too extremely, but he centered sparse but harsh criticism of eugenics in mid-1930s book reviews by the *Journal*, incident to a debate about New Hampshire's sterilization law. Criticism was there in 1915 and earlier.

Further, Lombardo hedged his argument formally, stating, "Occasionally, some voices in the *Journal* dissented from eugenics propaganda, urging social amelioration and discounting the hard hereditarian tone of the eugenicists. But they were drowned out by the *Journal*'s ongoing chorus of support for eugenic policies."⁶¹ Lombardo cited a single article by Bertha Downing, though he might have found more, who concluded, "Neither heredity, environment nor personal choice alone will explain the facts of social life. One of the most significant statements of Mr. Dugdale in "The Jukes" (p. 55) is, 'The tendency of heredity is to produce an environment which perpetuates that heredity.' This seems to be largely overlooked, by the present students of heredity in man."⁶²

Lombardo is an authority on the history of Dugdale's misuse of "The Jukes" for propagandistic purposes.⁶³ What is noteworthy about his citation of Downing is that she referred to Dugdale's own acknowledgement of the role of environment in heredity,

⁶¹ Lombardo Paul A., "'Ridding the Race of His Defective Blood' — Eugenics in the *Journal*, 1906–1948, 871."

⁶² B. C. Downing, "Mental Hygiene and the Special Child - A Chapter in Social Pathology," *Boston Medical and Surgical Journal* 156 (1912): 592–95; Downing, 595.

⁶³ Paul A. Lombardo, "Return of the Jukes: Eugenic Mythologies and Internet Evangelism," SSRN Scholarly Paper (Rochester, NY, 2012), <https://papers.ssrn.com/abstract=2143405>.

dating to the 1870s. Lombardo points at Elmer Southard's similar acknowledgement, too, yet categorizes him as an exemplar of the eugenics camp in the 1910-1920s era.

However, Southard was not blinkered by eugenic pseudoscience. He had Progressive era goals to make mental hygiene medically effective. Southard's mind appeared open, in 1914, to euthenics as well as eugenics in an article he wrote for the *Boston Globe*.⁶⁴ He took a scientifically agnostic position on the nature versus nurture debate, and as Lombardo wrote, "proposed studies" of this topic, seeing great potential in eugenics but admitting lack of preparation for legislative programs. Ironically, in 1914 Southard professed to believe that eugenics could conceivably end racial prejudice by improving humanity.⁶⁵ Such nuances are lost in current anti-eugenic scholarship.

Lombardo's essay implicated the "usual suspects" in eugenics, such as Charles Davenport and Harry Laughlin of the Eugenics Records Office, Dr. John Harvey Kellogg's Race Betterment Foundation, and others. However, Lombardo's "chief complaint" about the Journal was that it published the work of eugenics advocates, but publication was not considered tantamount to endorsement or complicity at that time. Lombardo cited little direct evidence to indict *NEJM* or Massachusetts Medical Society as broad boosters of eugenics.

Lombardo cited a laudatory mention of the idea of eugenics in 1910, during the editorial tenure of George Shattuck (b. 1845-d. 1923), who the shared some of the

⁶⁴ Dr Elmer E. Southard, "Mental Hygiene and the Institutions.," *Boston Daily Globe* (1872-1922), December 27, 1914.

⁶⁵ Boston Daily Globe, "EUGENICS DEFINED.: Dr E. E. Southard at the Harvard Medical School. Popular Conception of the Subject Declared Somewhat in Error.," *Boston Daily Globe* (1872-1922), April 13, 1914.

Galtonian hereditarian assumptions of his era.⁶⁶ The idea that physicians, under the auspices of legislation, would be involved in determining the “fitness” of couples to have children, was then commonplace. Courts continue in the present to grapple with this contentious issue, and most U.S. states still allow for court-ordered sterilization, if judicially deemed to be in the best interest of a disabled person who is not competent to decide independently.⁶⁷

The *coup de grace* for Lombardo was an editorial that appeared in 1913, in which the editors of the *Boston Medical and Surgical Journal* came out firmly in support of state laws permitting sterilization of the unfit. In their opinion, the editors stated:

The New Jersey State law is the most carefully planned of all. It aims to avoid abuse at the same time that it lends itself to scientific research, and provides for the sterilization of practically all those feeble-minded males whose confinement in institutions would be unnecessary were it not for the sole danger of procreating their kind. However, the law has been in effect only a short time and its workings are not yet assured.⁶⁸

As judges are supposed to do in the present, the editors of the *Journal* sought “to avoid abuse,” and to order sterilization such that it would increase liberty, ostensibly in the best interests of the males believed unfit for parenting. They understood, in the “laboratories of democracy” bent on legislative experimentation with state interference in reproductive decisions, that “scientific research” was needed. And even if Shattuck failed to live up to modern anti-eugenic expectations in 1913, by 1915 his protégé Green took over for Shattuck’s successor, Dr. E. Wyllys Taylor, expressing an opposing viewpoint.

⁶⁶ Editor, “The Anti-Vivisection Agitation — An Important Charity — Eugenics Again — Lunches for School Children — Medical Notes,” *The Boston Medical and Surgical Journal* 163, no. 1 (July 7, 1910): 27–32, <https://doi.org/10.1056/NEJM191007071630109>.

⁶⁷ “Forced Sterilization of Disabled People in the United States,” National Women’s Law Center, accessed April 28, 2024, <https://nwlc.org/resource/forced-sterilization-of-disabled-people-in-the-united-states/>.

⁶⁸ Boston Medical and Surgical Journal Editor, “Sterilization of the Unfit — The Phipps Psychiatric Clinic — Mr. Morgan as a Medical Benefactor — Medical Notes,” *The Boston Medical and Surgical Journal* 168, no. 15 (1913): 548–53, <https://doi.org/10.1056/NEJM191304101681511>.

That year also marked the resignation of Thomas Hunt Morgan from the American Breeders' Society, turning his back on eugenicists.⁶⁹ This was a historical turning point, a moment in which the promise of eugenics as a panacea for social ills was judged too unpromising scientifically to be classed with medical genetics.

Why do seasoned historians of eugenics such as Lombardo underemphasize scientific criticism of eugenics prior to WWI? The evidence for ongoing pre-WWII involvement in eugenics by so many prominent scientists, physicians, and other people of high social status is so overwhelming, and scientific critics were seemingly so ineffectual, that it's tempting to ignore scientific criticism. Yet it's important to know why so many people were involved. The massive nativist sentiment of the eugenics era explains much, as Lombardo made clear. The problem of the "feeble-minded," having not been solved by robust building of institutions, was still in search of solution. Eugenics and "cacogenics" (bad genes) were used as bludgeons against disfavored "races."

The aim of all current anti-racist eugenics historiography is to deracinate eugenic rationalizations for racism past and present and plant the ideal of equality in the public mind. "The time has come to cut down this tree and remove its global roots. The personal and collective reckoning with the legacies of eugenics can then begin."⁷⁰ Along these lines, university administrators, social activists, and historians have undertaken campaigns to rectify institutional legacies, contextualizing or even expurgating names of those perceived to have been tainted by eugenics. Even Harvard Medical School's iconic Oliver Wendell Holmes, Sr. (1809-1894), who at first blush seems an anachronistic suspect, having died before the eugenics movement took hold, has recently been daisy-

⁶⁹ Morgan, "Thomas Hunt Morgan to Charles Davenport," January 18, 1915.

⁷⁰ Turda, "Legacies of Eugenics."

chained into the ring of complicity as a likely proto-eugenicist with links to racism (“scientific racism,” an oxymoron, is a term best avoided).⁷¹

In “*Legacies of eugenics: confronting the past, forging a future*,” anti-eugenics scholar Marius Turda encapsulates the dominant narrative of up-to-date anti-eugenic academic historiography, stating, “The message of improving the race through eugenics was universal, cutting across geographies, cultures and religions. We should therefore not treat eugenics as a historical anomaly. Eugenics was not a deviation from the Western scientific norm that found practical application in Nazi policies of genocide.”⁷²

The U.S. National Park Service (NPS) has excoriated Cold Spring Harbor Laboratory’s Eugenic Records Office (ERO) for having “conducted hundreds of studies based on false claims and research,” “now thoroughly discredited,” a “pseudoscience” which was “not only deeply flawed but were also rooted in racist assumptions and prejudices.”⁷³ NPS historians charge that “bad science produced by the ERO harmed some of the most vulnerable people living in the United States.” In support of such claims the historians recommended, “For a sampling on the histories of science, eugenics, and racial bias, read Evelyn Hammonds,⁷⁴ Dorothy Roberts,⁷⁵ Stephen Jay Gould,⁷⁶

⁷¹ Scott H. Podolsky, “Oliver Wendell Holmes, Racism, and Remembrance,” *Bulletin of the History of Medicine* 96, no. 4 (2022): 484–515, <https://doi.org/10.1353/bhm.2022.0048>.

⁷² Turda, “Legacies of Eugenics, 2472.”

⁷³ Ella Wagner and Perri Meldon, “Cold Spring Harbor Laboratory and the Place of Science in U.S. History (U.S. National Park Service),” May 9, 2023, <https://www.nps.gov/articles/000/cold-spring-harbor-laboratory-and-the-place-of-science-in-u-s-history.htm>.

⁷⁴ Hammonds and Herzig, *The Nature of Difference*, xiii.

⁷⁵ Dorothy E. Roberts, *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty*, Second Vintage books edition., Twentieth anniversary edition. (New York: Vintage Books, a division of Penguin Random House LLC, 2017).

⁷⁶ Stephen Jay Gould, *The Mismeasure of Man*, Rev. and expanded. (New York: Norton, 1996).

Angela Saini,⁷⁷ and Rebecca Herzig [references inserted here do not appear in original text].”⁷⁸

Hammonds and Herzig stated, “Indeed, one of the primary emphases of *The Nature of Difference* is the tremendous range in what has counted as science (and “pseudoscience”) over the past two centuries. We invite readers to ask with us: what, exactly, makes something scientific?” No definition of science is offered except, “We approach science not as a single instrument or method that reveals (or obscures) the real truth about human difference but instead, like race, as a profoundly heterogeneous array of practices.”⁷⁹ The book’s title uses nebulous plural “sciences of race,” and the authors “encourage readers to approach the very definition of science as mutable and reflective of differential relations of power.”⁸⁰ While this may be the fashion now, it wasn’t during the early twentieth century.

Saini differentiates between poor and solid science but likewise doesn’t define it crisply or seek to sort the scientific wheat from ideological chaff. It is as if whatever scientists present as science is uncritically accepted as such, even if then deemed biased or invalid. However, the scientific method is independent of the scientist. As Gould stated, science and religion are “nonoverlapping magisteria,” and “religion” can broadly be defined as belief that requires a “leap of faith” rather than logically following from rigorous epistemology.⁸¹ Gould attacked the assertions of eugenicists, assailed their proxy measures for “intelligence,” and decried the social weaponization of summary statistics

⁷⁷ Angela Saini, *Superior: The Return of Race Science* (Boston: Beacon Press, 2019).

⁷⁸ Wagner and Meldon, “Cold Spring Harbor Laboratory and the Place of Science in U.S. History (U.S. National Park Service), n1.”

⁷⁹ Hammonds and Herzig, *The Nature of Difference*, xiii.

⁸⁰ Hammonds and Herzig, xiii.

⁸¹ Stephen Jay Gould, “Nonoverlapping Magisteria,” *Filozoficzne Aspekty Genezy* 11 (2021): 7–21, <https://doi.org/10.53763/fag.2014.11.95>.

on IQ in the Yerkes era, and the “disingenuousness” of Herrnstein and Murray’s *Bell Curve* arguments.⁸² Gould’s argument is a polemic about methodology and data interpretation rather than an indictment of the science.

Racism is not “scientific” to Gould’s mind. He applauds Ashley Montague for fighting “scientific racism” but because he showed that it was anti-scientific, leaving science unscathed except to “criticize the myth that science itself is an objective enterprise, done properly only when scientists can shuck the constraints of their culture and view the world as it really is.”⁸³ It seems that Gould’s quarrel is with scientists, and that he is indeed better able than they to shuck cultural constraints and arrive at a more objective answer to scientific questions. Like Kuhn, Gould distances himself from relativistic radical skepticism that posits “truth as a meaningless notion outside cultural assumptions.”⁸⁴

Without challenging charges of racism leveled against eugenicists, the present thesis contends that eugenics did indeed deviate from the norm of the scientific method and knew that their eugenics schemes were not supported by the immutable definition of science that they knew at the time. Though sloppy science and outright errors occurred, there was never a eugenics “scientific consensus” that went beyond the bounds of laboratory and medical genetics. Genetics was science; eugenics was politics.

According to a classification of eugenics historiography by Marks, “The third form of revisionism is simply to downplay the appeal of the movement and its ideas to the community of American geneticists.”⁸⁵ This thesis will test the validity of the “third

⁸² Gould, *The Mismeasure of Man*.

⁸³ Gould 15;21.

⁸⁴ Gould, *The Mismeasure of Man*, 54.

⁸⁵ J. Marks, “Historiography of Eugenics,” *American Journal of Human Genetics* 52, no. 3 (1993): 650–52.

revisionist” strain. Levine states, “Eugenics was not a minority interest but a mainstream international science that promised not just the advance of scientific knowledge but the improvement of the human condition.”⁸⁶ The culmination of eugenics in Nazi ideology and the deliberate destruction, facilitated by modern science and technology, of tens of millions of human lives in World War II makes it understandable that early scientific critics of eugenics, who clearly didn’t do enough to stop it, have not been studied in depth. Yet it is important to go back and explore what it meant.

Allen’s informative essay covered a broad swath of criticisms,⁸⁷ without going into the depth of the case method of Spencer and Paul (*vide infra*),⁸⁸ and without critically analyzing the response of the eugenicists to criticisms. It seems obvious that eugenicists ignored scientific criticism, since they kept at their policy work, but nobody has investigated the reasons why in any detail.

⁸⁶ Levine, *Eugenics*, 13.

⁸⁷ Allen, “Eugenics and Modern Biology.”

⁸⁸ Spencer and Paul, “The Failure of a Scientific Critique.”

Chapter IV.

Eugenics Era Science

The preceding chapter presented a brief history and historiography of eugenics. This one covers the history of science and its political purpose in the eugenics era, an overview of which is a predicate for understanding scientific criticism of eugenics. Though some contemporary philosophy of science is fraught with postmodern skepticism,⁸⁹ for the purpose of this thesis, set in modern early twentieth century Anglo-American scientific circles, the straightforward 1911 *Encyclopedia Britannica* definition of science provides a point of departure. Science was defined, by author William Cecil Dampier (Whetham), as “ordered knowledge of natural phenomena and of the relations between them.”⁹⁰

Dampier (1867-1952), a Cambridge physical scientist, historian of science, and author of a book on eugenics, is an exemplar of the understanding of science of his era, as applied to eugenics.⁹¹ In addition, the eleventh edition of *Encyclopedia Britannica* was of such cultural importance in the “Anglosphere” to have merited a history of its own.⁹² Dampier appreciated the purity of Baconian inductive method, free of presupposition and focused on primary data collection to support strictly limited conclusions. However, he thought it extreme and inefficient to do without hypothesis entirely. Thus, Dampier

⁸⁹ Hilary Kornblith, *Scientific Epistemology: An Introduction* (New York, NY: Oxford University Press, 2021).

⁹⁰ William Whetham, “Science,” in *1911 Encyclopædia Britannica*, 1911, Wikisource, https://en.wikisource.org/wiki/1911_Encyclop%C3%A6dia_Britannica/Science.

⁹¹ William Cecil Dampier Dampier, *An Introduction to Eugenics* (Cambridge, [Eng.: Bowes and Bowes; etc., etc., 1912), <http://id.lib.harvard.edu/alma/990149937840203941/catalog>.

⁹² Denis Boyles, *Everything Explained That Is Explainable : On the Creation of the Encyclopædia Britannica's Celebrated Eleventh Edition, 1910-1911* (New York : Alfred A. Knopf, 2016), <http://archive.org/details/everythingexplai0000boyl>.

would allow for Whewell's hypothetico-deductive methodology, as long as hypotheses are modified or abandoned if they fail tests. He allowed for experimental "verification."

Popper preferred "falsification" as a more formal logical framework than "verification." Popper's 1934 conception of the scientific method precipitated in print late in the eugenics era, but Popper only crystallized a pre-existing understanding of science.⁹³ Science, prior to philosophical perturbations induced by Einstein's relativity and Planck's quantum theory, was an outgrowth of Newtonian-Baconian fundamental theory and practice.⁹⁴ Huxley and Popper bookend the eugenics era, and Peirce was in the middle.⁹⁵ Darwin,⁹⁶ Huxley,⁹⁷ and Galton⁹⁸ were all steeped in Whewell's hypothetico-deductive model.⁹⁹ It was Whewell who coined the term "scientist" in 1834,¹⁰⁰ and the epistemology of science was straightforward to scientists of the eugenics era, who arguably were more conversant in it than today's narrowly specialized scientists are. The eugenics era scientists weren't plagued by doubts about experimental science.

Although the definition of science was clear, apart from quibbling about emphasis on deduction or induction, and falsification or verification, the core purpose of science was disputed, with Peirce representing "pragmaticist" science for its own sake and

⁹³ Karl R. Popper, *The Logic of Scientific Discovery*, [3d ed. (revised)] (London: Hutchinson, 1968).

⁹⁴ Laurens Laudan, "Theories of Scientific Method from Plato to Mach: A Bibliographical Review," *History of Science* 7, no. 1 (1968): 1–63, <https://doi.org/10.1177/007327536800700101>.

⁹⁵ Gillham, *A Life of Sir Francis Galton*.

⁹⁶ Ruse, *Darwinism and Its Discontents*, 38.

⁹⁷ Thomas Henry Huxley, *Science and Culture* (Hoboken, N.J. : Boulder, Colo.: BiblioBytes ; NetLibrary, 199AD).

⁹⁸ Gillham, *A Life of Sir Francis Galton*.

⁹⁹ William Whewell, *On the Philosophy of Discovery: Chapters Historical and Critical* (London: J.W. Parker and son, 1860), <http://nrs.harvard.edu/urn-3:HUL.FIG:002245909>.

¹⁰⁰ OED, "Scientist, n. : Oxford English Dictionary," March 12, 2023, <https://proxy.bostonatheneum.org:2262/view/Entry/172698?redirectedFrom=scientist#eid>.

Pearson science as instrument for guiding policy.¹⁰¹ The clearest exposition of the difference of opinion about the role of science in society may be found in the response of Harvard's Charles Sanders Peirce¹⁰² to eugenicist Karl Pearson's *Grammar of Science*.¹⁰³ Peirce agreed with Pearson on "canons of legitimate inference," but disagreed that the purpose of science was to further "social stability."¹⁰⁴ And Pearson's misguided view of social stability - his earlier "socialism" degenerated into a toast for the future of National Socialism and "Reichskanzler Hitler and his proposals to regenerate the German people" - has marred his legacy.¹⁰⁵ Davenport, though he was a devoted American patriot, first and foremost, sought alliance of international eugenicists with Mussolini.¹⁰⁶

Eugenics was inextricably entangled with international politics in ways that would have intrigued historian of science Thomas Kuhn.¹⁰⁷ Science served as a prop for propaganda, involving the state as the shaper of policy informed by scientific experts. Eugenicists such as Davenport didn't confuse politics with science. Demographic dilution of those who considered their race "supreme" was Davenports' political preoccupation. Davenport identified differential birth rate one of the most fundamental eugenical ideals

¹⁰¹ Peter Skagestad, "Peirce and Pearson: Pragmatism vs. Instrumentalism," in *Language, Logic and Method*, Boston Studies in the Philosophy of Science (Dordrecht: Springer Netherlands, n.d.), 263–82, https://doi.org/10.1007/978-94-009-7702-0_14.

¹⁰² Charles S. Peirce, "Pearson's Grammar of Science: Annotations on the First Three Chapters," *Popular Science Monthly Volume 58 January 1901*, 1901, Wikisource, https://en.wikisource.org/wiki/Popular_Science_Monthly/Volume_58/January_1901/Pearson%27s_Grammar_of_Science.

¹⁰³ Karl Pearson, *The Grammar of Science*, Contemporary Science Series (London: W. Scott, 1892).

¹⁰⁴ Peirce, "Pearson's Grammar of Science: Annotations on the First Three Chapters."

¹⁰⁵ Louis Napoleon George Filon, *Speeches Delivered at a Dinner Held in University College, London in Honour of Professor Karl Pearson 23 April 1934*, 1934, <http://archive.org/details/filon-et-al-1934-speeches-delivered-at-a-dinner>.

¹⁰⁶ Charles Benedict Davenport, "Charles Davenport to Eugen Fischer," August 3, 1929, Mss.B.D27 Davenport Papers - Fischer, Eugen, Folder 1, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹⁰⁷ Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago ; London : The University of Chicago Press, 2012), <http://archive.org/details/structureofscien0000kuhn>.

in a 1929 letter to Dr. Eugen Fischer.¹⁰⁸ By differential birth rate he meant “the high birth-rate of the intellectually and physically better blood lines,” and he added, in preparation for the Rome meeting, “especial reference to securing the adhesion of Mussolini to our point of view.”¹⁰⁹

Davenport didn’t support Hitler, and he had disdain for the Ku Klux Klan for its backwards stance on evolution. Davenport wrote to Dr. C.C. Little of Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine:

You have perhaps heard from Dr. O. von Verschuer (Otmar Freiherr von Verschuer, 1896-1969) that he has a fine new establishment for the study of heredity and race hygiene at Frankfurt a.M.? Unfortunately, I fear it will have to be used in part to advance the ideas of the dictator, but dictators have a way of passing in time.¹¹⁰

Debates over evolution in the 1920s were especially entangled in American eugenics. In his *Eugenical News* review of *Evolution or Christianity?* by W. M. Goldsmith (1924), Davenport wrote marginalia in his draft, “Reply to Anti-evolutionists,” appending “even as Klu Klux Klanners are believed to have done in Louisiana,” to “It is fair to conclude, from the bitterness of their abuse, that they will do what they can to alter these organizations so that they shall have a free hand to carry conservatism to its logical conclusion and make it possible to put to death ~~all~~ (those) who do not agree with them.”¹¹¹ “We propose that there shall be no doxy but our doxy and we have the cash to bring it about,” by propaganda, is noted in this review. Davenport’s marginalia betrays three aspects of his self-conception: (1) he believed that he was a

¹⁰⁸ Davenport, “Charles Davenport to Eugen Fischer,” August 3, 1929.

¹⁰⁹ Davenport.

¹¹⁰ Charles Benedict Davenport, “Charles Davenport to Dr. Clarence Cook Little,” May 20, 1936, Mss.B.D27 Davenport Papers, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹¹¹ Charles Benedict Davenport, “Reply to Anti-Evolutionists (Davenport Marginalia)” (1924), Mss.B.D27 Davenport Papers - Eugenical News Folder 25, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

Progressive rather than conservative; (2) he supported freedom of expression through persuasion but not coercion, and not through threats or violence.

As this thesis will show, it was the phenomenal mind of Harvard's Charles Sanders Peirce that first got at the crux of the epistemological difference between eugenics proponents and critics.¹¹² Eugenicists in Pearson's camp defended political "twisting," to use Peirce's term, "expert" spin to promote progressive or totalitarian social aims, whereas Peirce's scientific purists sought to approximate truth for truth's sake, even if antithetical to social values.¹¹³ This thesis will show how Davenport and Pearson twisted their models in opposite directions, propagandizing but not technically violating formal scientific norms, while Morgan sought biological truth for its own sake, with its social utility being an implied derivative benefit of knowing it.

If eugenicists simply spun their hypothetical models to serve social aims, why is there so much confusion about eugenics as a science or pseudoscience? For that we must look beyond science, to the role of the "expert." In the Progressive Era, the expert was exalted to a high societal pedestal. As stated in the opening of the present paper, there were three social roles for scientists to play – advocate, expert, or scientist – as explained by identified by historian Thomas C. Leonard.¹¹⁴ The expert was seen as a "disinterested" person of high education, often a scientist by training, who presumably would "follow the science" to arrive at a "science-based" policy.

Others denigrated eugenic scientism, but often on religious grounds rather than charges of hubris, which were characteristic of sophisticated freethinkers like Clarence

¹¹² Peirce, "Pearson's Grammar of Science: Annotations on the First Three Chapters."

¹¹³ Peirce; Francis E. Reilly, *Charles Peirce's Theory of Scientific Method*, American Philosophy (New York, NY: Fordham University Press, 2019).

¹¹⁴ Leonard, *Illiberal Reformers*.

Darrow.¹¹⁵ However, the expert, sometimes wearing the mask of the scientist while stealthily acting the part of the advocate, was central to the Progressive idea of social engineering via scientific management. Even human reproduction would be precisely managed for the common good, and the individual's procreative liberty, especially for those of low social standing, amounted to almost nothing in comparison.¹¹⁶ The metastasis of scientism, embodied by experts saying scientific-sounding things to support overbroad policies, into complex problems subjected to collectivist social engineering, like eugenics, led to charges of hubris by F.A. Hayek.¹¹⁷

¹¹⁵ Clarence Darrow, "The Eugenics Cult," *The American Mercury* (1951) 8, no. 30 (1926): 129–37.

¹¹⁶ Leonard, *Illiberal Reformers*, 22; 190.

¹¹⁷ Hayek, *The Counter Revolution Of Science*.

Chapter V.

Research Methods

This thesis tested the hypothesis that there was no substantial difference between critics and the main exponent of eugenics, Charles Benedict Davenport, in their understanding of the scientific basis and limits of eugenics, and that their differences derived from personal values not epistemology or logic. As Olson stated, “If one disentangles Davenport’s social agenda from his scientific claims and simply ignores his cheerleading, Davenport’s science was not so bad.”¹¹⁸ In large part because doing so is tedious and potentially contentious, no historian yet has attempted an in-depth dissection of social from scientific claims of eugenicists.

Three major categories of criticism of eugenic science were: eugenics-euthenics (nature versus nurture); biometrician-Mendelian (polygenic blending versus simple “unit-character” Mendelian genetics); and methodological (valid versus invalid phenotype definitions and metrics).¹¹⁹ Chapters IX, X, and XI cover all three, respectively, after chapters on Davenport and then Morgan set up the dialogue between scientism and science. This covers the overarching debate, science versus scientism (rigorous and restrained fact-finding and truth-seeking versus co-optation of scientific expert status and the language of science for nonscientific aims). Finally, the aim of scientism was to support reactionary pronatalist nativism, and that argument is made in Chapter XII.

¹¹⁸ Witkowski, Inglis, and Davenport, *Davenport’s Dream*, 88.

¹¹⁹ Allen, “Eugenics and Modern Biology.”

British and American eugenics were inseparably entangled in their scientific underpinnings, though public policy diverged considerably.¹²⁰ Thus, an Anglo-American cultural focus is apt, but some international influences on eugenics are indispensable for a full view of the politics. The goal was to analyze the source of disagreement in scientific statements of geneticists involved in eugenics. Given what Olsen described as the “commingling of science and social values,”¹²¹ these were parsed into categories of advocacy, expert opinion, or dispassionate science in search of truth.

I examined published writings and private papers of selected British and American geneticists, visiting the major repository of private papers of geneticists in the United States, the Bentley Glass Collection at American Philosophical Society in Philadelphia.¹²² Glass identified Edward Murray East and Charles Davenport as leaders among scientists supportive of eugenics.¹²³ Allen placed Davenport’s fellow New Yorker Thomas Hunt Morgan as the key critic of Davenport.¹²⁴ Preliminary research confirmed that Morgan and Davenport were close friends, and that Morgan was Davenport’s main, and perhaps only, foil, given Morgan’s role as the eminent geneticist of his era.

According to Glass, “Surely, the most influential figure among geneticists in encouraging the rampant, racist views of American eugenics in the 1920s was in fact not Davenport at all, but Edward M. East.”¹²⁵ Glass classified East’s fellow Harvard Professor William Castle as a critic of eugenics, noting that, like other scientific critics,

¹²⁰ Edward J. Larson, “Biology and the Emergence of the Anglo-American Eugenics Movement,” in *Biology and Ideology from Descartes to Dawkins*, ed. Denis R. Alexander and Ronald L. Numbers (University of Chicago Press, 2010), 0, <https://doi.org/10.7208/chicago/9780226608426.003.0008>.

¹²¹ Witkowski, Inglis, and Davenport, *Davenport’s Dream*, 79.

¹²² American Philosophical Society Library, *A Guide to the Genetics Collections of the American Philosophical Society*, Publication (American Philosophical Society. Library) No. 13 (Philadelphia: The Society, 1988).

¹²³ Glass, “Geneticists Embattled.”

¹²⁴ Allen, “Eugenics and Modern Biology.”

¹²⁵ Glass, “Geneticists Embattled.”

Castle was not categorically opposed but selective in criticism, with evolving views over the first two decades of the twentieth century.¹²⁶ Classification can be contentious, and Davenport and East each had sufficiently rampant, racist views that I chose to focus on Davenport primarily. His correspondence is so voluminous that it connects with essentially all eugenicists of his era.

Kevles listed J.B.S. Haldane as one of the “leading scientists in the anti-mainline assault, those most powerful and sustained in their critique.”¹²⁷ He cites Karl Pearson, Galton Professor of Eugenics at University College London, as the chief exponent of eugenics in Great Britain.¹²⁸ I approach Pearson mainly through his protégé Heron, who was most direct in his criticism of Davenport.

The methodology of the thesis involved investigation of correspondence of the foregoing geneticists for evidence of motivations for criticism and rejection of criticism, to understand why and how scientific criticism failed to suppress eugenic policies. The thesis is limited, to keep scope manageable, but will touch upon nearly the entire field, given their interconnectedness within a larger community of scientists.

The published letters of eugenicists were scoured for evidence of scientific disagreement (epistemological), criticism, and response to criticism. Themes were gleaned from the text of the letters. I chose to survey all eugenics-era correspondence in the Genetics Collections of the American Philosophical Society that was coded by

¹²⁶ Glass.

¹²⁷ Kevles, *In the Name of Eugenics*, 122.

¹²⁸ Kevles, 21.

Bentley Glass as pertaining to eugenics (EU), behavioral genetics-IQ (BG), and/or philosophy of science (PS).¹²⁹

All applicable protocols and policies of Harvard University's Institutional Review Board for the use of human subjects in research will be complied with in this proposed thesis research.

¹²⁹ American Philosophical Society Library, *A Guide to the Genetics Collections of the American Philosophical Society*.

Chapter VI.

Research Limitations

This research may accept or reject the null hypothesis of no substantial difference between critics and proponents of eugenics, exemplified by Morgan and Davenport, respectively, in their understanding of the scientific basis and limits of eugenics. One limitation is lack of consensus among historians of science about what differences could be considered “substantial.” This is a matter of judgment. Readers do not have necessarily have access to materials omitted from a thesis. Thus, the potential for omission bias is also a threat to validity of the thesis. Competing researchers could reveal significant omissions, and that is a safeguard for the internal validity of the work.

Selection bias is also a limitation of the study, in that only several pairs of elite geneticists were chosen for study, and the focus sharpened to Davenport’s vast circle, so external validity to the broader scientific community is not assured. The selection of a vast trove of correspondence that was pre-classified for relevance by Bentley Glass was done to mitigate potential for selection bias. Though historians such as Allen identified individuals selected for this thesis as opponents of eugenics, other historians may argue that they were partial proponents, at least at certain times, and that this could limit the extent to which differences in scientific interpretation would be discoverable. Evidence of their scientific criticism of eugenics, however, will be presented in the thesis for readers to judge.

It is unclear how to deal with contradictions, in which subjects express opposing views in different contexts, without any clear epistemological evolution or admission of prior error. The treatment of these is necessarily context-dependent, meaning that the

potential reasons must be considered, for example, if a subject makes one statement to a public audience and another in private. It is clear, however, that such contradictions can constitute infractions of scientific integrity.

The loose definition of “science” can be construed broadly to include social context as well as subtle aspects such as choice of study design or data analysis methodology. The present thesis focuses strictly on hypothetico-deductive processes such as the conduct of experiments or rigorous testing of formal, falsifiable models (such as whether some putative measure of “feeble-mindedness” segregates in a pedigree according to a Mendelian pattern). This limits the scope to the core of the scientific method, ignoring para-scientific aspects such as the extent to which the scientist may harbor prejudicial views that may have introduced bias into experimental design or led observations to be overlooked when inconsistent with pre-existing beliefs.

Chapter VII.

Charles Benedict Davenport

Charles Benedict Davenport was born on June 1, 1866, in the house his father built on the Davenport ancestral farm, in Stamford, Connecticut, a legacy of his “Puritan” heritage.¹³⁰ Although the family lived in Brooklyn, his father Amzi Benedict Davenport “took great pride” in the family farm. Davenport’s mother, Jane Joralemon Dimon, was of English-Dutch-Italian ancestry, with deep familial roots in Brooklyn.¹³¹ Genealogy was one of Charles Davenport’s key conceits. His autobiographical manuscript, at the American Philosophical Society, heavily emphasizes genealogy.

During the latter decades of the nineteenth century, an upsurge of interest in genealogy, along with creation of hereditary societies, served to define an individual’s birthright to exclusive membership in nativist groups.¹³² As Allen explained, English hereditary tradition, with its heraldry and aristocratic genealogy, was the milieu from which eugenics emerged.¹³³ Gilded Age Americans outdid the English and sought, as in the case of Consuelo Vanderbilt’s marriage to the Duke of Marlborough, to consolidate financial with pseudo-aristocratic social power.¹³⁴

¹³⁰ Charles Benedict Davenport, “Autobiographical (1916-1940),” Mss.B.D27 Davenport Papers, American Philosophical Society, accessed November 20, 2023, <https://www.amphilsoc.org/library/search-collections>.

¹³¹ Oscar W. Riddle, “Biographical Memoir of Charles Benedict Davenport, 1866-1944” (National Academy of Sciences Biographical Memoirs, Fall 1947), <https://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/davenport-charles.pdf>.

¹³² Francesca Morgan, *A Nation of Descendants: Politics and the Practice of Genealogy in U.S. History* (Chapel Hill: The University of North Carolina Press, 2021).

¹³³ Allen, *Thomas Hunt Morgan*, 227-8.

¹³⁴ Consuelo Vanderbilt Balsan, *The Glitter and the Gold: The American Duchess - in Her Own Words*, 1st U.S. ed. (New York: St. Martin’s Press, 2012).

The memorialization of Davenport, as expressed in the biographic essay written for the National Academy of Sciences in 1947 by Frank Riddle, wasn't critical.¹³⁵ Riddle did note Davenport's tendency for "hasty preparation and the lack of critical judgment in lumping together, indiscriminately, cases with ample and with insignificant evidence."¹³⁶ Riddle rattled off the panoply of topics that captured Davenport's attention: human stature, body build, longevity, goiter, otosclerosis, neurofibromatosis, pellagra, epilepsy, mental disorders, temperament, mental attributes of naval officers, mongoloid dwarfs, twinning, sex-linkage, and race crossing. Davenport's penchant for discussing eugenics in relation to "state, church, medicine, and society in general" was acknowledged.¹³⁷

According to Riddle, Davenport's "scientific background and associations gave him the prestige of an authority in the eyes of those inclined to accept his position on the social and political aspects of eugenics."¹³⁸ However, "the opposition of many, instead of quickening the search for more accurate and convincing evidence, called forth a defensive attitude which led to exaggerated emphasis and dulled objective thinking."¹³⁹ Riddle, a biologist who made contributions to pituitary hormone research, worked under Davenport at Cold Spring Harbor.¹⁴⁰ He was not a proponent of eugenics; his work in endocrinology influenced Davenport, as the far-reaching physiological effects of hormones, along with potential to replace them therapeutically, complicated the eugenic

¹³⁵ Riddle, "Biographical Memoir of Charles Benedict Davenport, 1866-1944."

¹³⁶ Riddle, 87.

¹³⁷ Riddle, 87.

¹³⁸ Riddle, 87.

¹³⁹ Riddle, 87.

¹⁴⁰ George W. Corner, "Oscar Riddle (September 27, 1877-November 29, 1968 - a Biographical Memoir" (National Academy of Sciences Biographical Memoirs, 1974), <https://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/riddle-oscar.pdf>.

narrative.¹⁴¹ His political project was to promote academic freedom, particularly in the realm of anti-supernatural science teaching.

Also in the wake of Davenport's death came a memorial biography by E. Carleton MacDowell of the Carnegie Institute.¹⁴² MacDowell noted that he "lived in continuous personal contact with Doctor Davenport during most of the second half of his life and has had access, during the past year, to official files and an extensive collection of personal letters, autobiographical sketches, diaries and other contemporary documents going back to childhood."¹⁴³ MacDowell characterized Davenport as being profoundly hypersensitive to criticism. However, he found that Davenport had, "On one side, a loyalty of his mind justifying his actions, on the other, a loyalty of his heart in defense of his dreams."¹⁴⁴ MacDowell felt overall that the well-intended if hypersensitive Davenport "identified himself with great concepts - Science, Experimental Morphology, Advancement of Knowledge, Evolution, Improvement of Mankind."¹⁴⁵

Rosenberg (1961), the first professional historian of science to take up Davenport as a subject, described him as "a leader in the use of biostatistics," with mathematical biology skills reflecting his engineering background that were "far greater than was customary among biologists of his day."¹⁴⁶ Rosenberg implied that Davenport categorically switched to Mendelian over quantitative mode, becoming by 1904 a "thorough convert to the ideas of Mendel and de Vries," though he did not "immediately

¹⁴¹ Allen, "Eugenics and Modern Biology."

¹⁴² E. Carleton (Edwin Carleton) MacDowell, *Charles Benedict Davenport, 1866-1944; a Study of Conflicting Influences* (Oklahoma City? 1946, 1946).

¹⁴³ MacDowell, 3.

¹⁴⁴ MacDowell, 4.

¹⁴⁵ MacDowell, 37.

¹⁴⁶ Charles Rosenberg, "Charles Benedict Davenport and the Beginning of Human Genetics," *Bulletin of the History of Medicine* 35 (1961): 266-76.

discontinue his biometric studies of variation and selection.”¹⁴⁷ Though Davenport boldly proffered the Mendelian model in his studies – as a public expert and booster of eugenics who wouldn’t wish to be seen as a skeptic - he nevertheless appreciated the need to put it to rigorous quantitative testing. Rosenberg did not make this distinction.

Though Rosenberg reasonably concluded that Davenport “broke sharply” with Pearson and his system of biometrics, no distinction was drawn between Davenport’s public and private *personae*. Privately, and in published response to scientific criticism if not on a public platform, as I will show below, Davenport didn’t break from biometrics. He adopted an adversarial argumentative stance, to be sure, but didn’t negate the biometric model. He made future-looking pronouncements that the Mendelian camp would prevail in the fullness of time, but that’s mere editorializing not an epistemological violation.

Davenport’s 1913 summary of laws regulating marriage and procreation is illuminating for historians.¹⁴⁸ It was quintessential Progressivism, scientism in the supposed service of the state, that drove Davenport’s opinionated interaction with government. Legislators were his target readership. “The principle that the State may and should control marriage matings is, as we have seen, recognized by all States,” Davenport stated, and he sought to instruct legislators in the art of social control.¹⁴⁹ He wasted no time in putting out his hand for funding. In his preface he got right to the point, “Very slowly, but I trust none the less surely, will legislation come do not know whether this legislature has passed such laws, but know the same legislature has since rejected a bill to

¹⁴⁷ Rosenberg, 268-9.

¹⁴⁸ Charles Benedict Davenport, *State Laws Limiting Marriage Selection Examined in the Light of Eugenics*, Eugenics Record Office. Bulletin No. 9 (Cold Spring Harbor [N.Y: Cold Spring Harbor N.Y 1913., 1913), http://nrs.harvard.edu/urn-3:hul.ebookbatch.MOML_batch:F152813587.

¹⁴⁹ Davenport, 37.

appropriate to recognize that research is a basic function of the State.”¹⁵⁰ Last, but not least, decisions about fitness to reproduce would be left to experts like him, and the state would collect their fees for them. “With the Eugenics Board should be left the execution of all laws limiting procreation, both inside the marital relation and outside.”¹⁵¹

Davenport’s aim was to provide a visionary biological rationale around which to re-organize and amend the hodgepodge of Levitical or Anglo-American state laws regulating sexual, reproductive, and marital contract relationships. Davenport made explicit the analogy between risk of horizontal infectious disease transmission to a spouse and risk of vertical transmission of a hereditary condition to a child. He presented cases illustrating what he deemed adverse outcomes of non-eugenic marriages. As was typical, Davenport made unsupportable generalizations about putative modes of inheritance of various traits and diseases. His certitude that a “frightful load of non-social traits would be cast upon society by the presence of such hybrids” conceived via miscegenation may have been contemptible, but Davenport admitted that there was “much to be learned.”¹⁵²

After a long brew in the eugenic past, it is sobering for historians of eugenics to recall that laws regulating procreation by persons with intellectual disability, enacted by democratically elected legislatures, remain in force in 31 states, as do prohibitions on consanguineous marriage and incest.¹⁵³ In several states, consensual adult incest is not illegal, though the marriage contract is barred.¹⁵⁴ Prisoners, while incarcerated, are not free to reproduce in most cases. State-sanctioned social workers still counsel about birth

¹⁵⁰ Davenport, 6.

¹⁵¹ Davenport, 40.

¹⁵² Davenport, 34.

¹⁵³ “Forced Sterilization of Disabled People in the United States.”

¹⁵⁴ Andrew J. Pecoraro, “Exploring the Boundaries of Obergefell,” *William and Mary Law Review* 58, no. 6 (May 1, 2017): 2063-.

control and family planning, according to what they deem prudent standards, and they have broad powers to abrogate parental rights temporarily pending judicial hearings. State government regulation of reproduction has intensified considerably following *Dobbs v. Jackson* (2022), a throwback to the hodgepodge of state laws on abortion.¹⁵⁵ Davenport was part of the Progressive state-science conjunction that sought technocratic regulation of almost every aspect of life, and though they have gone away, the problems over which they sought control haven't.

Given Davenport's errant editorializing, Rosenberg wrote that Davenport "assumed that human traits were discrete, unit characters determined by pairs of distinct immutable factors, one of which might often mask or dominate the other."¹⁵⁶ A counterargument is that Davenport's model assumed such, but that Davenport dutifully sought to put it to the test. In other words, Davenport wasn't really blinkered by naïve assumptions. It suited his purposes, particularly political ones, to proffer and test simple Mendelian models, certainly hoping and probably believing that it would explain far more than his critics would allow. That's different from assuming that Davenport was necessarily pseudoscientific.

Thus, I propose to add nuance to Rosenberg's relatively terse take, based on his historical paper read at the Johns Hopkins Medical History Club in 1961, on Davenport's mindset. I point to the apparent incongruity in Davenport's pre-1900 academic credentials as a Harvard student and Instructor, and as an Associate Professor at University of Chicago, with impressive scientific output, and a his suddenly simplistic

¹⁵⁵ "Dobbs v. Jackson Women's Health Organization | Constitution Center," National Constitution Center – constitutioncenter.org, accessed June 6, 2024, <https://constitutioncenter.org/the-constitution/supreme-court-case-library/dobbs-v-jackson-womens-health-organization>.

¹⁵⁶ Rosenberg, "Charles Benedict Davenport and the Beginning of Human Genetics, 269-70."

turn of mind in the public sphere. Davenport did indict himself as a suspected scientific simpleton by his own statements, such as “modern studies in heredity have made that science relatively simple.”¹⁵⁷ Rosenberg added, as a note in proof, that Davenport blithely informed Irving Fisher in a June 15, 1912 letter that there wasn’t “very much more mathematics to Mendel’s law than that of $\frac{1}{2}$ of $\frac{1}{2}$ is $\frac{1}{4}$.”¹⁵⁸ However, it’s true of Mendel’s laws that they’re simple; the biometric departures of human traits from the laws are what’s complicated, and in fact, biometrical trait distributions that appear continuous are produced by very large numbers of discrete Mendelian characters acting at multiple loci, as in the case of human height.¹⁵⁹

I concur with Rosenberg’s assessment that, in the field of behavioral genetics, “Dr. Davenport’s social commitments were in sharp contrast with his scientific objectivity.” Davenport willingly sacrificed, through his hyperbolic grandstanding remarks and writings, the purity of the historical record on his scientific detachment capability. He sought to appear as a detached expert, for example by stipulating certain “desirable traits of the Negro.”¹⁶⁰ Yet he was artful enough to hedge most of his statements, or to make them outside the context of scientific results or conclusions, reserving his bloviation for the discussion section. Thus, he could usually retort that his critics failed to parse science from idle chatter, making them seem unsophisticated while enjoying social approbation from his political allies.

Rosenberg admonished, “Unfortunately, human beings are not so easily studied as garden peas or drosophila. Nor are most human traits easily accommodated by the

¹⁵⁷ Rosenberg, 269.

¹⁵⁸ Rosenberg, 269.

¹⁵⁹ Mitchell Conery and Struan F.A. Grant, “Human Height: A Model Common Complex Trait,” *Annals of Human Biology* 50, no. 1 (February 2023): 258–66, <https://doi.org/10.1080/03014460.2023.2215546>.

¹⁶⁰ Davenport, *State Laws Limiting Marriage Selection Examined in the Light of Eugenics*, 32.

simplistic doctrine which Mendelianism seemed to most biologists to be in the century's first decade."¹⁶¹ In doing so, did Rosenberg take at face value Davenport's misleading rhetoric? Or was Davenport truly a Mendelian simpleton?

Davenport, based on his own stipulations in numerous letters and publications, surely would have agreed with Rosenberg's statement that human genetics is complex. It's not what Davenport believed that so irks historians; it's how he behaved and what he said and wrote about socially and/or biologically disadvantaged people that transgresses the categorical imperative, setting historians against him. Knowing that Davenport didn't even believe what he said might provoke even sterner opposition, however. Davenport had intelligence and high educational and social privilege. "To whom much is given, much will be required (*Luke 12:48*)," is the operative biblical injunction that explains why Davenport could be subjected to harsher historical judgment, based on mores of Western culture. This arguably isn't a historian's role, but readers are free to judge Davenport however they see fit.

Rosenberg charged that "Charles Davenport was to adhere consistently to this interpretation of human behavior until his death in 1944. His convictions were too deeply rooted in his opposition to social change and too much a product of the scientific concerns and presuppositions of the generation in which he grew to maturity."¹⁶²

I join Rosenberg's conclusion that Davenport may well have clung to his strong sociobiological "interpretations," but that's not the same as misinterpreting specific data to form an erroneous scientific conclusion. When Darwin drew in his notebook the

¹⁶¹ Rosenberg, "Charles Benedict Davenport and the Beginning of Human Genetics, 269."

¹⁶² Rosenberg, 271.

phrase, “I think,” next to his tree of life model, that was a tentative interpretation.¹⁶³ Davenport understood the requirement of tentativeness while shirking the duty to it. Unlike Rosenberg, I put essentially all the emphasis on Davenport’s deeply rooted “opposition to social change” as the explanation for his dislike of others whom he considered unlike him. Davenport’s “presupposition” was merely a tentative model held up boldly, in the tradition of Jefferson’s “I advance it, therefore, as a suspicion only” derogatory comments about the “endowments both of body and mind” of people of African ancestry.¹⁶⁴ Abuse of hypotheticals may not technically violate scientific logic, but it may nonetheless be offensive and deemed taboo by society.

Davenport (1866-1944) understood eugenics and medical genetics in much the same way as his critic and scientifically prodigious friend, Thomas Hunt Morgan (1866-1945), as Chapter IX on the Biometrician-Mendelian debate will clarify. What Davenport said, and what he knew, based on his own writing, posed Janus faces to different audiences. Davenport was a competent elite scientist, and though he certainly made scientifically unsupported statements, he did so in editorial mode, for scientists, or expert mode (veiled advocacy), for public figures and the public. He let the liars and “damned liars,” those shills for heinous causes, such as Harry Laughlin, who in his deposition in Carrie Buck’s case characterized her whole family as being of “the shiftless ignorant, and worthless class of anti-social whites of the South,” do the dirtiest of the political propaganda work.¹⁶⁵

¹⁶³ Niles Eldredge, *Darwin: Discovering the Tree of Life*, 1st ed. (New York: W.W. Norton & Co., 2005).

¹⁶⁴ Thomas M Morgan, “The Education and Medical Practice of Dr. James McCune Smith (1813-1865), First Black American to Hold a Medical Degree,” *Journal of the National Medical Association* 95, no. 7 (2003): 603.

¹⁶⁵ Paul A. Lombardo, “Carrie Buck’s Pedigree,” *The Journal of Laboratory and Clinical Medicine* 138, no. 4 (October 1, 2001): 280, <https://doi.org/10.1067/mlc.2001.118091>.

What made Davenport have such loathing for immigration? Was he simply following the Zeitgeist of the New York Gilded Age and Progressive elites? Why did Davenport seem to believe that the eugenic ends would justify its draconian means? How could he have been so lacking in sympathy for the plight of others?

Charles, as a child, set out in the right spirit. He gratefully pledged to his father, Amzi Benedict Davenport, “I cannot thank you too much, and hope I may be able to repay you by a life spent in the service of humanity.”¹⁶⁶ Davenport wrote, of his formative years, “My early education was conducted by my father upon the principles of the middle nineteenth century.”¹⁶⁷ He finished reading the New Testament by age eight years, and did not go to school until thirteen years old. Charles worked as an errand boy in his father’s real estate office. In 1916 worked on Davenport family history, and sought to compile it into a book, a common aim of ambitious men of “Puritan stock” who considered themselves patriotic proprietors.

Charles Davenport knew personal suffering, too, and should have been able to empathize with others. “The worst thing that has befallen our family was the death, Sept. 5, of our son Charles Benedict Davenport Jr. of acute anterior poliomyelitis and which during the summer had been raging about us. Two or three contacts with possible “carriers” became known after his death.”¹⁶⁸ After four weeks of quarantine he and his wife “became wanderers going to Chicago to see our daughter Jane settled at the University.”¹⁶⁹ Nothing in Davenport’s personal history explains his politics. It seems to

¹⁶⁶ Charles Benedict Davenport, “Charles Davenport to Amzi Benedict Davenport,” March 18, 1885, Mss.B.D27 Davenport Papers - Davenport, A.B. (Amzi Benedict), b. 1817, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹⁶⁷ Davenport, “Autobiographical (1916-1940).”

¹⁶⁸ Davenport.

¹⁶⁹ Davenport.

have been the ambient clubbish culture that shaped him. Davenport, on the fictional Long Island stomping grounds of F. Scott Fitzgerald's characters in *The Great Gatsby* (1925), reacted against the immorality of Jazz Age hedonism while embracing the moral decadence of the WASP superiority complex.

Davenport seemed positively phobic about crime. He was so staunchly opposed to crime that he was willing to use almost any means to reduce it. His prejudice was that perceived differential crime rates by race and class emanated from inherent biological difference. Davenport kept a collection of abstracts of his writings.¹⁷⁰ One cites his *Journal of Heredity* article on "Crime, Heredity, and Environment."¹⁷¹ Davenport opined that "the whole crime situation is complicated by the fact that we are breeding too many people with feeble inhibitions and without proper social instincts. Satisfactory progress will be made when we learn how to prevent such breeding."

He also revealed his thoughts in an abstract of his "Race Crossing in Jamaica" work with Steggerda, stating, "The racial improvement of the species can be affected either by awaiting the new mutations in the race or crossing a given race with another that has the qualities desired. The first is a slow process; the second introduced undesired traits into the complex. Since human matings are uncontrolled there is no way of eradicating the undesired traits."¹⁷² He pondered, "There are general instances where the whites are superior in psychological tests to the adult blacks; the adolescent blacks are superior to the adolescent whites. There seems to be a precocious attainment of their maximum achievement on the part of negro children; the white children continue to

¹⁷⁰ Charles Benedict Davenport, "Abstracts," October 1923, Mss.B.D27 Davenport Papers - Abstracts, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹⁷¹ Charles B. Davenport, "Crime, Heredity, and Environment," *The Journal of Heredity* 19, no. 7 (1928): 307–13, <https://doi.org/10.1093/oxfordjournals.jhered.a103006>.

¹⁷² Davenport, "Abstracts."

improve to the adult state.”¹⁷³ Davenport indulged in broad generalizations, as did his friends, when doing so suited their political aims.

In correspondence with Davenport his friend Charles Winthrop Gould decried the “orgy of crime,” and regurgitated that the “old frontiersman’s idea that the only good Indian is a dead Indian” could be applied to criminals, giving that the bounty for a dead one (\$3000) was set higher than for a live one (\$2500).”¹⁷⁴ Davenport made no effort to self-censor the most undignified and spiteful notions that came to his mind, but many of his correspondents didn’t either. They could be shamelessly sophomoric – or worse – in their casually bigoted dialogue.

Yet Davenport and his peers saw themselves as scions of society, heirs to American culture, endowed with a certain *noblesse oblige*, if misguided or worse in the execution of their duties. For example, Davenport saw that children with disabilities needed state aid, but he also sought to prevent their existence in the first place, using technical expertise and heartless efficiency characteristic of the Progressive Era. In his letter to J. H. Kellogg, December 2, 1930, Davenport stated, in relation to the proposed W. H. Kellogg (John’s brother) child welfare foundation for the treatment of the handicapped children of the nation, “What I wish to urge, as one whose life is devoted to research and who for the past nine years has been doing much research on the feeble-minded at Letchworth Village in New York State, is that in such a foundation the idea of research be incorporated.”¹⁷⁵ He decried the lack of research when states like

¹⁷³ Davenport.

¹⁷⁴ Charles Benedict Davenport, “Charles Davenport to Charles Winthrop Gould,” October 7, 1925, Mss.B.D27 Davenport Papers - Gould, Charles Winthrop, Folder 2, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹⁷⁵ Charles Benedict Davenport, “Charles Davenport to John Harvey Kellogg,” December 2, 1930, Mss.B.D27 Davenport Papers - Kellogg, John Harvey, Folder 4, 1923-1930, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

Massachusetts and New York are spending one quarter to one third of their discretionary funds on the care of handicapped children and the insane. Davenport sought to find and reduce or eliminate root causes of imperfect mental and physical development.

Davenport seemed to believe that NYC elites would side with eugenics.

Davenport wrote to Mr. J. Pierpont Morgan, Jr., May 25, 1910, enclosing his booklet entitled, “Eugenics.”¹⁷⁶ He wanted Morgan to read it and join “a lady of New York, of large means,” in supporting the eugenics movement.

The first work that it is proposed to undertake is the study of the blood lines which have produced our defectives and delinquents, as well as those combinations of characters in blood strains which have produced our effective men. Especial attention would be given to the pedigrees of our insane criminals, and the combinations of hereditary characters that have produced them.¹⁷⁷

Morgan did contribute, reinforcing Davenport’s social instincts.¹⁷⁸

Davenport was beholden to Gilded Age doyenne Mrs. Harriman, as he explained in his own words. “The Eugenics Record Office was founded by Mrs. E. H. Harriman, as a result of a conference with her in the autumn ’09 and the spring of 1910. As she has often told me her father was interested in breeding race horses and also Mr. Harriman and she appreciated the importance of heredity in horses and believed the laws equally applicable to man.”¹⁷⁹ He continued, “My contacts with Mrs. Harriman were facilitated

¹⁷⁶ Charles Benedict Davenport, “Charles Davenport to J. Pierpont Morgan, Jr.,” May 25, 1910, Mss.B.D27 Davenport Papers - Morgan, J. Pierpont, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹⁷⁷ Davenport.

¹⁷⁸ Burrows, *Gotham*, 827.

¹⁷⁹ Charles Benedict Davenport, “Charles Davenport to Leonard Darwin,” April 18, 1931, Mss.B.D27 Davenport Papers - Darwin, Leonard, folder 4, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

thru my acquaintance with her and her daughter some years earlier. It was really thru Mary Harriman that I was able to approach Mrs. Harriman.”¹⁸⁰

The expectations of wealthy donors may explain why Davenport was so apparently uncritical of eugenics. The record shows that Davenport was fully aware of criticism, but that he disdained it, indulging his prejudices. He did not assert that eugenics had a firm scientific basis; he sought to create one. Davenport acknowledged that sterilization schemes, whether voluntary or coerced, were premature. This did not deter him from wanting to dabble in experimentation.

Dr. J. Madison Taylor of Philadelphia forwarded to Davenport Grant’s letter of February 27th, 1912, which criticized Davenport’s book, *Heredity in Relation to Eugenics*,” and Davenport, not miffed, claims to “write to express my interest in your criticism,” and that he knows “full well the book is not as good as it might have been.”¹⁸¹ Davenport speculates wildly about “white, straight haired, emotionally controlled offspring” of white-negro hybrid parents, having difficulty believing them as “capable of doing satisfactory college work as a negro.”¹⁸² Davenport continued:

I presume there is no doubt that the ancestors of all of us had a black skin. The white skin is highly abnormal and, no doubt, a relatively recent acquisition. The evidence for this is that all of the primates have a dark skin. I suppose the political consequences of the statement of a truth are the last things in the mind of a scientific writer.¹⁸³

Davenport also opined, “My standpoint in regard to sterilization is that it is desirable to go slow and seek further knowledge.”¹⁸⁴

¹⁸⁰ Davenport.

¹⁸¹ Charles Benedict Davenport, “Charles Davenport to Madison Grant,” July 1, 1914, Mss.B.D27 Davenport Papers - Grant, Madison, Folder 1 (1904-1917), American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹⁸² Davenport.

¹⁸³ Davenport.

¹⁸⁴ Davenport.

Grant replied to Davenport, July 6, 1914. “The inferior races are struggling so hard to assert their equality with the dominant races, that I think it is a pity to give them any statements, which by mis-quotation could be twisted to their advantage. This is especially true of the negro, about whom so much sentimentalism has been wasted.”¹⁸⁵

Grant added:

As to sterilization, I do not remember what your standpoint is, but I do know that it will give us a great chance to eliminate some highly undesirable strains now allowed through it to be propagated. Emperor Augustus, and better men since his time, have endeavored to induce the better classes to breed, without any marked success, and it seems to me that the converse of the position can now safely be tried, and if we can eliminate from each generation, the submerged tenth, about the selection of which I think the most of us are agreed, a long step upwards can be obtained.¹⁸⁶

Quantitative ranking of people according to perceived merit, with elimination of those deemed of relatively poor quality, calls to mind Taylorism, the application of “scientific management” principles to groups of people without regard for the dignity of the individual.¹⁸⁷

Charles Davenport was unlike his brother, William, who had a relatively high degree of empathy for struggling immigrants. Rev. William E. Davenport, “Resident in Charge, Maxwell House, The Italian Settlement of the United Neighborhood Guild, Brooklyn, New York,” wrote to his brother Charles looking for work for a seventeen year old boy, Vincent Attardi, entreating Charles on his behalf, “The boy has been careless &

¹⁸⁵ Madison Grant, “Madison Grant to Charles Davenport,” July 6, 1914, Mss.B.D27 Davenport Papers - Grant, Madison, Folder 1 (1904-1917), American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹⁸⁶ Grant.

¹⁸⁷ Frederick Winslow Taylor, *The Principles of Scientific Management* (New York: Harper, 1911), <https://hdl.handle.net/2027/hvd.32044010722338>.

stayed out with bad company and wants to reform but has not much strength of character.”¹⁸⁸

Charles Davenport replied, on June 7, 1911, “Dear William:- I am afraid I can not do anything for Vincent Attardi. A boy who goes with bad company probably likes that kind. In any case he can find it at Cold Spring Harbor. Indeed it will seek him out. It would be better if he could get further away from the city. In any case our staff is now full.”¹⁸⁹

Charles elaborated on his dehumanizing view of “the help,” when efficiency was at stake, replying to William:

I have your letter of November 26th about the Bartolomeo lad. My experience with inefficient help has been, perhaps, an unfortunate one but something like this. I find that it takes several dollars worth of my time each day to look after a five dollars a month boy. Certainly there is no economy in that. As far as possible I am trying to get rid of all help that is not perfectly capable of doing its work without any oversight.” “I am quite sure that my Trustees would regard it as a misappropriation of funds if I were to spend any money not definitely assigned to an individual upon an inefficient boy, merely in order to possibly develop that boy. I agree that such boys are not responsible for their condition and that they do require aid and care and this can best be given out in the country. Certainly by no stretch of my authority can I be permitted to use any of our facilities to improve the condition of defective persons.

Meanwhile we are doing all we can to bring the State to a realization of its duty in respect to these people who are not altogether capable of taking care of themselves. We are urging that the state bond itself in order to apply immediately two or three times the present facilities for taking care of such persons. Meanwhile there are tragedies enough in Nassau County which are being supported by private funds, simply because it is impossible to get the state to care for these cases that are pining to be taken care of.

¹⁸⁸ William Davenport, “William Davenport to Charles Davenport,” June 4, 1911, Mss.B.D27 Davenport Papers - Davenport, William, Folder 1, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

¹⁸⁹ Charles Benedict Davenport, “Charles Davenport to William Davenport,” June 7, 1911, Mss.B.D27 Davenport Papers - Davenport, William, Folder 1, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

I am very blue, anyway, about the future of this country. I think that the United States with the greatest possibilities before it that any country could have had has been exploited and practically ruined thru the importation of cheap labor. Cheap labor in the North since 1860; cheap labor was introduced into the south before that date. What are we going to do about it? I sometimes feel that the only thing is to leave the United States and go to a country like New Zealand and Australia which appreciate good blood and the undesirability of burdening our resources to the limit inside of a single generation, leaving nothing for the next. Excuse, my dear brother, this rambling letter. You see the point is that, with very great regret on my part, it will be out of the question to assist Frank Barolomeo here. Frances and Millia and one of her friends are here over Thanksgiving. I trust it may be possible for you too to run up and see us. Affectionately your brother, D/G.”¹⁹⁰

Charles again shared some of his authentic self in another letter, dated February 11, 1924, to his brother William Davenport:

Dear William:- I have your letter of February 9th. As I look at it you are interested in the people who live in your community and among whom you walk daily and whom you help with their problems and you look at immigration from this point of view. Others look on immigration from the point of view of the workingman who has a vision of cornering the market of labor by keeping out competition. Others look at the problem from the point of view of the manufacturer and employer of labor who wants to flood the market by bringing in quantities of cheap labor, just as the gentleman agriculturalist of the South did a century and a half or two ago. I have to look at the matter of immigration from the standpoint of a eugenicist who isn't concerned merely with present matters but has to take a jump a century or two in advance and ask what of America in the year 2100. It may be hard on the poor people of the year 1924 that they can't come over in unrestricted numbers from Europe to America but is it the best thing for the United States in the year 2100 that they should come without selection and restriction in numbers? As I see, I have to look at things from this standpoint, get all the light I possibly can on the subject, and then advise. I think if I were in your place and didn't look beyond the present generation and the immediate circle whom I come in contact with I would feel as you do: open the gates wide and increase my opportunities for doing good. The wider open they are, the greater need for my services, the greater opportunities for soul expansion in contact with real need.

¹⁹⁰ Charles Benedict Davenport, “Charles Davenport to William Davenport,” December 28, 1914, Mss.B.D27 Davenport Papers - Davenport, William, Folder 1, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

Can you forget all the present and try in imagination and by the use of all scientific data there are to put yourself forward to the year 2100 and imagine what sort of a country it will be then if the gates have, in the mean time, been wide open and population encouraged to come hither by transportation companies and by the employers of the cheapest labor? Possibly if you could put yourself in this attitude you might think as I do, namely: that since poverty, feeble-mindedness, lack of sex control, tendency toward crime all have an inherited basis that we want to make selection in the best way we can on the basis of the kind of germ plasm that is invited or admitted to our country, all for the sake of the country 200 years hence. We don't want to make a State of Mississippi or worse out of New York City and Long Island, just because our soul expansion by our contact with poverty or because we can get rich quicker by bringing in a crowd of cheap labor. Affectionately yours, Chas. B. Davenport.¹⁹¹

Charles Davenport didn't allege that eugenics was an established science.

Rather, he wrote, "The general programme of the eugenicist is clear—it is to improve the race by inducing young people to make a more reasonable selection of marriage mates. It also includes control by the State of the propagation of the mentally incompetent."¹⁹²

Davenport's hubris about the prospects for bringing scientific methodology to bear on humanity was acute. He wrote, "Science seeks to explain phenomena in terms of mechanism, and no other interpretation now brings entire satisfaction. If human behavior can be brought under a mechanical law instead of being conceived of as controlled by demons or by a "free" will (which really, instead, habitually chooses either good or ill), why should we regret it?"¹⁹³

Davenport was a masterful in playing on scientism. He avidly embraced propaganda, the practice of which would be put to the test in World War I and culminate in its professionalization as the field of public relations, as described by Edward Bernays,

¹⁹¹ Davenport, "Charles Davenport to William Davenport," February 11, 1924.

¹⁹² C. B. Davenport, "Eugenics, A Subject for Investigation Rather than Instruction," *The Journal of Heredity* 1, no. 1 (1910): 68–69, <https://doi.org/10.1093/jhered/1.1.68>.

¹⁹³ Charles B. Davenport, "The Duty of Society: Its Members Must Be Eugenically Responsive or It Will Die," *The New York Times*, July 8, 1913.

nephew of Sigmund Freud.¹⁹⁴ Davenport's media relations were essential to his success. "Scientific detectives who are patiently tracking that mysterious thing, heredity, to its lair," was the subtitle of this *New York Times* article on the Davenports.¹⁹⁵

Of his "enthusiastic assistants," the "chief among these is his wife, Mrs. Gertrude C. Davenport, who has been ever since their marriage her husband's constant collaborator," according to the *NYT*, highlighting the fact that eugenics was not a patriarchal monopoly.¹⁹⁶ A society intoxicated by scientific and technological progress saw an ever-expanding horizon of natural phenomena to be overmastered. "Shall we as an intelligent people, proud of our control of nature in other respects, do nothing but vote more taxes or be satisfied with the great gifts and bequests that philanthropists have made for the support of the delinquent, defective, and dependent classes?"¹⁹⁷ The statist utopia seemed in reach. "But we have become so used to crime, disease, and degeneracy that we take them as necessary evils. That they were in the world's ignorance is granted. That they must remain so is denied," according to the spread on the Davenports in the "newspaper of record" in the epicenter of American cultural imperialism.¹⁹⁸

The conjunction between elites and government was set to conquer aspects of humanity that didn't conform to regulations. In "Experimental Evolution on Long Island: A Visit to the New Carnegie Institution Laboratory at Cold Spring Harbor,"¹⁹⁹ the

¹⁹⁴ Edward L. Bernays, *Biography of an Idea: Memoirs of Public Relations Counsel Edward L. Bernays* (New York: Simon and Schuster, 1965).

¹⁹⁵ NY Times, "Shall We Be Able to Determine the Character of Our Children?: Scientific Detectives Who Are Patiently Tracking That Mysterious Thing, Heredity, to Its Lair," *The New York Times*, 1910.

¹⁹⁶ NY Times, "Experimental Evolution on Long Island: A Visit to the New Carnegie Institution Laboratory at Gold Spring Harbor. How Scientists Have Equipped Themselves for a Prolonged and Elaborate Study of Heredity in Animals and Plants---Planning an Insectary---Results of an Interesting Experiment in the Breeding of Cats," *The New York Times*, 1906.

¹⁹⁷ NY Times.

¹⁹⁸ NY Times.

¹⁹⁹ NY Times.

reporter cited the “Committee on Eugenics” appointed by Assistant Secretary Hays of the Department of Agriculture about ten days ago, “designed to make a study of heredity in man with a view to racial improvement, using for its data some of the researches that are being made into the heredity of plants and animals.”²⁰⁰ The article mentioned Davenport’s “Associate Professor of Zoology at the University of Chicago for the past four years,” and his early career at Harvard University, impeccable credentials for being in charge.

In preparation for social-legislative experiments on humans, work was done with plants and insects, and domesticated animals as well. Whereas nonhuman experiments would produce lucrative, well-behaved beasts, progress had not yet reached humans. Experimental Evolution would take time and funding. “As of yet, of course, it is in its first infancy, and has not had time to accumulate more than enough data to give merely an indication of what its future work will be.”²⁰¹

The fact that eugenics was an ancient aspiration, and that Darwin’s work crystallized the application of scientific methodology to life science, was in Davenport’s consciousness as the twentieth century began.

This idea of heredity, of course, goes back to the days of Aristotle. But you are safe in saying that before Darwin nothing much of a really scientific character had been done in this field, ‘Variation and Heredity’ being fundamental ideas in his theory. Now the impulse to conduct original investigations in this branch of science has reached us from abroad, and we are taking up the subject with better facilities and more resources than have been at command elsewhere.²⁰²

As in all enterprises of the era, America aspired to outcompete rivals.

²⁰⁰ NY Times.

²⁰¹ NY Times.

²⁰² NY Times.

However, Davenport hinted that the practical program of eugenics was his idea. “Sir Francis Galton was one of the first who attached the subject of improving the race of men along these lines, but I don’t remember that he makes any practical suggestion,” Davenport declared.²⁰³ Davenport further acknowledged his debt to Old World colleagues, effecting a deft merger of eugenics with the social and political impetus of the temperance movement:

Then there is Auguste Forel, Professor of Mental Diseases at Zurich, Switzerland, who has lately called attention to the subject in his study of alcoholism. He shows that the use of alcohol injures the human germ in such a manner that the resulting offspring inherits mental diseases of various kinds. Men of his school would therefore limit the use of alcohol by law, while other more radical reformers advocate its total abolition. It is conceivable, also, that in some far distant time the State may take a controlling interest in marriages, exacting medical certificates of fitness from both parties to the contract before permitting their union. But this is utterly out of the question and would be quite futile under present social conditions.²⁰⁴

True to his scientist role, Davenport went on to explain to NYT readers that not enough is known about environmental influences on the egg or germ plasm to know whether damage can occur from alcohol exposure. Davenport adroitly tapped the wellsprings of Progressive Era causes like anti-alcohol sentiment, to index his eugenics research activity to them, garner political support, and yet try to maintain plausible deniability as an advocate by adding terse disclaimers that the heuristic process was just gaining traction, and that more funding was needed for formal science to catch up with the progress of the Progressives. Davenport dangles prohibition and medical certificates of fitness (which his Eugenic Records Office would be suited to provide), while coyly demurring that it’s premature to advocate this course, for a man of science.

²⁰³ NY Times.

²⁰⁴ NY Times.

Chapter VIII.

Thomas Hunt Morgan

Whereas Davenport exemplified scientism, Morgan was the exemplar of scientific human genetics. He served as a foil to Davenport's eugenics. Morgan, in the second decade of the twentieth century, conscientiously set genetics apart from eugenics. However, in what remains the standard biography of Morgan, Gar Allen asserted, "Prior to 1915 Morgan supported the movement, and was a member of the Committee on Animal Breeding of the American Genetics Association, the scientific society that fostered work in practical breeding and eugenics."²⁰⁵

Allen's assertion that Morgan "supported the movement" has become a consensus or often repeated view. The National Human Genome Research (NHGRI), for example, in its historical timeline on eugenics, declares that "Eugenics is an immoral and pseudoscientific theory."²⁰⁶ NHGRI goes on to implicate Morgan in eugenics. "Some of the most important scientists of the day supported the Eugenics Record Office, including Nobel Laureate Thomas Hunt Morgan (though he later became an outspoken critic of eugenics) and Alexander Graham Bell."²⁰⁷ Yet neither Allen nor NHGRI defined what was meant by Morgan's "support."

Before 1909, Morgan corresponded with Davenport about topics of pure medical genetic interest that will be discussed later in this chapter. When Davenport first sought

²⁰⁵ Allen, *Thomas Hunt Morgan*, 228.

²⁰⁶ National Human Genome Research Institute, "Eugenics: Its Origin and Development (1883 - Present)," November 30, 2021, <https://www.genome.gov/about-genomics/educational-resources/timelines/eugenics>.

²⁰⁷ National Human Genome Research Institute.

to intercalate eugenics into the naturalist section of the American Breeders' Association meeting, Morgan wasn't familiar enough with eugenics to reply. Davenport assured Morgan that papers on the "Possibilities of Eugenics as Applied to the Human Species" were to be presented.²⁰⁸

One imagines an eyesore Morgan looking up from his microscope just long enough to write to Davenport, on May 25, 1910, to ask:

Dear Davenport, Can you write me a letter about the present movement in eugenics that will reach me by Monday May 30. Will you speak especially of the different lines of work under way in this country and the names of those doing such work...Pardon me for giving you so much bother but I know you have this matter at heart.²⁰⁹

Morgan could not have "supported," in the sense of being advisedly for rather than against it, a "movement in eugenics" if he could not readily call to mind its specifics. In the first volume of *American Breeders' Magazine* (later *Journal of Heredity* published by American Genetic Association), Morgan was described as a "staunch Darwinian" who had accepted Mendelian phenomena but was still "casting about" for another explanation of them besides that offered by the deVriesian school's germ plasm theory.²¹⁰ This captures Morgan's skepticism and suspension of ideology while sifting through facts and seeking explanatory models.

Morgan's name does not appear on a document pertaining to sterilization legislation produced by the Eugenics Section of the American Breeders' Association at

²⁰⁸ Charles Benedict Davenport, "Charles Davenport to Thomas Hunt Morgan," October 2, 1909, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 2, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

²⁰⁹ Thomas Hunt Morgan, "Thomas Hunt Morgan to Charles Davenport," May 25, 1910, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 2, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

²¹⁰ W. J. Spillman, "A Theory of Mendelian Phenomena," *The Journal of Heredity* 1, no. 2 (1910): 113–25, <https://doi.org/10.1093/jhered/1.2.113>.

its May 1912 meeting in Palmer, Massachusetts.²¹¹ Nothing appears to implicate Morgan in eugenics throughout the full run of the *American Breeders' Magazine/Journal of Heredity* from 1910-1915 (hathitrust.org), and Morgan wasn't listed in the Eugenics Section (he was on the Animal Breeding Committee, appropriately, given his *Drosophila* work). While it's clear that eugenics was becoming more prominent as a branch of the American Breeders' Association, Morgan's manifest role was nil.

When Morgan resigned from the Animal Breeding Committee he mentioned specifically Paul Popenoe, as Editor of the *Journal of Heredity*, publishing poor work by "Redwood" (meaning Casper L. Redfield, as Davenport's return letter clarified). What irked Morgan specifically about Redfield may have been his publication, in 1914, of an article, "Results of Early Marriage."²¹² Redfield's article offered a \$100 donation to the American Genetic Association if it could be "shown that any superior individual was ever produced by breeding human beings as rapidly as four generations in a century."

When Morgan explained his resignation to Davenport, Davenport said he, too, often thought of resigning due to lowbrow scientific editorial standards in the *Journal of Heredity*, and he distanced himself from Redfield. Yet in the final volume of the *Journal of Heredity* before Morgan's resignation (Vol. 5(12);1914), Davenport and coauthors actually took Redfield's work seriously.

Casper L. Redfield of Chicago has been studying for many years the effect of the age of parents on the character of the offspring, particularly from an intellectual point of view. This investigation, which has led not only to a thorough study of the parentage of men of genius, but to similar studies on

²¹¹ Eugenics Section, American Breeders' Association, "Preliminary Report of the Committee of the Eugenic Section of the American Breeders' Association to Study and to Report on the Best Practical Means for Cutting off the Defective Germ-Plasm in the Human Population.," Wellcome Collection, 1912, <https://wellcomecollection.org/works/ptej9qxs/items>.

²¹² Casper L. Redfield, "Results of Early Marriage," *The Journal of Heredity* 5, no. 7 (1914): 316–17, <https://doi.org/10.1093/oxfordjournals.jhered.a107883>.

race horses, cattle and pedigreed dogs, has led Mr. Redfield to a belief in the inheritance of certain classes of acquired characters, and the data which he has published probably form one of the most serious contributions made to Lamarckism during the last decade or two. The practical conclusion which he reaches is that intellectual excellence in a child depends largely on the age of its parents at its birth.²¹³

Redfield's implication was that children of young parents would be consigned to "mediocrity" unless ancestral generations had children at older ages (thus transmitting the benefit of late reproduction to the young parent as an acquired trait). While Davenport's description of Redfield's belief, and summary of his work, did not constitute a ringing endorsement, he nevertheless flipped his Janus faces when either writing about Redfield to the readership of the *Journal of Heredity* or validating Morgan's disdain for unscientific sensationalism, especially involving Lamarckism, which would require extraordinarily compelling scientific evidence to resurrect as a theory.

Did Morgan, lending his propinquity if not enthusiasm, "support" the Eugenics Record Office (ERO) at Cold Spring Harbor? Yes, but his support consisted solely of its legitimate scientific mission, not of its political entanglements with the eugenics movement. The ERO, despite its scientific shortcomings that Davenport acknowledged, pioneered pedigree methods that continue to be used, and useful, in medical genetics. Crisp trait definitions were lacking at first, and still are in many cases, but the ERO made its most solid scientific contributions to the analysis of traits that aren't especially hard to define, like polydactyly. Even if classifications of polydactyly have been refined, it's the sort of trait that one knows on sight. Harder to classify are syndromes such as Huntington

²¹³ Frederick Woods, Adolf Meyer, and Charles B. Davenport, "Studies in Human Heredity," *The Journal of Heredity* 5, no. 12 (1914): 547–55, <https://doi.org/10.1093/oxfordjournals.jhered.a107793>.

disease, but Davenport, along with Dr. Elizabeth Muncey, managed to do it well.²¹⁴ It was when he editorialized or strayed from strictly medical genetic phenotypes that Davenport erred, and he overextended his hypotheses to satisfy the biases of his supporters. Huntington's disease (HD), an insidious autosomal dominant disorder that can result in strikingly impulsive behaviors that may involve sexuality, substance use, or violence—was taken by Davenport as proof of principle that very complex human behaviors could emanate from mutation in a single gene. His pronouncements on the potential simplicity of complex traits must all be viewed in light of the HD example.

Morgan respected and cited Davenport's HD clinical work.²¹⁵ Whereas Morgan sought deeper understanding of HD before he would brook even speculation about less understood neurobehavioral disorders,²¹⁶ Davenport in 1916 felt he knew enough to know that hundreds of cases of Huntington's disease sprang from just a few ancestral immigrants, and that this was an object lesson on the harms to the national germ plasm stock that could occur if immigrants weren't strictly vetted for hereditary health.²¹⁷ The HD example showed that the ERO could do important clinical genetics work, the value of which was abrogated but not eliminated by Davenport's precipitous policy prescriptions.

The closest Morgan came to "support" of the ERO, as far as can be found in extant letters at American Philosophical Society, consisted of engaging students using Davenport's studies of genetic traits; remaining friendly with Davenport despite disagreement over eugenics propaganda being mixed with science; requisitioning information and asking for clear presentation of the ideas and advances of eugenics

²¹⁴ Charles Benedict Davenport, *Huntington's Chorea in Relation to Heredity and Eugenics*, Eugenics Record Office. Bulletin No.17 (Cold Spring Harbor, N. Y.: ., 1916).

²¹⁵ Thomas Hunt Morgan, *Evolution and Genetics* (Princeton University Press, 1925), 202.

²¹⁶ Morgan, 203.

²¹⁷ Davenport, *Huntington's Chorea in Relation to Heredity and Eugenics*,.

within scholarly forums such as the National Academy of Sciences; referring J. W. Wilkinson, “interested in doing propaganda work in eugenics,” to Davenport; serving as a scientific advisor to the ERO (where Morgan’s “judgment served to point out the best line of action in many doubtful cases” per Davenport); and finally, entertaining the notion that some degree of dysgenic group selection could occur if there were mass mortality of soldiers drafted to fight in WWI, but finding the topic too complicated to study rigorously, counseling the same to Davenport.²¹⁸

Thus, Gar Allen was accurate to state that Morgan supported eugenics in some sense, but given how fraught the subject of eugenics has become, it is crucial to clarify the meaning of such support. Morgan never supported the political aims of eugenics, and to the extent he engaged at all, it was only to steer it towards meritorious human genetics topics, mostly by “setting a better standard” himself, to call out its most egregious scientific errors, to criticize and even lampoon its most pathetic propaganda, and to wall it off like an abscess from the corpus of human genetics scientific societies and publications. The eugenics movement could have used a lot more support of the type offered by Morgan, who was anti-eugenics from a political perspective.

²¹⁸ Charles Benedict Davenport, “Charles Davenport to Thomas Hunt Morgan,” April 19, 1917, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 4, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>; Charles Benedict Davenport, “Charles Davenport to Thomas Hunt Morgan,” December 31, 1917, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 4, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>; Morgan, “Thomas Hunt Morgan to Charles Davenport,” May 25, 1910; Thomas Hunt Morgan, “Thomas Hunt Morgan to Charles Davenport,” October 11, 1911, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 3, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>; Morgan, “Thomas Hunt Morgan to Charles Davenport,” January 18, 1915; Thomas Hunt Morgan, “Thomas Hunt Morgan to Charles Davenport,” December 16, 1916, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 4, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>; Thomas Hunt Morgan, “Thomas Hunt Morgan to Charles Davenport,” April 13, 1917, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 4, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>; Thomas Hunt Morgan, “Thomas Hunt Morgan to Charles Davenport,” May 9, 1917, Mss.B.D27 Davenport Papers - Morgan, Thomas Hunt, Folder 4, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

In the realm of medical genetics, however, Morgan did lend approbation to the notion that the birth of children with serious intellectual disabilities was undesirable enough that methods of prevention should be sought, if the genetics could be understood. In *Scientific Basis of Human Evolution* Morgan wrote, “Regarding “inheritance of derangements of the mental faculties of man,” a “very difficult problem:”

Anyone familiar with the medical literature must be appalled at the widespread occurrence of these traits in the human race when compared with wild species. It is often said that the protection afforded to weaklings and defectives in communal life helps, or is responsible for, this excess of defectives; they would quickly perish if their existence depended on their own responsibility.²¹⁹

Morgan did not display radical acceptance of difference that would have been precocious for a secular scientist, from a historical perspective, prior to the post-WWII period, when child advocates such as Pearl S. Buck led movements for social inclusion of children with disabilities, inspired in large part because her own daughter had PKU and lived at Vineland Training School.²²⁰ Morgan also did not adopt a religious viewpoint, and did not see disabilities in children as divinely ordained events, the explanation of which lies beyond ordinary human reason.

According to Norman H. Horowitz, who knew Morgan at CalTech:

Morgan's passion for experimentation was symptomatic of his general skepticism and his distaste for speculation. He believed only what could be proven. He was said to be an atheist, and I have always believed that he was. Everything I knew about him—his skepticism, his honesty—was consistent with disbelief in the supernatural.²²¹

It should be noted that Morgan did not explicitly make public his beliefs, and that skepticism is consistent with doubtful agnosticism rather than affirmative atheism.

²¹⁹ Morgan, *The Scientific Basis Of Evolution*, 207-8.

²²⁰ Stanley Finger and Shawn E. Christ, “Pearl S. Buck and Phenylketonuria (PKU),” *Journal of the History of the Neurosciences* 13, no. 1 (2004): 44–57, <https://doi.org/10.1080/09647040490885484>.

²²¹ Norman H. Horowitz, “T. H. Morgan at Caltech: A Reminiscence,” *Genetics (Austin)* 149, no. 4 (1998): 1629–32, <https://doi.org/10.1093/genetics/149.4.1629>.

Morgan did express a belief in avoidance of “reckless propagation” of “injurious traits,” which stands as the most controversial or perhaps normatively transgressive specimen of his thought that could be found. Yet he advised against coercive methods of prevention, placing essentially all emphasis on search for curative therapies, making the analogy between transmission of genetic traits and that of infectious diseases, placing his hope in the progress of medical science rather than in coercive government policy that interfered with reproductive choice. Morgan did not accuse any individual or group of reckless propagation, which appeared in abstract form only. Morgan elaborated:

In many cases of insanity, the diagnosis is still too uncertain to warrant interference, especially when a particular environment is a contributory factor. It has often been suggested that the pressure of civilization itself is too heavy a strain in many cases for certain individuals. If so, the cure may be rather in returning such persons to a simpler life, where they may be useful, than to attempt to breed a more resistant race. The contrast between the two methods under consideration finds excellent examples in communicable diseases that have been at times veritable scourges to humanity...It is apparent, then, that here the genetic method is far less efficient than the curative or preventative procedure.²²²

Morgan was eventually thanked for his service on the Board of Scientific Directors of the ERO:

On Friday, December 26th Mrs. Harriman completed her transfer of the Eugenics Record Office to the Carnegie Institute of Washington. In connection with this event Mrs. Harriman wishes to express to those who have served on the Board of Scientific Directors of the Office her appreciation of the devotion they have shown to the trust they assumed. She feels that the weight of your name served to give dignity and solidity to the work from its beginning. Your judgment served to point out the best line of action in many doubtful cases. In the future, even more than in the present, the full benefit wrought by your generous gift of time and thought upon the Eugenics Record Office will be appreciated by science and humanity. She sends best wishes for the New Year and hopes that under the new arrangements your interest in the work will still continue.”²²³

²²² Morgan, *The Scientific Basis Of Evolution*, 210-211.

²²³ Davenport, “Charles Davenport to Thomas Hunt Morgan,” December 31, 1917.

Allen, in summation of the state-of-the-science of human genetics prior to WWI, asserted, “While there were some positive advances made in the study of human heredity in this early period, eugenicists increasingly claimed that personality traits, intelligence, and behavior patterns were genetically determined – claims most geneticists realized had no basis in fact.” I concur with Allen on this point. As Allen also wrote, “Even worse were the increasingly racist overtones the eugenics movement (both in the United States and abroad) took after 1910.”²²⁴ This was why eugenics went off the scientific rails. Allen, having studied Morgan’s life in a comprehensive, holistic way, went on to conclude, “Morgan took a principled stand on this issue; he saw the prejudice and lack of scientific evidence rampant in the eugenics movement, and he disassociated himself from it.”²²⁵

I agree with Allen but propose that Morgan went beyond dissociation from eugenics. He was a moderating influence on Davenport, who arguably had the most influence over the eugenics movement. Morgan’s friendship with Davenport, and their shared identity as men of science, was Morgan’s point of maximum leverage.

Allen cited some evidence that Morgan opposed eugenic polemicists. Morgan wrote, “Cattell knows what I think about Madison Grant...but he thinks I take a very extreme position...,”²²⁶ and, “As we have seen, Morgan was a rigorous thinker and an experimentalist, concerned first and foremost that hypotheses should be testable and should be in agreement with all (or nearly all) of the facts. He felt that many of the strict Darwinians, neo-Darwinians, and particularly the neo-Lamarckians, had engaged in

²²⁴ Allen, *Thomas Hunt Morgan*, 227-8.

²²⁵ Allen.

²²⁶ Allen, 231.

flights of fancy and speculation that he no basis in fact.”²²⁷ The foregoing statement encapsulates the scientific standard to which Morgan hewed in the first decade of the twentieth century.

Morgan didn’t court public attention from newspaper reporters, as Davenport and his chief public critic Heron did, as will be described in the next chapter on the fiery Biometrician-Mendelian debate. However, Morgan and Bateson,²²⁸ the ranking scientific statesmen of American and British genetics, respectfully, did exert private peer pressure exposing eugenicists as cranks and propagandists, for example in this 1920 letter to Henry Fairfield Osborn:

Dear Osborn, Bateson’s attitude toward the kind of people who meet at Eugenic Congresses is that, I think, of many other men working in genetics. The former are excited about all sorts of social propaganda and most of them have little scientific training, and some of them are not scientific at all. The interests of the geneticists are of a very different kind, and they do not care to get mixed up in the sort of business that appeals to the eugenicists. In this country the distinctions are not so sharply drawn, in part because we are not so sophisticated and are much more naïve. Personally I should rather see the two groups do their work apart, and I think it very unlikely that the men in Europe who have at heart the interests of genetics will care to join the other group. There are other reasons also why it may be better to meet first in a neutral country. We have settled down here for a quiet year of uninterrupted work. With best wishes for a pleasant summer – Sincerely, (Signed) T.H. Morgan.”²²⁹

Osborn replied to Morgan on July 16, 1920, copying Davenport, whose antennae always tuned in attentively to messages that could affect his social status.

My dear Morgan: Pardon my long delay in answering your letter of June fourteenth, which I am enclosing to Davenport. I do not think it is practicable to unite the Eugenics and Genetics Congresses, but it is

²²⁷ Allen, 113-4.

²²⁸ “Biological Fact and the Structure of Society : The Herbert Spencer Lecture Delivered at the Examination Schools on Wednesday, February 28, 1912 / by W. Bateson.,” Wellcome Collection, accessed June 30, 2024, <https://wellcomecollection.org/works/csyx7js4>.

²²⁹ Thomas Hunt Morgan, “Thomas Hunt Morgan to Henry Fairfield Osborn,” June 14, 1920, Mss.B.D27 Davenport Papers - Osborn, Henry F. Folder 5, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

practicable and most desirable to have a very strong genetic section in which the genetic basis of human heredity will be very clearly presented. In arranging for the Eugenics Congress, we are endeavoring in the Preliminary Announcement to give the whole affair a thoroughly scholarly tone and to ward off the cranks and faddists who have been fluttering around this subject. In fact, I will have nothing to do with the Congress unless it is kept on a thoroughly scholarly, anti-fad and anti-crank basis. I think we shall succeed in framing a Preliminary Announcement which will inspire the right kind of people to interest and which will send a chill into the marrow of the cranks. I envy you your delightful year of uninterrupted work and look forward to great results. Always faithfully yours, (Signed) Henry Fairfield Osborn.²³⁰

“You will be amused, I think, in reading my letter to Morgan,” wrote Osborn to Davenport.²³¹ Osborn and Davenport may have snickered sophomorically out of Morgan’s view, pleased with the insincere assurances sent to placate Morgan, but this only reinforces that Morgan was formidable enough to need placating. Osborn, in forwarding his and Morgan’s letters to Davenport, betrayed the duo’s open and notorious intention to use the platform of the meeting to engage in blatant racial propaganda:

My dear Davenport: I enclose a valuable letter from Morgan. I have not received the names of the proposed lady members and I shall like to write to Mrs. Harriman early in the autumn. It would be a great thing if we could have a Frenchman, (?) de La Page, to preside over the racial section. Do you observe the tremendous progress which racial ideas are making with the press? Always sincerely yours, Henry Fairfield Osborn.²³²

Morgan had a skeptical stance towards genetic determinism that isn’t meaningfully different from criticism that has prevailed to the present day. Morgan dealt with of “intelligence,” (placing it in scare quotes) not by trying “to avoid the issue,” but drawing only upon “superficial experience” pointing to a rebuttable presumption of

²³⁰ Henry Fairfield Osborn, “Henry Fairfield Osborn to Thomas Hunt Morgan,” July 16, 1920, Mss.B.D27 Davenport Papers - Osborn, Henry F. Folder 5, American Philosophical Society.

²³¹ Osborn, “Henry Fairfield Osborn to Charles Davenport,” July 21, 1920.

²³² Henry Fairfield Osborn, “Henry Fairfield Osborn to Charles Davenport,” August 16, 1920, Mss.B.D27 Davenport Papers - Osborn, Henry F. Folder 5, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

inheritance of intelligence, a construct that we have an “inability to define,” and “we do not know here how much is due to nature and how much to nurture.”²³³

Morgan decried the “bigotry and ignorance” preventing “free use” of world literature for the choicest cultural gleanings,” and that “Racial taboos and prejudices are also orally transmitted, and at times may influence the behavior of the generality of mankind to a greater extent than all the wisdom of the ages.”²³⁴ Morgan, uncharacteristically, got overtly political in his book, leaving little doubt about his position. “The doctrine that all men are born free and equal carries with it the assumption that they be allowed to breed as they will.”²³⁵ Morgan would not take such a stand in a scientific research report, but did so seldom in his books, in which scientific norms granted more editorial latitude.

Morgan, arguing for ethical science but rejecting radical human genetic equalitarianism, asserted that there is no agreement on what type of human is desirable for “directed evolution”:

Unless there is agreement on this point, it would be quite futile to set out of such an errand. Who, then, shall determine what standard to set up? What ideal to build towards? A compromise is followed by some of the advocates of the eugenics movement to the extent of sterilizing the imbecile and insane, those with known or supposed inherited defects. The argument that these defectives and their descendants are a menace to society, in the sense that their supposed greater breeding capacity would in time lead to the replacement of the more capable members, cannot, I think, be taken too seriously; but that this defective class would be a perpetual burden to the social group that supports it in asylums and penitentiaries cannot be doubted. There is not much that is novel, however, in the recommendation that these defectives be segregated and prevented from breeding. Confinement has long been in practice. It is here only a question of perpetual confinement or returning them sterilized to the community. A more intelligent understanding of the conditions, both genetic and social,

²³³ Morgan, *The Scientific Basis Of Evolution*, 209.

²³⁴ Morgan, *The Scientific Basis Of Evolution*, 209.

²³⁵ Morgan, *The Scientific Basis Of Evolution*, 210.

that produce these unfortunate types is much to be desired. While segregation may be recommended on strictly genetic grounds for certain types, on the other hand imprisonment may be at times dictated by the social or political exigencies of a governing group. While this may promote the stability of a particular system it may not be an advantage for the evolution or advancement of another type of individual. Where democracy is the system in vogue, it is often implied that each individual has the same capacity to fulfill every social requirement as has any other individual. A very little knowledge of the composition of the human species dispels such a conclusion as an illusion.²³⁶

Morgan saw merit in preserving human genetic diversity, lauded the potential merits of the hybrid vigor that comes from conceptions in which parents have relatively wide genetic distance from each other, as in mixed-race couplings, and derided the idea that one type of person could ever be optimized for any particular moment in time, much less in unpredictably dynamic environments over evolutionary time:

There are at least two arguments that may seem to favor a mixed human population as better serving the purposes of evolution. The first is the genetic advantage; the chance of new combinations would be greater, and amongst these the opportunity for improvement might be expected. The second is social. The betterment of the conditions of life often depends on single, unique individuals—inventors or leaders arising at a time when circumstances offer an opportunity for new discoveries or progress. The far-reaching benefits of such discoveries may be enormously important for human advancement...Even more important for human welfare may be the intellectual and ethical and scientific discoveries that our postulated gifted individuals might contribute to human welfare. They might, for example, help us to find out how the evolution of mankind may so continue that the germ-plasm contribution and the social contribution could both be utilized most advantageously in promoting substantial progress.²³⁷

Morgan sagely warned against the hubris of using science, such as it stood in his era, to meddle with fundamental human biology:

It is conceivable that when man undertakes to direct the evolution of his race he may blunder badly. It might even be asked why he should meddle, since nature unassisted has brought about the evolution of man. Why not

²³⁶ Morgan, 212.

²³⁷ Morgan, 213.

trust natural processes to do all that is possible under the circumstances?
This may or may not be good advice.²³⁸

Morgan did not use the term “eugenic” anywhere in *The Scientific Basis of Evolution* (1932), but he clearly was counterarguing with eugenicists.²³⁹ Curiously, both Gar Allen and Dan Kevles apparently did not quote from Morgan’s illuminating Chapter X, “The Social Evolution of Man,” so it is advisable for historians of Morgan to read this in its entirety. Although it comes relatively late in eugenics era, Morgan’s views in this chapter don’t differ materially from his earlier statements.

Morgan viewed “wrong” ideas and interpretations as “useful in illustrating aspects of the scientific process,” particularly “its dynamic and non-dogmatic nature.”²⁴⁰ William Bateson characterized Morgan as “utterly without pretension,” readily admitting ignorance. Morgan was radically skeptical of the theory of natural selection, at first, with the intensity of his skepticism being proportionate to the importance of the theory. He criticized Weismann when he “piled one hypothesis on another as though he could save the integrity of the theory of natural selection by adding new speculative matter to it,” adding, “the most unfortunate feature is that the new speculation is skillfully removed from the field of verification.”²⁴¹ In his insistence on the testability of hypotheses, whether to verify or falsify as a primary aim, Morgan was a stalwart scientist. He exemplified the “*Nullius in verba*” (take nobody’s word) motto adopted in 1660 by the Royal Society of London for Improving Natural Knowledge, harking back to Bacon and

²³⁸ Morgan, 217.

²³⁹ Morgan.

²⁴⁰ Garland E. Allen, “How Many Times Can You Be Wrong and Still Be Right? T. H. Morgan, *Evolution, Chromosomes and the Origins of Modern Genetics*,” *Science & Education* 24, no. 1–2 (2015): 77–99, <https://doi.org/10.1007/s11191-013-9664-8>.

²⁴¹ Thomas Hunt Morgan, *Evolution and Adaptation* (Macmillan Company ; Macmillan & Co., 1903), http://archive.org/details/ldpd_6121986_000, 165–66.

Newton.²⁴² Morgan sought truth for its own sake, the hallmark of the true scientist in Peirce's conception.²⁴³

Thus, when hypotheses resisted testing and morphed into fanciful assertions, Morgan lampooned eugenicists. In *Some Possible Bearings of Genetics on Pathology* (1922) Morgan wrote:

It has been pointed out in derision that modern genetics deals, for the most part, with the inheritance of abnormalities and disorders of various kinds – albinos, brachydactyls, cretins, dwarfs, freaks, giants, hermaphrodites, imbeciles, Jukes, Kallikaks, lunatics, morons, polydactyls, runts, simpletons, twins, and Zeros: in a word, with pathological phenomena in a very broad sense. This statement, intended as a reflection on genetics, carries with it an implication that a study dealing with such material cannot be of first rate importance. Such condemnation will probably be received by pathologists with the kind of smile it deserves, and I feel that I am not likely to be called upon here to answer such an indictment. Nevertheless, I am going to ask your indulgence, for a moment, since this slightly malicious statement should not be allowed to pass unchallenged, both because it is inaccurate, and because, even were it true, the result of such work might still be of more importance than its critics seem to realize.²⁴⁴

Morgan took on miscegenation from a scientific perspective, expressing what most within America's racially segregated society found mortifying at the time:

The possibility that *some* hybrid strains may be better than either pure strain is enough to put one on his guard against the popular doctrine of racial purity so-called. Whatever advantages some kinds of pure races of mankind may have, from a political, religious or militaristic viewpoint, this should not blind us to the possibility of the biological advantages that certain mixtures may bring about. I emphasize the statement that *certain* mixtures of races *may* have a biological advantage. It is equally possible that other combinations may have a biological disadvantage. We are far from being able to state at present what combinations are beneficial and what are biologically injurious. It is an interesting problem, one of deep significance I think for the future of the human race, but mixed up as it is at present with difficult social and political questions it is a problem that

²⁴² Richard S. Lehman, "Nullius in Verba: Don't Take Anyone's Word for It," *JAMA Internal Medicine* 173, no. 12 (June 24, 2013): 1049–50, <https://doi.org/10.1001/jamainternmed.2013.823>.

²⁴³ Peirce, "Pearson's Grammar of Science: Annotations on the First Three Chapters."

²⁴⁴ Morgan, *Some Possible Bearings of Genetics on Pathology*, 1.

only a light hearted amateur or a politician is likely to be dogmatic about.”²⁴⁵

Regarding biometrician-Mendelian debate, Morgan defended the value of pedigree studies while militating against retrofitting of models to data:

Often the best that we can do in the case of man is to try to find the simplest Mendelian formula to which the evidence will fit. If a one factor-difference will not suffice then two must be tried; if two will not do, then three must be tried, etc. Now I need hardly point out that we can explain almost anything if we are allowed enough factors. It is, at best, a dangerous practice, one to be used only with great caution and the conclusion stated as provisional and checked in every possible way.²⁴⁶

Morgan urged caution to assure that conclusions emanated logically from data without overbroad leaps.

Feeble-mindedness, insanity, and even some types of criminality have been *said* to be inherited according to a simple one-factor Mendelian difference. Owing to the difficulty of diagnosis it is obvious that the student of genetics would be expected to approach these problems with the utmost caution. The data, on which some rather sweeping conclusions have been based, sometimes show, on closer scrutiny, obvious contradictions.²⁴⁷

Morgan betrayed his contempt, in 1922, for irresponsible and destructive sociobiological speculations that had become so rampant.

Curiously enough no one has as yet had the temerity to suggest that some of the high-grade imbecile types—the moron, for example, might represent an ancestral stage of the human race.” “Lombroso’s ‘criminal type’ is notorious. The criminal has been painted as the ancestral brute from which the more docile human animal has arisen through loss of ‘wild-type’ genes. I need not state, perhaps, that no one takes such speculations seriously today from a genetic standpoint.²⁴⁸

²⁴⁵ Morgan, 9.

²⁴⁶ Morgan, 12.

²⁴⁷ Morgan, 23.

²⁴⁸ Morgan, 23-4.

Morgan's battle plan against bad science was to expose it by juxtaposition with better science, setting a better example, as a capable leader would do. It is tedious and counterproductive to fact-check every bigoted utterance or non sequitur passed off as a scientific conclusion, as it calls attention to those who don't deserve it, taking away attention from the painstaking process of creating valid science.

Morgan was impressed by cancer genetic research. He highlighted studies of carcinomas in Japanese waltzing mice, drawing on seminal tumor immunology work by Tyzzer and Little, in which a carcinoma was transplantable to that inbred strain or hybrids but not in the common Asiatic house mouse.²⁴⁹ Morgan and geneticists in general were focused on hard-core medical scientific work, making creative use of animal models developed by Japanese mouse fanciers, for example. "There is no more interesting field in which genetics and pathology meet than that of cancer," marveled Morgan, presciently but all-too-tentatively offering that, "I am far from wishing to suggest that spontaneous cancer is a mutational process, despite certain rather obvious resemblances to mutational effects in plants and animals."²⁵⁰ Medical genetics never needed to break from eugenics; it developed organically, in parallel with eugenics.

Still, Morgan was characteristically cautious.

If I have appeared at times overcritical concerning the application of genetics to pathology, it is not because I do not sympathize with the attempts that have been made to apply genetics to pathology. I realize, of course, that from the nature of the case much of this work is pioneer work, where rough and ready methods have often to be resorted to. So long as this is kept in view, no harm can be done in attempting to find how far Mendel's principles can apply to heredity in man. But I want to enter a protest against the danger of premature conclusions drawn from

²⁴⁹ Morgan, 24.

²⁵⁰ Morgan, 26.

insufficient evidence. In our enthusiasm in applying Mendel's laws, we should be careful not to compromise them.²⁵¹

Morgan's interest in *Drosophila* was motivated not by pure science alone, but by the utility of "simpler" animal models for solving fundamental genetic problems. Morgan, like other experimental biologists of his era, was immersed in the science of life. He knew the scientific method, followed it, and offered criticism liberally when its dictates were violated by others. However, he eschewed anti-eugenic crusades on the grounds of futility and distraction from the nearly all-consuming process of setting a better example.

²⁵¹ Morgan, 33.

Chapter IX.

Biometrician-Mendelian debate

Early twentieth century geneticists, confronted with the staggering complexity of human morphology, physiology, and pathology, divided into two camps: simple Mendelians and complex biometricians. Mendelians “assumed” a genetic model; biometricians assumed complex interaction between genetics and environment. The assumptions of a testable model of natural phenomena are based on formal logic. They differ qualitatively from naïve assumptions, of which a person may not even be aware.

Mendelians and biometricians with rigorous scientific training did not categorically make naïve assumptions. Both felt free to opine, in advance, how studies would come out in the end, but they knew that observations had to be formally tested against expectations set by models. Mendelians, particularly, also freely engaged in *post hoc* qualification of their models, parsing populations into subgroups to be put to the test yet again, once the whole group’s data violated the model.

Biometricians did something similar, but from the opposite direction. Instead of taking away subgroups when their models failed, they simply added more variables to their complex polygenic x environmental interaction models of human traits, arguing for far deeper level of understanding through experimentation. Morgan complained that the “statistical answers that can be wrung out” of exacting biometric data “may have very

little meaning” if due to “a multiplicity of causes” that were unknown.²⁵² Morgan critiqued Jennings for seeming “to imply—perhaps he does not really intend to do more—that since through such modifying genes a perfectly continuous series of modifications of a character may exist, all real distinction becomes lost between continuous and discontinuous variation.”²⁵³ Morgan saw that Mendelian inheritance patterns, applied simultaneously to many genes involved in one particular trait like height, would blend to produce the Gaussian distributions of the biometricians.

Morgan appreciated statistics, but only as a prelude to experiment or rigorous, quasi-experimental, model-testing discovery of cause-effect mechanistic relationships. The introductory chapter of his book *Experimental Embryology* covered Morgan’s understanding of experimental method, the application of which to developmental biology he credited to Wilhelm Roux *circa* 1883.²⁵⁴ It is a testament to the level of scientific sophistication within the coterie of elite geneticists in the early twentieth century. According to Allen, “Morgan wanted to rid biology of its too-heavy reliance on speculation and metaphysical thinking, and to place it on an equal footing with physics and chemistry as a rigorous, experimental science.”²⁵⁵

Thus, Morgan sought comprehensive understanding of the mechanistic, dynamic molecular basis of Mendelian models and statistical factors. But he recognized that each of the two more superficial approaches had its merits and demerits. Both have proved to hold true for subgroups that were concealed within human populations. For example,

²⁵² Morgan, *Experimental Embryology*, 13.

²⁵³ Morgan, *The Theory of the Gene*, 525.

²⁵⁴ Morgan, *Experimental Embryology*.

²⁵⁵ Garland E. Allen, “Thomas Hunt Morgan: Materialism and Experimentalism in the Development of Modern Genetics,” *Trends in Genetics* 1, no. 6 (1985): 186–90, [https://doi.org/10.1016/0168-9525\(85\)90075-7](https://doi.org/10.1016/0168-9525(85)90075-7).

some cases of short or tall stature fit Mendelian genetic models nicely. However, most tall or short people attained their height due to complex interactions among large numbers of genetic and environmental variables.²⁵⁶ For each individual trait, if Mendelian genetics or complex gene-environment plays the major role, there is at least some bit part played by the other.

Thus, the biometrician-Mendelian debate was a tempest in a teapot to a scientist like Morgan, who recognized that both camps were onto something, but that neither was yet even close to the intricate level of understanding that would permit experimental verification of hypothetical models under construction. Morgan had no monopoly on his brand of scientific epistemology. Davenport and his critics had it, too, and Morgan was universally respected for his scientific acumen. Morgan had no qualms about clinging to a “wrong” older hypothesis or latching on to a “wrong” novel one, as he preferred at any given moment, as he saw speculation for what it was, a mere working hypothesis awaiting a test.²⁵⁷ Unlike Morgan, however, Davenport and others felt free to boast and bicker about whose model was smartest, pending the *denouement*, in the Station for Experimental Evolution, of the elusive *experimentum crucis* that Morgan highlighted.²⁵⁸

Eugenics may have been an unethical and poorly designed “social experiment,” but it was nonetheless a potent intervention. All the sophistication of the era belies the myth that eugenic models were lightly contested, with a broad base of support, as covered by Diane Paul’s work, to which I have several things to add.

²⁵⁶ Conery and Grant, “Human Height.”

²⁵⁷ Morgan, *Experimental Embryology*; Allen, “How Many Times Can You Be Wrong and Still Be Right?”

²⁵⁸ Morgan, *Experimental Embryology*; NY Times, “Experimental Evolution on Long Island.”

Spencer and Paul provided the present thesis with a case study model for analysis of a scientific critique of eugenics that failed to be accepted.²⁵⁹ They studied the “biometrician-Mendelian” debate between Charles Davenport and others versus Karl Pearson and David Heron. The topic was whether data on the inheritance of “feble-mindedness” (today termed “intellectual disability” in medical genetics) fit or violated the assumptions of single gene Mendelian models (e.g., dominant 50% transmission probability of the trait from parent to child).

Spencer and Paul, writing in the pre-genomic era (1998) stated, “Certainly, by today's standards, the Mendelian theory of mental defect is easily refuted,” but they also acknowledged dominantly transmitted Huntington’s disease (elucidated by Davenport) as an exception.²⁶⁰ By siding with biometricians Heron and Pearson, Spencer and Paul were on scientifically safe turf, as certainly not all intellectual disability is transmitted in a Mendelian fashion, and it hadn’t yet been proven, as genomic sequencing wasn’t done clinically at the time.

Spencer and Paul called for historians to take eugenicists seriously as scientists. They stated, “Since the critical arguments were advanced by eugenicists, the Heron case shows that scientific sophistication was (and is) compatible with policy choices that most historians now disdain.”²⁶¹ The scientific controversy case analysis method pioneered by Spencer and Paul parsed policy choice from scientific disagreement in one illuminating case.

Spencer and Paul, by focusing on the biometrician-Mendelian controversy, spotlight the eugenicist when forced to thrust and parry formidable scientific debate

²⁵⁹ Spencer and Paul, “The Failure of a Scientific Critique.”

²⁶⁰ Spencer and Paul, 443.

²⁶¹ Spencer and Paul, 452.

adversaries. Public disputation to defend one's scientific conclusions and justify hypotheses has been an essential element of scientific method from its genesis. In addition to the biometrician-Mendelian case study, other debates likewise forced eugenicists and their scientific critics to transcend superficial musings in monographs and be cross-examined by sophisticated peers.

Spencer and Paul focused mainly on Heron's attack rather than Davenport's defense. They concluded that Heron's critique was ineffective because its tone was extremely hostile, and that it was technically overtaxing for readers. In addition, the authors acknowledged that onlooking scientists may have concluded that Heron's criticism was unjustified, in part from "politically astute" rejoinders by Davenport and Weeks. Whereas Spencer and Paul characterized Davenport's defense as focused on a "small subset of Heron's less-damaging points." Davenport also criticized criticism itself, shaming Heron for not coming up with constructive solutions to biological problems, which were skirted by a mathematical approach.

The substantive part of Davenport's counter-criticism of Heron were accusations of "invalid methods of scientific criticism, for example 'making unjustifiable assumptions and then refuting them,' 'leaving false impressions by partial statements,' 'multiplication of "errors" by adopting the worst construction' and 'listing as errors-of-omission data which were not used because not sufficiently critical.'"²⁶² Davenport also defended his standard data collection methods and pointed to similar findings by

²⁶² Spencer and Paul, 449.

independent researchers, in particular Lundborg's Mendelian model of progressive myoclonic epilepsy, a different subtype of epilepsy than that which Davenport studied.²⁶³

Leaving aside some minor additional points made by Spencer and Paul, they concluded, of Heron's failed criticism, that the "primary explanation is that his scientific claims soon seemed irrelevant, given the subsequent apparent confirmation of the Mendelian model of feeble-mindedness, and the triumph of the general Mendelian-chromosome theory."²⁶⁴ They pointed to Goddard's *Feeble-mindedness* (1914) as the treatise that turned the debate in Davenport's favor. Spencer and Paul further acknowledged that "one form of mental defectiveness, Huntington's chorea, had been shown to be due to a dominant Mendelian factor by Davenport himself."

According to the argument of Spencer and Paul, "Given the widespread acceptance - even by critics of the single-gene model - that the vast majority of cases of feeble-mindedness were due to genetic defect, the triumph of the Mendelian model for genetics generally carried the implication that the Mendelian model for mental defect was also right."²⁶⁵ Regarding the fate of Heron's critique among historians, Spencer and Paul propose two reasons:

First, the Heron case undermines the conventional linkage between the progress of genetics and the decline of eugenics. After all, the most compelling scientific criticisms were there from the start. Secondly, it also undermines a strong inclination to dispose of eugenics on technical grounds. Since the critical arguments were advanced by eugenicists, the Heron case shows that scientific sophistication was (and is) compatible with policy choices that most historians now disdain.²⁶⁶

I concur.

²⁶³ Charles Benedict Davenport, *Reply to the Criticism of Recent American Work by Dr. Heron of the Galton Laboratory* (Eugenics Record Office, 1914), 24.

²⁶⁴ Spencer and Paul, "The Failure of a Scientific Critique, 450."

²⁶⁵ Spencer and Paul, 451.

²⁶⁶ Spencer and Paul, 452.

Spencer and Paul end by indicting historians for “having as little interest as scientists in taking Heron seriously.”²⁶⁷ Here, I join Spencer and Paul but add that Davenport must also be taken seriously. He and Heron both had valid arguments. Spencer and Paul stated in 1998, several years before the human genome was sequenced, “Today, the views of the early Mendelians, such as Charles B. Davenport and Henry H. Goddard, are universally seen to be mistaken.” If, as the authors offer, Davenport’s views are best expressed by his assertion by 1912 that “feeble-mindedness was inherited as a simple Mendelian recessive trait,” then it’s safe to say that such a simple model has been completely extirpated by post-genomic era science.

However, a more complex, multi-locus Mendelian model combining the burden of rare and common genetic variation causing mild or severe intellectual disability has not been falsified.²⁶⁸ The social environment in many places has changed dramatically for the better since the early twentieth century, with early childhood enrichment programs and protective services, better nutrition and health care, and higher standard of living. Yet intellectual disability persists in each generation.

Davenport, whose Eugenic Records Office engaged in an enormous amount of field work, was gathering direct clinical observations that supported a genetic (if not simple Mendelian recessive) model. It is equally understandable that biostatisticians like Heron could readily see patterns in population-level data that seemed to belie the pedigree-based observations made by Davenport and others. Both scientists made valid points.

²⁶⁷ Spencer and Paul, 452.

²⁶⁸ Lea Urpa et al., “Evidence for the Additivity of Rare and Common Variant Burden throughout the Spectrum of Intellectual Disability,” *European Journal of Human Genetics* 32, no. 5 (May 2024): 576–83, <https://doi.org/10.1038/s41431-024-01581-3>.

However, Davenport made sweeping oversimplifications, quite often, though he was more circumspect in his strict scientific conclusions emanating directly from his data. In addition, though Davenport is responsible for dressing up as a straw-man by his public pronouncements, his epistemological sophistication was actually far greater than his public persona suggests.

What was not emphasized by Spencer and Paul are the following items that prove Davenport's (and co-author A.J. Rosanoff's) awareness of the limitations of simple Mendelian models: (1) "we meet at once with a misapprehension on his part wherein he takes our statement of theoretical expectation according to Mendel's law for conclusions; we believe, indeed, that the neuropathic constitution is transmitted by heredity in Mendelian fashion but we are fully aware that our material does not show an exact correspondence between theoretical expectation and actual findings;"²⁶⁹ (2) frank acknowledgement of the "variable and for the most part unknown rôle played by environmental factors;"²⁷⁰ and (3) "such generalizations as we have drawn have been based on evidence fully set forth. These conclusions may have to be qualified in the light of advancing knowledge. What has appeared is that, when both parents belong to hereditary imbecile strains or both are unmistakably hereditary epileptics, the mating is in the highest degree dangerous, producing rarely anything but a defective child."²⁷¹

Spencer and Paul asserted, "Some historians assume that the Mendelians' errors were exposed by advances in the science of genetics."²⁷² This seems to adjudicate the debate entirely in Heron's favor. They state as "fact that the lapses for which the

²⁶⁹ Davenport, *Reply to the Criticism of Recent American Work by Dr. Heron of the Galton Laboratory*, 39.

²⁷⁰ Davenport, 39.

²⁷¹ Davenport, 27.

²⁷² Spencer and Paul, "The Failure of a Scientific Critique, 441."

Mendelian eugenicists are now notorious were, in fact, mostly identified at the time by the biometricians David Heron and Karl Pearson.”²⁷³ I take a different view and would not declare the biometrician-Mendelian debate a win, loss, or even a draw. It seems, even with the benefit of hindsight, to have been an appropriate if overheated debate in which there was enough residual uncertainty, based on the data available at their moment in time, to support a range of interpretations approximately as wide as the divergence in opinions between Heron and Davenport.

Spencer and Paul did not mention examples of Mendelian genetic syndromes with intellectual disability as feature, such as phenylketonuria,²⁷⁴ along with twin and pedigree studies done using essentially the same methodology as that devised by Davenport, could have been cited as a counterargument to the skeptical disdain for Mendelian theory of mental defect among many historians of eugenics writing since the 1960s.

If one filters out the rancor, sets aside the controversial topic of human intellectual function, and allows for some ordinary, inconsequential errors in scientific publications, there’s nothing to see but mundane scientific intercourse. This was just Davenport the medical geneticist doing scientific work, not the racist, nativist face of Davenport railing about the putative inferiority of “races” or ethnic groups. Propaganda to support public policies that put certain groups at disadvantage has nothing to do with medical genetics, which at least since Garrod (1857-1936) has been a rigorous, hypothesis-testing endeavor on which historians of eugenics have not focused, but need to, for holistic assessment.

²⁷³ Spencer and Paul, 441.

²⁷⁴ Louis I. Woolf and John Adams, “The Early History of PKU,” *International Journal of Neonatal Screening* 6, no. 3 (July 29, 2020): 59, <https://doi.org/10.3390/ijns6030059>.

Chapter X.

Eugenics-euthenics debate

Eugenicists with elite scientific credentials fully appreciated the uncertainty of the genetic model of complex traits, knew how important the environment was in producing maladaptive social behaviors, but predicted poor return on investment from social reforms, partly due to an overweening emphasis on biological factors, but also because much of the investment would aid people they didn't even want in society.

Eugenicists knew that their reproductive restrictions would substantially achieve their ends whether nature (eugenics) or nurture (euthenics) was operative. They believed, in the long-run, that nature trumped nurture, and that environmental enhancements were merely palliative. In the short run, however, allowing only aristogenic breeding would bring great bang for Mrs. Harriman's buck. It seems almost too obvious to belabor the point, but restricting reproduction only to the healthiest and wealthiest parents was bound to ameliorate squalor and street crime. It was a "heads, we win; tails, they lose" wager.

Anti-eugenicists who emphasized euthenics to the verge of environmental determinism knew that being born into privileged circumstances enhanced health and developmental outcomes in the eugenics era. The fact that eugenic schemes actually targeted nature (heredity) and nurture (social circumstances) meant that they were bound to work, one way or the other or both. But they were an unethical means to a virtuous end, namely that all babies ought to be wellborn, not only those whose parents could afford to have them. Their sympathy with the plight of the underprivileged and oppressed impelled them to demand universal environmental enhancement rather than restriction of reproduction to the fortunate few. Anti-eugenics was based on social justice not science.

In addition, eugenicists supported euthenics (see Popenoe, for example), so long as it was not what they deemed a “dysgenic” intervention (i.e., one that would allow survival and reproduction of persons of “inferior stock”).²⁷⁵ They had a strong belief that perceived parental qualities could be transmitted via germ plasm to children. They also acknowledged that “sports” could erupt via mutation, and an allegedly “superior” child could be derived from allegedly “inferior” parents, but downplayed this mechanism and disputed putative examples. Eugenicists stipulated that eugenics and euthenics were inseparable. The problem was that the eugenics movement in large part emanated from frustration with euthenics; the numbers of needy and maladaptive persons, native or immigrant, outstripped the institutions created to remediate social problems. Philanthropists didn’t want to throw good money after bad. Some novel approach was desired. Eugenics delivered it.

However one categorizes the means by which impatient eugenicists sought to end not only poverty but also dreadful diseases (whether determined by genetics or poverty-related environmental exposures), the end of a healthier, wealthier world is broadly if not universally shared.

Did Davenport and others believe that traits such as “feeble-mindedness” were inherited via simple Mendelian transmission of a single factor? This topic was analyzed by Barker, and even more recently, by Kampourakis.²⁷⁶ Both authors acknowledge Morgan and others as scientific critics of the simple Mendelian feeble-mindedness

²⁷⁵ Paul Popenoe, *Applied Eugenics* (New York : Macmillan, 1933), <http://archive.org/details/applieugenics00popegoog>.

²⁷⁶ David Barker, “The Biology of Stupidity: Genetics, Eugenics and Mental Deficiency in the Inter-War Years,” *The British Journal for the History of Science* 22, no. 3 (1989): 347–75, <https://doi.org/10.1017/S0007087400026200>; Kostas Kampourakis, *How We Get Mendel Wrong, and Why It Matters: Challenging the Narrative of Mendelian Genetics* (CRC Press, 2023).

hypothesis that Goddard's data purportedly supported. As for the "believers" in simple Mendelian recessive explanation of feeble-mindedness, the analysis is not so simple. Belief can be a binary conclusion without caveat or qualification, or it can be belief in a hypothesis, expressed with varying degrees of conviction. In Davenport's case, it seems to have been the latter. He developed a conviction that Goddard's summarized pedigree data supported a simple Mendelian recessive inheritance model for feeble-mindedness.²⁷⁷

Historians critical of Davenport and his ilk tend not to truly be concerned with whether he got the mode of genetic inheritance correct or not. Their main concern seems to be the crass genetic deterministic propaganda that eugenicists spread to the public. As Barker wrote of eugenics, "Its critics, geneticists such as Haldane and Hogben in England and Morgan in America, were clear that they were confronting not just mistaken or bogus science, but a powerful socio-political doctrine, which treats social inequalities as rooted in man's biology and 'therefore' as inevitable and immutable."²⁷⁸

However, historians writing in the twentieth century, before genetic technology elucidated at least the foundation of the genetic architecture of complex disorders such as intellectual disability, should acknowledge that the eugenics-euthenics debate is old hat as the third decade of the 21st century plays out. The premises of the argument are invalid. Neither genetic pathway derangements nor environment are necessarily immutable, even if certain types of social inequality are rooted in biology.

Both nature and nurture are important. It is a truism that both must be addressed, to the extent possible. Nurture in the form of assistive technology, including artificial intelligence, may yet be the great equalizer that erases unfair cognitive distinctions

²⁷⁷ Charles Benedict Davenport, *Heredity of Constitutional Mental Disorders*, Eugenics Record Office. Bulletin, No. 20 (Cold Spring Harbor, N. Y.: , 1920).

²⁷⁸ Barker, "The Biology of Stupidity, 347."

influenced by genetics. The technology will likely become orders of magnitude “smarter” than humans are. It has become beside the point for historians of science to conduct perpetual *post hoc* peer review of scientifically-trained geneticists, like Davenport, who supported eugenics as bad scientists, when in fact the problem was nasty bigotry by choice not bad science by stupid mistake. It would be straightforward, for example, to show that Davenport failed to act towards those with intellectual disability in accordance with a maxim that he would have become a universal law, in violation of Kantian ethics.

Why does it seem important for many historians also to prove that Davenport was a poor scientist who fell for simple Mendelian models as the cause of social ills to the utter exclusion of environmental causes? There may have been a time, perhaps, decades ago, when a social shift from genetic determinism to strong environmental determinism might have stopped genomics dead in its tracks. That did not come to pass, despite the efforts of ardent anti-eugenicists of the 1970s and beyond. Now the front in the culture war is not the eugenics-euthenics debate but novel uses of exclusionary genetic algorithms or genetic genealogy to recreate tribal mythologies that we thought had passed with the passing of Madison Grant and his book *The Passing of the Great Race*.²⁷⁹ According to Brothers *et al* (2021), “Focusing on the eugenicists of the past and the white supremacists of the present, however, risks causing us to lose sight of the more subtle forms of racism that remain in our field.”²⁸⁰

²⁷⁹ Kyle B. Brothers, Robin L. Bennett, and Mildred K. Cho, “Taking an Antiracist Posture in Scientific Publications in Human Genetics and Genomics,” *Genetics in Medicine* 23, no. 6 (2021): 1004–7, <https://doi.org/10.1038/s41436-021-01109-w>; Katharine Tyler, “Genetic Ancestry Testing, Whiteness and the Limits of Anti-Racism,” *New Genetics and Society* 40, no. 2 (April 3, 2021): 216–35, <https://doi.org/10.1080/14636778.2020.1811656>.

²⁸⁰ Brothers, Bennett, and Cho, “Taking an Antiracist Posture in Scientific Publications in Human Genetics and Genomics, 1004.”

In an August 18, 1913 letter Davenport expressed to H. E. Jordan, “In regard to pellagra I fear Dr. Mumcey’s report would be negative.”²⁸¹ However, it is pretty early yet to say what the outcome may be.” Davenport displayed willingness to accept negative results in a disease that disproportionately impacted the poor, led many to falsely believe it was genetic, because it clustered in families, and that was due to nutritional deprivation. Pellagra is known by the “four Ds” namely dermatitis, diarrhea, dementia, and death. Nearly 3 million Americans suffered from pellagra between 1907-1940, and the work of Dr. Joseph Goldberger, Surgeon in the United States Public Health Service, ultimately proved that niacin-deficient corn-based diets caused the disease. Southern blacks subsisting on corn bread and grits were vastly overrepresented among cases.²⁸²

Curiously, the initial U.S. report in 1907 by Dr. Searcy of Alabama correctly identified the cause and remedied it with a diet of wheat bread and potatoes.²⁸³ There was little justification for the competing theory that an ergot-like toxin was the cause. Pellagra certainly ran in families, so it was not unreasonable to investigate a potential hereditary basis; eugenicists placed more focus on race, however, than was warranted.

According to Elof Carlson, “The roots of the hereditarian-environmentalist controversy in the United States are often attributed to the pioneer studies of Richard L Dugdale, a prison reformer and author of *The Jukes: A Study in Crime, Pauperism, Disease, and Heredity* (1877).”²⁸⁴ Carlson found that, “A reading of the original study of

²⁸¹ Charles Benedict Davenport, “Charles Davenport to Harvey Ernest Jordan,” August 18, 1913, Mss.B.D27 Davenport Papers - Jordan, H.E., American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

²⁸² Alan Kraut, “Joseph Goldberger & the War on Pellagra - Office of NIH History and Stetten Museum,” 1996, <https://history.nih.gov/pages/viewpage.action?pageId=8883184>.

²⁸³ George H. Searcy, “An Epidemic of Acute Pellagra,” *Journal of the American Medical Association* XLIX, no. 1 (July 6, 1907): 37–38, <https://doi.org/10.1001/jama.1907.25320010037002j>.

²⁸⁴ Elof Axel Carlson, “Commentary: R. L. Dugdale and the Jukes Family: A Historical Injustice Corrected,” *Bioscience* 30, no. 8 (1980): 535–39, <https://doi.org/10.2307/1307974>.

the Jukes, as it appeared in book form in 1877, reveals that neither Dugdale nor his Jukes study was hereditarian.”²⁸⁵ Dugdale urged social reforms. Carlson mentions Alexander Graham Bell’s studies of the hereditary nature of deaf-mutism, citing “Memoir upon the Formation of a Deaf Variety of the Human Race,” and explaining that Bell recognized consanguinity in many pedigrees. Carlson criticized “Davenport’s Misreading,” following A. E. Winship’s portrayal of the “Jukes story as a hereditarian model.” Carlson quoted Davenport’s claim that the Jukes’ “protoplasm has been multiplied and dispersed during the subsequent years and is still marching on,” and his lament at “how slow the community is to protect itself by adopting some method of preventing their reproduction.” Carlson cites Davenport’s *Heredity in Relation to Eugenics* (1913) as the source.²⁸⁶

However, in that book Davenport related the “well known” case of the Jukes and did not allege that Max was a Jukes, and was relaying a story rather than reporting his own original pedigree research. Carlson appears to be criticizing the hereditarian bias that Davenport showed, and rather than alleging any sort of scientific misconduct, Davenport is blamed for writing uncharitable comments about the family without offering proof, but this is unsubstantiated, as are claims that Davenport’s hereditarian bias was to the exclusion of eugenics. He devoted chapter VIII to eugenics in *Heredity in Relation to Eugenics* (1913), coming across as ostensibly unbiased and reasonable.²⁸⁷

²⁸⁵ Carlson, 535.

²⁸⁶ Davenport, *Heredity in Relation to Eugenics*,.

²⁸⁷ Davenport, 252-66.

Chapter XI.

Methodological validity debate

Davenport's team in the Eugenics Record Office pioneered medical genetic field work. He acknowledged forthrightly that his first stab at data collection instruments didn't hit the mark.²⁸⁸ However, one must bear in mind the difficulty in communicating with families about medical history. The process of eliciting a pedigree itself can be confusing and misleading, relying upon the recall of the informant. Traditionally, the matriarch of the family was the keeper of information about the vital status and ailments of kinfolk and ancestors. Rigorous pedigree verification via medical records, pathology reports, and DNA testing was obviously not an option in the early days of the ERO.

Methodological criticism of pedigree analysis can be too technical to hold the interest of most readers of history. Even aficionados of the history of science may find it arcane. Thus, in the case of Charles Davenport, his seemingly most egregious methodological blunder is perhaps the most interesting point of departure in an exploration of his methodological transgressions. Is Davenport's attempt to prove that love of the sea ("thalassophilia") segregates as a Mendelian sex-linked trait fatal to the hypothesis that he understood science essentially as well as Morgan? How can Davenport be taken seriously as a scientist if he would entertain an absurd question?

According to Kevles, the explanation for Davenport's studies of traits such as thalassophilia was that his pedigrees were "gathered without rigorous rules of evidence"

²⁸⁸ Davenport, *Reply to the Criticism of Recent American Work by Dr. Heron of the Galton Laboratory*.

and that his “analytical concepts drew uncritically on vague, unproved notions – notably the neuropathic basis of mental illness.”²⁸⁹

Allen found Davenport “simplistic and naïve” in relation to studies involving obviously complex traits, and in his book review of *Davenport’s Dream*, he tendentiously charged geneticists with tendencies towards “genetic determinism.”²⁹⁰ One such geneticist, James Watson - Nobel Laureate, co-discoverer of the structure of DNA, and then-president of Cold Spring Harbor Laboratory – had this to say about Davenport’s dalliance with thalassophilia: “But, even his fellow early eugenicists must have regarded, as more wartime patriotism than science, his 1917 claim that a dominant gene for thalassophilia predisposed its recipients to careers as naval captains.”²⁹¹ Is there any evidence that Davenport’s naval genealogy study was motivated by “wartime patriotism?” Watson offered no proof for his remark made in the context of a brief keynote address.

Before Davenport published his study *Naval Officers: Their Heredity and Development*,²⁹² he wrote a brief article for *Proceedings of the National Academy of Sciences* entitled, “On Utilizing the Facts of Juvenile Promise and Family History in Awarding Naval Commissions to Untried Men.”²⁹³ In this paper, read April 19, 1917 before the NAS, Davenport wrote, “The essential traits of successful fighting naval

²⁸⁹ Kevles, *In the Name of Eugenics*.

²⁹⁰ Garland E. Allen, review of *Review of Davenport’s Dream. 21st Century Reflections on Heredity and Eugenics*, by Jan A. Witkowski and John R. Inglis, *Journal of the History of Biology* 42, no. 3 (2009): 593–98, <https://doi.org/10.1007/s10739-009-9195-y>.

²⁹¹ James D. Watson, “Genes and Politics,” *Journal of Molecular Medicine (Berlin, Germany)* 75, no. 9 (1997): 624–36, <https://doi.org/10.1007/s001099770001>.

²⁹² Charles Benedict Davenport and Mary Theresa Scudder, *Naval Officers, Their Heredity and Development* (Washington, Carnegie Institution of Washington, 1919), 1-252 <http://archive.org/details/navalofficersthe00daverich>.

²⁹³ C. B. Davenport, “On Utilizing the Facts of Juvenile Promise and Family History in Awarding Naval Commissions to Untried Men,” *Proceedings of the National Academy of Sciences of the United States of America* 3, no. 6 (June 1917): 404–9, <https://doi.org/10.1073/pnas.3.6.404>.

officers are (1) Love of the sea - perhaps an elementary instinct, but not yet fully studied.” Davenport’s rationale for his paper was that “within the next few months, over 20,000 commissions will be given, largely to men who have never seen service.”²⁹⁴ Davenport argued that young men who showed certain qualities, vaguely defined though they may²⁹⁵ have been, and had seafaring genealogy, might make the best recruits.

Davenport was chronically financially stressed.²⁹⁶ He bought more real estate than he could afford. The Eugenics Record Office had a large staff that needed support. Buried within Davenport’s genealogical study of naval officers is a veiled sales pitch to the United States Navy. “Through these field workers as a nucleus, a body of investigators sufficient to report on the personal and family history of 50,000 men in three months could be organized and the cost would be less than two days’ pay for each person considered.”²⁹⁷ In addition, Davenport’s genealogical avocation was a way to network with prominent families of New England and New York. Since 1915 he had been interested in carrying on Galton’s use of genealogy to assess “family quality.” Davenport, safeguarding the public germ plasm, wrote, “The scientific genealogy of the future will afford society that knowledge of the racial qualities of its breeding stock.”²⁹⁸

Davenport corresponds March 15, 1910 with Frederick Adams Woods of 1006 Beacon Street in Brookline.²⁹⁹ He mentioned that Dr. Woods of course knows Dr. E. E. Southard well. “There can be little question that Massachusetts with its well pedigreed

²⁹⁴ Davenport, 409.

²⁹⁵ Davenport, 401.

²⁹⁶ MacDowell, *Charles Benedict Davenport, 1866-1944; a Study of Conflicting Influences*.

²⁹⁷ Davenport and Scudder, *Naval Officers, Their Heredity and Development*.

²⁹⁸ C. B. Davenport, “The Value of Scientific Genealogy,” *Science (American Association for the Advancement of Science)* 41, no. 1053 (1915): 337–42, <https://doi.org/10.1126/science.41.1053.337>.

²⁹⁹ Charles Benedict Davenport, “Charles Davenport to Frederick A. Woods,” March 15, 1910, Mss.B.D27 Davenport Papers - Woods, Frederick Adams, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

population and long established families is one of the best states in the country to study pedigrees of insanity.”³⁰⁰ He went on to state, “The trouble with Pearson and his co-workers is that they have not had biological let alone medical training and without medical training analysis of the elementary forms of insanity is impossible.”³⁰¹ Davenport sees “trained psychiatrists such as Meyer and Southard” as a distinct advantage in definition of “unit characters.”³⁰² Advocates for greater phenotypic precision, that it would be “more hopeful to study some well defined form of insanity such as melancholia.”³⁰³ Davenport also sought to hobnob with wealthy men interested in their own genealogies.

Davenport knew that genealogy was not yet a rigorous science, but he sought to make it one by encouraging families to fill out his forms and deposit them in the Eugenics Record Office. He was building his business. He wasn’t naïve but shrewd. When talking up his schemes he sounded as if he might confuse the puffery of genealogy with the rigor of experimental embryology, but that wasn’t so. Davenport was obsessed with money and despised taxation.³⁰⁴ He wanted government to pay him, to supplement what he could get from wealthy donors and foundations. In his appeals for funding he compromised his scientific reputation, turning the Eugenics Record Office into something like P.T. Barnum’s “Greatest Show on Earth.”

Heron’s 1913 methodological criticism, which paled in comparison to his complaints about eugenic policies being based on poor interpretations of data, nevertheless were detailed and vexing to Davenport: (1) field workers are biased, and

³⁰⁰ Davenport.

³⁰¹ Davenport.

³⁰² Davenport.

³⁰³ Davenport.

³⁰⁴ MacDowell, *Charles Benedict Davenport, 1866-1944; a Study of Conflicting Influences*.

have biased training (despite a warning “against being prejudiced” in ways that warp judgment), to “make a special search” to find pedigree data that fit the Mendelian recessive model of feeble-mindedness, once found in a proband; (2) the manual for field-workers confusingly instructed not to record unaffected ancestors of the affected individual, when this could be relevant (Heron cites X-linked hemophilia as a case in point, but it is also true that, in such cases, a female could have affected male ancestors or collaterals, and if not, that the pedigree will be uninformative); (3) trait definitions are imprecise and reliant on vague, vernacular terms like “jealous” or “impractical;” (4) numerous inconsistencies are found between data shown in pedigrees versus elsewhere in text or tables; (5) misclassification bias potential existed in that individuals affected with the trait would be classified as unaffected if some extrinsic cause could be found; (6) some individuals were omitted from certain pedigrees.³⁰⁵

Davenport objected, regarding alterations of pedigree numbers (which would be of no use to Heron or other readers anyway): “To avoid the possibility that a person who is not authorized should connect an individual at the institution with his family history, it was decided to apply alterations to the case numbers which enable the authors, but not the ordinary reader, to identify the case.”³⁰⁶ He explained that omissions of immaterial (“not critical” data were made in some cases, and called this quibbling. Davenport also charged Heron with numerous errors by charging that certain observations appeared in two separate tables when they did not. Davenport admitted some minor errors, such as in listing the sex of an individual incorrectly. “It would appear that the greatest crime in all

³⁰⁵ David Heron, *Mendelism and the Problem of Mental Defect: I, a Criticism of Recent American Work*, Questions of the Day and of the Fray ; No. 7 (London: Dulau, 1913), http://nrs.harvard.edu/urn-3:hul.ebookbatch.MOML_batch:F151112208.

³⁰⁶ Davenport, *Reply to the Criticism of Recent American Work by Dr. Heron of the Galton Laboratory*, 16.

of the American work is my phrase that weakness any trait should marry strength and that strength may marry weakness.”³⁰⁷ Heron’s 62 pages of criticism repeatedly decried this phrase. “Dr. Heron states (p. 6) we cannot conceive of a greater evil than that expressed in the teaching we have cited above.”³⁰⁸ Davenport claimed that his phrase was taken out of context, meant not for severe medical genetic diagnoses but for the average couple with minor “strengths” and “weaknesses.” Davenport acknowledged uncertainty. “Of course, there are still many cases in which the general rule cannot yet be applied just because we know so little of inheritance of traits. But for the others, it stands as the plain teachings of common sense backed up by such scientific knowledge as has been gained.”³⁰⁹

William E. Castle of Harvard charged Davenport and Jennings of making “broad sweeping statements” about “hybrid” Jamaicans, born to black-white parental dyads, that contradicted “honestly made records” in primary data showing that measured racial differences in leg length were too trivial (0.5 cm) to pose Davenport’s alleged musculoskeletal challenges such as “difficulty picking up things from the ground.”³¹⁰

Decrying the tendency to “think of the Negro as an inferior,” and as a cross with a white person a “degradation,” Castle expressed frustration that data were reported faithfully in a scientific journal, “never to reach the ears of eugenics propagandists and Congressional committees,” whereas misleading sweeping statements would “be with us as the bogey men of pure-race enthusiasts for the next hundred years.” Castle could not charge eugenicists with scientific misconduct. He could only impeach the integrity of

³⁰⁷ Davenport, 20.

³⁰⁸ Davenport, 20.

³⁰⁹ Davenport, 21.

³¹⁰ W. E. Castle, “Race Mixture and Physical Dysharmonies,” *Science (New York, N.Y.)* 71, no. 1850 (June 13, 1930): 603–6, <https://doi.org/10.1126/science.71.1850.603>.

their character, as illustrated by their licentious public statements, but not their data. Charges that Davenport lacked methodological rigor, more so than expected for a scientist of his massive output, are unsupported. What he lacked was Kantian moral rigor.

Chapter XII.

Eugenics as nativist propaganda

Eugenics was marshalled as a biological basis for nativism, a political movement that preexisted eugenics. The Eugenics Movement rose and peaked as a political force during what immigration historian Roger Daniels termed an Era of Nativism, 1890-1924.³¹¹ The “nodal point” began with the May 1882 Chinese Exclusion Act, which set in motion “successive exclusions of certain kinds of immigrants through 1921, and then, creation of a federal bureaucracy in the decades leading to World War II, to set limits on numbers of non-excluded immigrants.”³¹² This bureaucracy was motivated to “keep out first Chinese and then others who were deemed to be inferior.”³¹³

However, it’s arguable, as I propose here, that the primary motivation for deeming others inferior was to keep them out. Such deeming of inferiority can also be applied to those being brought in, however, as in the case of enslavement, to cement a caste system that keeps designated inferiors apart from the self-appointed superior class. It is not necessary to furnish proof of their inferiority, but expedient for “expert” scientific sophists to create the appearance of pursuing the truth of the matter. Given the groundswell of nativist sentiment against the massive tide of immigration, even proof positive of the biological superiority of immigrants over “Nordic stock” would not have altered anti-immigrant attitudes.

³¹¹ Roger Daniels, *Not like Us: Immigrants and Minorities in America, 1890-1924*, American Ways Series (Chicago: Ivan R. Dee, 1997), <http://catdir.loc.gov/catdir/toc/fy0709/97016117.html>.

³¹² Roger Daniels, *Guarding the Golden Door: American Immigration Policy and Immigrants since 1882*, 1st edition (New York: Hill and Wang, 2004), <http://catdir.loc.gov/catdir/toc/ecip042/2003007714.html>.

³¹³ Daniels, 3.

The actual demographic data indicated roughly a “tie” of foreign to native born Americans, albeit with restriction of the former by the latter, over the span of the late nineteenth and early twentieth centuries.³¹⁴ The ratio of the two groups didn’t much change, as the accelerator of immigration was checked by the brakes of nativism. One might protest that demographics shouldn’t have been viewed as a competition. However, it was, by nativists, and eugenics “experts” provided propaganda needed to win in politics. And once they lashed out at immigrants, recriminations and even vendettas became commonplace, as one would expect in a hostile tribal turf battle.

Why were eugenic experts (and damned liars) so important in the war on immigrants (and internal migrants, too, particularly African-Americans in the Great Migration)? Immigrants not from northwestern Europe simply weren’t considered family, in the genealogical sense, and they allegedly didn’t build the American enterprise system over which Anglo-Saxon Protestant elites sought to retain control. Even if some group, such as Slavs or Jews or Japanese, measured up to or over the standards of the experts, they still weren’t socially, culturally, or genealogically eligible to join the clubbish clan of the nativists. Allen previously presented eugenics as class struggle.³¹⁵ Here, I extend and revise his argument.

Genealogy was proto-eugenic in the nineteenth century. The Third Reich would later weaponize genealogy to assign “racial” identity, which was typically tantamount to a death sentence for those deemed to be Jews. With its splendid capacity for family myth-making, genealogy created clubs that nobody else could ever be eligible to join. European

³¹⁴ John Higham, *Strangers in the Land: Patterns of American Nativism, 1860-1925*, Atheneum Paperbacks 32 (New York: Atheneum, 1963).

³¹⁵ G. E. Allen, “Genetics, Eugenics and Class Struggle,” *Genetics (Austin)* 79 Suppl (1975): 29–45.

monarchs and aristocrats exploited heraldry and invented mythical pedigrees that consolidated their power and thwarted social mobility into their ranks.

In late nineteenth century America, hereditary descent from royalty brought no demerit, as it might have in the Age of Jackson and before. In fact, it conferred considerable prestige, but the grail of the Gilded Age genealogist was still descent from America's "founders" and "builders," whether colonial Pilgrims or Puritans, revolutionary patriots, or of great American capital empires, or "Old Money," as preferred by Mrs. Astor and her cultural maven Ward McAllister for their fabulous Four Hundred families who were to define New York high society.³¹⁶ This pseudo-aristocratic assemblage of self-appointed socialites aped its European counterparts whose hereditary titles they took on in exchange for money.

Mrs. Mary Williamson Averell Harriman was of money that was old enough, for high society standards, born to a banker and betrothed to E.H. Harriman, a railroad magnate.³¹⁷ A philanthropist imbued with *noblesse oblige*, Mrs. Harriman gave generously to progressive causes such as the American Red Cross, engaging along with her socialite peers in a sort of potlatch-like ritual to determine one's position within the New York cultural hierarchy. It made sense to her not to throw money at social problems but to prevent them by ensuring that future American generations would emanate from family stock not too inferior to hers. That required keeping out "poor family stock," such as blocking entry of "defectives" at Ellis Island.

³¹⁶ Eric Homberger, *Mrs. Astor's New York: Money and Social Power in a Gilded Age* (New Haven [Conn.]: Yale University Press, 2002).

³¹⁷ George Kennan, *E.H. Harriman: A Biography*, Harvard Social History/Business Preservation Microfilm Project. Project 2a 23413 (Boston ; New York: Houghton Mifflin Co., 1922), <https://books.google.com/books?vid=HARVARD:32044009968652>.

The family hearth and home's primacy in American culture during the Gilded Age was highlighted by Richard White.³¹⁸ From Washington's 1789 declaration to Lincoln's 1863 proclamation inspired by Sara Josepha Hale, the holiday of Thanksgiving created a shared cultural memory and imagery of Pilgrims as American's righteous founding families, the idea of nationhood based on family ties and Christianity flourished in conservative circles (though as Allen pointed out, liberals of the ruling class share with conservatives the interest in maintaining power). Marx, born in the same year as Lincoln and Darwin, would set off socialist revolutionary fervor against this bourgeois capitalist backdrop. Fear was rational among the ruling class.

The quest for an exclusive, authentic American identity can be encapsulated in the phrase, *E. pluribus unum*, proposed by Adams, Jefferson, and Franklin as the motto for the Great Seal of the United States. They hoped this phrase would make one nation of 13 colonies, but many did not mean everyone. As John Adams wrote to Abigail 14 August 1776, Pierre Eugene du Simitiere's proposed design for the seal would include six shields of the "Arms of the several Nations from whence America has been peopled."³¹⁹ Included were England (rose), Scotland (thistle), Ireland (harp), Holland (lion), France (fleur-de-lis), and Germany (eagle). These were to be under the all-seeing eye of Providence and bookended by the Goddesses Liberty and Justice.

By no stretch of the imagination was *E. pluribus unum* meant as an open invitation for a multicultural invasion of the United States. By 1790 Congress had restricted naturalization to "free white persons," with the "obvious intention" to bar

³¹⁸ Richard White, *The Republic for Which It Stands: The United States during Reconstruction and the Gilded Age, 1865-1896*, Oxford History of the United States (New York, NY: Oxford University Press, 2017).

³¹⁹ John Adams, "Letter from John Adams to Abigail Adams," August 14, 1776, <https://www.masshist.org/digitaladams/archive/doc?id=L17760814ja>.

“blacks and indentured servants.”³²⁰ Though there was to be separation of church and state, and limited religious tolerance, Catholics weren’t courted as citizens, nor were Jews, and Founders sought to keep the culture and not be swarmed and displaced as they and their colonial forbears had done to the detriment of Native Americans.

Legal importation of enslaved Africans was to cease by 1808. Nominal citizenship for African-Americans would come with the passage of the 14th amendment in 1868, but the meaning of citizenship was hotly contested before and after that time. After the Civil War, Reconstruction as well as its reactionary Redemption counter-campaign led to an internal population displacement crisis, the Great Migration.³²¹ As Southern blacks exited the blight, bigotry, and terroristic threats and acts of the South, they converged with an unprecedented influx of international immigrants.

All of this mass travel was made possible by technological and commercial innovation in trans-oceanic and railroad travel. Previously, Manifest Destiny had to be fulfilled the harder way, with a treacherous ship or steamer voyage followed by pioneer horse and wagon travel. Now, practically anyone with meager means and inclination could come and capitalize on what nativists felt that they had built with their blood and toil (ignoring what blacks and Native Americans and others had done). Come they did, in droves.

As they came, the elites transcended rank nativism by creating sophisticated myths out of genealogy, armchair anthropology, and various social sciences. The Darwinian synthesis and Galton’s extension of it to stirpiculture stimulated the imagination. An elaborate rationalization for nativism was concocted by experts speaking

³²⁰ Daniels, *Guarding the Golden Door*, 7.

³²¹ Isabel Wilkerson, *The Warmth of Other Suns: The Epic Story of America’s Great Migration*, First edition. (New York: Random House, 2010).

the language of science, but the scientific method would ultimately undo their aims. The nativists themselves succumbed to geopolitical forces beyond their control.

Otto von Bismarck's 1862 "Blood and Iron" speech to bring about the unification of Germany symbolizes the creation of cultural memory to unify disparate groups of people. The German unification was anti-Catholic (against universalist Christianity), anti-socialist (anti-internationalist), and fiercely nationalist, creating a mythical family out of the ether. Hobsbawm dubbed Bismarck the "undisputed world champion at the game of multilateral diplomatic chess for almost twenty years after 1871."³²²

The Victorian Era, an Age of Empire as well as competition among great powers for colonial hegemony, saw heightened tensions about supposed bonds of blood and bloodshed in service of their supposed native kin. Politics of propaganda and internecine warfare among great powers solidified what had been superficial or erroneous national identity systems. Mythmaking was extended to support altruistic wartime self-sacrifices by the "sons and daughters" of fatherlands or motherlands in heroic sacrifice to the "national family" to which they belonged, and to which others most certainly did not, even if the underlying population genetic reality would eventually tell a far different tale.

The coalescing of the nation-state system prior to World War I around "common blood" was thus a global phenomenon, as was eugenics, but the bonds of blood mythmaking preceded the eugenics movement. Europe had never fully shed its aristocrat structures. Americans had to dig for their roots to create their own genealogical pseudo-aristocracy that could compete with Europe's. Both pompous groups felt besieged by the swelling ranks of the underclasses, whether traditional peasants or radical workers bent on undoing them. Eugenics served to solidify the ties of the international elites, and to

³²² E. J. Hobsbawm, *The Age of Empire, 1875-1914* (London: Weidenfeld & Nicolson, 1995).

confound the efforts of upstarts and organizers of workers and paupers. They feared being disposed of and replaced as the French Revolution had done with its own nobility.

Fear and loathing of the other had appeal, but eugenics added scientific promise as well as a utopian flair. Eugenics would rid the world of the competing classes while simultaneously serving to end the hellish scourges of crime and poverty and disease, ushering in a utopian family living in harmony, always improving itself via the culling of defectives and the upholding of social standards. The eugenicists would strive to use nature and nurture to compound their sociobiological capital and widen the moat between them and those deemed of lesser tribal traditions. This would be a redux of the techno-industrial compounding process that had already caused cultural evolution of the European peninsular backwater that came to dominate the globe.³²³

The precariousness of their “supremacy” was not entirely lost on the eugenicists. They didn’t quite understand why their culture had broken out of the pack in the past, with its cumulative innovations, storehouse of talent and knowledge, printed works, and weapons proving impossible to replicate quickly elsewhere. They thought it was inborn genius rather than an organic compounding of cultural capital. However, they were aware of the existential threat to their tribe posed by swarming or by accretion from colonization and out-reproduction.

Eugenicist Harry Laughlin, formerly of the Eugenics Record Office of Cold Spring Harbor, next of the Carnegie Institution of Washington, wrote a book entitled *Immigration and Conquest*, citing settlement and reproduction as a formidable method.³²⁴

³²³ Niall Ferguson, *Civilization: The West and the Rest* (London ; New York: Allen Lane, 2011).

³²⁴ Harry Hamilton Laughlin and John Bond Trevor, *Immigration and Conquest: A Study of the United States as the Receiver of Old World Emigrants Who Become the Parents of Future-Born Americans : A Research on the Essential Long-Time Parallel between Conquest Following Successful Military Invasion*

Laughlin did not want other groups to do unto his what his had done unto others. He viewed the swarming of Native Americans by European colonists as an object lesson of the calamity that may befall those that can't or don't resist colonization. Laughlin felt that everyone lost World War I, but in the long run, at least to 1939, that Germany won. He wrote, "In the long run, victory belongs to the that population group which produces the greatest number of individuals within the particular territory."³²⁵

Laughlin's us-versus-them old-school Social Darwinist mentality totally ignored the interdependency of the world as well as the vast benefits that accrued to humanity due to cultural exchange. Life was a zero-sum contest for him. He crassly lumped humans in with the weeds taking over flower gardens. He treated other human beings as pests. None of this had anything to do with the scientific method. It was simply a narrowly tribalistic fascist worldview.

Davenport's obituary, published in *Science*, for Harry Hamilton Laughlin (1880-1943) was revealing: "One can not but feel that a generation or two hence Laughlin's work, in helping bring about restricted immigration and thus the preservation of our country from the clash of opposing ideals and instincts found in the more diverse racial or geographical groups, will be the more widely appreciated as our population tends toward greater homogeneity."³²⁶ The Laughlin-Davenport duo had the former as the damned liar, while the latter could cloak his advocacy as expertise.

and Enforced on the Other, and an Investigation into Those Forced by Which a Sovereign Nation Can, to Its Own Benefit, Control Immigrant-Additions to Its Own Reproductive Stocks in Number, Geographic Distribution, Race-Descent and Inborn Quality (New York: Special Committee on Immigration and Naturalization of the Chamber of Commerce, 1939).

³²⁵ Laughlin and Trevor, 11.

³²⁶ Chas. B. Davenport, "Harry Hamilton Laughlin," *Science* 97, no. 2513 (February 26, 1943): 194-95, <https://doi.org/10.1126/science.97.2513.194>.

Davenport, in his March 23, 1923 letter, was solicitous of funding from Wickliffe Draper of Boston, laying on thick (in ways not observable in letters to fellow scientists) the preservation of “excellent Nordic traits” that could be accomplished by “proper selection of immigrants and by securing desirable matings” as well as the “repression of undesirable ones” in already admitted immigrants to the United States.³²⁷ He speaks of studies that would “bring home to the American people and to the government the fundamental importance to the nation of its inherited or racial traits.”

This was a purely political program, involving such initiatives as placing an “agent trained in eugenical research, at a point in Europe whence persons emigrate to the United States.” He railed about the “importation of cheap labor” problem and how it contaminates native stock by commingling. Davenport expresses interest in investigating “present day conditions in Haiti and Liberia, as self ruled negro communities founded by negroes and mulattoes who have been formerly in contact with white civilization.”³²⁸ He cited a similar situation in Jamaica, an English ruled colony, as having heuristic value for the “treatment of the negro problem in prevailing negro counties.”³²⁹ Davenport promised that his studies, by informing the “improvement of our human breeding stock in America, could achieve the “most progressive revolution in history.”³³⁰

³²⁷ Charles Benedict Davenport, “Charles Davenport to Wickliffe Draper,” March 23, 1923, Mss.B.D27 Davenport Papers - Draper, W.D., Folder 1, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

³²⁸ Davenport.

³²⁹ Davenport.

³³⁰ Davenport.

On July 3, 1935, L.C. Dunn accepted Merriam's invitation to serve on an advisory committee pertaining to the Eugenics Record Office.³³¹ Dunn impugned the motives of eugenics research, charging that it was:

...not always activated by purely disinterested scientific motives, but was influenced by social and political considerations tending to bring about too rapid application of incompletely proved theses. In the United States its relations with medicine have never been close, the applications having more often been made through sociology than through medicine, although the basic problems involved are biological and medical ones.³³²

He endorsed a "rigidly experimental, quantitative discipline" training for all engaged in such research. Dunn cited the archives at Cold Spring Harbor as unique and valuable. "Eugenics has come to mean an effort to foster a program of social improvement rather than an effort to discover facts," adding, "I have just observed in Germany some of the consequences of reversing the order as between program and discovery."³³³ There, the "theory of the state which has been influenced by the racial, class and religious prejudices of the group in power, has been embalmed in law," according to Dunn. There, "the solution of the whole eugenic problem by fiat eliminates any rational solution by free competition of ideas and evidence." "Scientific progress in general seems to have a very dark future."³³⁴

Davenport wrote to Dunn, June 24, 1932, regarding Muller's paper received:

The idea that under the dictatorship of the proletariat eugenics would find a sympathetic environment does not seem to be justified in the experience of Russia where the leading eugenicist, Philiptschenko (*sic*), told me that he had been warned to cease his studies on human heredity. He died shortly after and I have not been able to get a satisfactory account of his death – only rumors come that he was crushed by the government. There

³³¹ L. C. (Leslie Clarence) Dunn, "Leslie C. Dunn to John C. Merriam," July 3, 1935, Mss.B.D27 Davenport Papers - Dunn, Leslie Clarence, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

³³² Dunn.

³³³ Dunn.

³³⁴ Dunn.

is now no writer on human heredity, or applications of its study, in Russia so far as I know. I believe absolutely in freedom of speech and have no objection to radicalism in eugenics but may we not justifiably question whether a paper by an Einstein or other great interest, let us say, on the expanding universe would properly be read in a congress on eugenics?³³⁵

The latter statement was Davenport's ironic way of saying that Muller's submission to the Third International Congress of Eugenics was too political to belong in a congress on eugenics. Hermann Muller was a communist. Davenport was anti-communist, with fascist sympathies, and a conservative Progressive statist political orientation. Davenport's fears about Iurii Filipchenko were unfounded; he reportedly died of meningitis in 1930.³³⁶ However, many Soviet geneticists were purged in Stalinist USSR, and genetics was banned in 1948, with Stalin's endorsement of Lysenkoism, a form of Lamarckism that ruined agricultural genetics, contributing to famine in Ukraine.³³⁷ Yet many early Bolsheviks saw a role for eugenics.

According to historian of Russian eugenics Nikolai Krementsov, "The Bolsheviks, in the words of one of their leaders Leon Trotsky, believed that with the victory of the Revolution 'humankind, frozen Homo sapiens, will enter into radical reconstruction and will become — under its own fingers — an object of most complicated methods of artificial selection and psycho-physical training.'"³³⁸ Trotsky

³³⁵ Charles Benedict Davenport, "Charles Davenport to Leslie C. Dunn," June 24, 1932, Mss.B.D27 Davenport Papers - Dunn, Leslie Clarence, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

³³⁶ N. L. Krementsov, *With and without Galton: Vasilii Florinskii and the Fate of Eugenics in Russia* (Cambridge, England: Open Book Publishers, 2018), 389.

³³⁷ Sam Kean, "Trofim Lysenko, the Soviet Era's Deadliest Scientist, Is Regaining Popularity in Russia - The Atlantic," *The Atlantic*, December 19, 2017, <https://www.theatlantic.com/science/archive/2017/12/trofim-lysenko-soviet-union-russia/548786/>; Krementsov, *With and without Galton*.

³³⁸ Krementsov, 331.

continued, echoing Nietzsche, “Man will put forward a goal [...] to raise himself to a new level — to create a higher socio-biological type, an *Urbmensch*, if you will.”³³⁹

Bolshevism and fascism, two diametrically opposed political philosophies connected by totalitarian tendencies, in addition to Progressivist statism, are all anti-libertarian strains of government that have consistently sought control over human reproductive choices; eugenics appeals to adherents of such political philosophies that will not brook the *status quo* of humanity, needing to improve it. Strong anti-eugenic political systems, such as Stalinist socialism or theocratic totalitarianism, likewise derive power from banning voluntary reproductive choices or practices that could be construed as eugenic in form. Only strains of libertarianism that spring from Enlightenment liberalism are conceptually inclined to leave people alone so they can make their own reproductive decisions, provided that these do not demonstrably harm others. Eugenics was entirely entangled in the disastrous experimentation with strong statist governmental forms erected to address class struggle in the 20th century. I expand here on Allen.³⁴⁰

Davenport, writing to Laughlin, June 3, 1931, saw potential to work with Soviet eugenicists:

In the case of the U.S.S.R. we have been informed the government is officially out of sympathy with eugenical principles and would hardly give a sympathetic hearing to the proposal to send any individual as official delegate. The U.S.S.R., however, is very much interested in genetics and will probably send some of its geneticists as delegates. Possibly some eugenicists might be gotten in as geneticists.³⁴¹

³³⁹ Krementsov, 331.

³⁴⁰ Allen, “Genetics, Eugenics and Class Struggle.”

³⁴¹ Charles Benedict Davenport, “Charles Davenport to Harry Laughlin,” June 3, 1931, Mss.B.D27 Series IIB Davenport Papers - Box 2, folders 11-34, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

However, Davenport was adamantly anti-communist, and would work with the USSR only in the spirit of a nonaggression pact that furthered the eugenics movement. Davenport declared his sympathy with Mussolini in an August 3, 1929 letter to Dr. Eugen Fischer, identifying differential birth rate as a fundamental eugenical ideal to preserve class rule within the American nation.³⁴² By differential birth rate he meant “the high birth-rate of the intellectually and physically better blood lines,” and he added, in preparation for the Rome meeting, “especial reference to securing the adhesion of Mussolini to our point of view.”³⁴³ Eugenicists avidly sought Mussolini as the avatar of statist eugenics.³⁴⁴ July 29, 1929 Davenport discusses the primacy of race crossing as a method of genetic analysis, without which “the science of genetics would not have got far.”³⁴⁵

In “Studies on Human Race Crossing” he and Fischer wrote that a year ago, Davenport showed “in what degree today over almost the whole world race crossings have led to F₁ hybrids,” decrying that “no adequate scientific investigation” has occurred.³⁴⁶ Fischer did work on the “Rehobother bastards” whereas Davenport and Steggerda published “Race Crossing in Jamaica.” They had a sense of urgency that the F₁ generation would pass without being studied. “Likewise to be desired are observations on

³⁴² Davenport, “Charles Davenport to Eugen Fischer,” August 3, 1929.

³⁴³ Davenport.

³⁴⁴ Francesco Cassata, “Chapter IV. Quality through Quantity : Eugenics in Fascist Italy,” in *Building the New Man : Eugenics, Racial Science and Genetics in Twentieth-Century Italy*, CEUP Collection (Budapest: Central European University Press, 2011), 135–221, <https://books.openedition.org/ceup/726>.

³⁴⁵ Charles Benedict Davenport, “Charles Davenport to Eugen Fischer,” July 29, 1929, Mss.B.D27 Davenport Papers - Fischer, Eugen, Folder 1, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

³⁴⁶ Charles Benedict Davenport and Eugen Fischer, “Studies on Human Race Crossing” (Cold Spring Harbor, N. Y., 1930), Mss.B.D27 Davenport Papers - Fischer, Eugen, Folder 2, American Philosophical Society.

the back crossing of the first grade. That is crossing of F1 hybrids with each of the two parent races....”³⁴⁷

In the United States Theodore Roosevelt served as a distinctly American Progressive alternative to Mussolini as a sponsor of eugenics. Roosevelt (writing as Contributing Editor, *The Outlook*) wrote a notorious letter to Davenport on the “conduct of a nation which permits unlimited breeding from the worst stocks, physically and morally....”³⁴⁸ Roosevelt’s Progressivism was a “third way” of sorts that sought to keep capitalism in check while staving off Bolshevism. The perception that the clash between industrial capitalism and militant leftists could cause another civil war provided enough fear that government could expand its powers markedly in the Progressive Era. Eugenics fit neatly into a patriarchal rubric in which Theodore Roosevelt would see to it that the state produced a bully bunch of citizens who could outcompete American rivals.

American colonialism after the Spanish-American War expanded the sphere of concern of eugenicists to ensure that racial hierarchy was consolidated and maintained overseas. Davenport wrote to Dr. Ernst Rudin, on December 5, 1929, desiring “to keep the membership of the Federation on a high plane of investigators in human heredity rather than mere publicists or propagandists.”³⁴⁹ Davenport wanted Rudin to represent the Kaiser Wilhelm Institut fur Psychiatrie to join the International Federation of Eugenic Organizations and head a committee on psychological differences among races, including

³⁴⁷ Davenport, “Charles Davenport to Eugen Fischer,” August 3, 1929.

³⁴⁸ Theodore Roosevelt, “Theodore Roosevelt to Charles Davenport,” January 3, 1913, Mss.B.D27 Davenport Papers - Roosevelt, Theodore, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

³⁴⁹ Charles Benedict Davenport, “Charles Davenport to Ernst Rudin,” December 5, 1929, Mss.B.D27 Davenport Papers - Rudin, Ernst, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

comparative analysis of “psychoses among the negroes of the Southern United States, The West Indies, Brazil, South Africa, and different parts of North Africa and Asia.”³⁵⁰

C. M. Goethe wrote to Davenport, “with the falling birth rate among the old high-powered Nordics that gave America her institutions, we should emphasize positive eugenics.”³⁵¹ International eugenicists had a perverse sort of philoprogenitiveness, conceiving of themselves as studs to populate the planet with a ruling class possessed of “wonderful spiritual and moral equipment” like the high-powered New England Nordics.³⁵² Californian entrepreneur Goethe took a trip to Hawaii, which the United States annexed in 1898, and celebrated the primacy of Hiram Bingham I in dominating Honolulu and it being “he who reduced the Hawaiian language to writing,” thus bringing civilization as well as his “brood” to rule over Hawaiian natives, urging a “eugenical study” of the Bingham clan to cement its ruling class status.³⁵³

Davenport replied on February 4, 1924, emphasizing the “importance of good breeding,” and, “Since you may be interested I am sending you a little pamphlet developing Galton’s idea of making eugenics a religion.”³⁵⁴ Goethe replied on February 12, 1924, “I have been cooperating for many years with the group interested in Immigration Restriction. I am inclined to believe that the best results as far as translating our ideals into legislation was concerned was accomplished by enlisting the aid of the

³⁵⁰ Davenport.

³⁵¹ Charles M. Goethe, “Charles M. Goethe to Charles Davenport,” January 24, 1924, Mss.B.D27 Davenport Papers - Goethe, C.M., American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

³⁵² Goethe.

³⁵³ Goethe.

³⁵⁴ Charles Benedict Davenport, “Charles Davenport to Charles M. Goethe,” February 4, 1924, Mss.B.D27 Davenport Papers - Goethe, C.M., American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

magazines, particularly, such weeklies as the *Saturday Evening Post*.”³⁵⁵ The media savviness of eugenicists, and cooperation of media in eugenics, is an important theme.

Davenport, showing his bigoted face rather than the scientific facade he always presented to Morgan, complained about immigration restriction legislation, “The bill makes no provision against the introduction of 100,000 negroes from Africa if agriculture in the South demands it but if negroes from Africa are excluded by earlier legislation against the slave trade we can, at least, import South Italians who are about as cheap.”³⁵⁶ Davenport railed on, in his follow up letter dated May 9, 1927:

We have a group of hyphenated Americans around New York who protest against anything which seems in any way to limit their untrammelled freedom of action without regard to the rights of other people. The idea seems wide spread that liberty means non-altruism and lack of necessity of regarding the rights of others. These are the people who react so strongly against the idea of registration. I believe every child should be finger printed at birth...”³⁵⁷

Davenport revealed his compulsion to control and overmaster others. He exhibited totalitarian disregard for the rights of others, arrogating to his social class the prerogative to define the meaning of altruism for them as dropping out of the gene pool in the next generation and submitting to gratuitous fingerprinting as a class of suspects. Davenport reveals, in his letters, that science really had nothing to do with eugenics as ideology. It was only a “science” in the sense that he wanted to conduct an unethical social experiment to rid his country of people he didn’t like.

Ultimately, Davenport’s grandiose racist aims would be foiled, but it would be his front man, Harry Laughlin, who would take the fall. The trouble started early in the

³⁵⁵ Goethe, “Charles M. Goethe to Charles Davenport,” January 24, 1924.

³⁵⁶ Davenport, “Charles Davenport to Charles M. Goethe,” February 4, 1924.

³⁵⁷ Charles Benedict Davenport, “Charles Davenport to Charles M. Goethe,” May 9, 1927, Mss.B.D27 Davenport Papers - Goethe, C.M., American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

course of the eugenics movement. On June 26, 1923, Davenport was compelled, following an upbraiding by John C. Merriam of the Carnegie Institution, to send a memorandum to Laughlin:

The following is a quotation from Dr. John C. Merriam's letter to me of June twentieth. "In order that there may be no misunderstanding concerning the second part of our telephone conversation regarding Dr. Laughlin's work I wish to be frank and say that I have heard a number of quite frank criticisms of Dr. Laughlin's conclusions drawn from his recent studies. There has been no question regarding the character of his data nor of the importance of his work nor yet of the great interest and enthusiasm with which he has taken up this problem." Dr. Merriam stated, "...because the genetics and eugenics work is so important it is necessary that we be exceedingly guarded lest conclusions go beyond the limits warranted by the facts and therefore ultimately diminish the effectiveness of our scientific work." The work pertained to the "scientific study of immigration."³⁵⁸

Davenport and Laughlin were cautious to report data with apparently high fidelity. No falsification has been shown or alleged. It was in the drawing of conclusions, or most often, editorial implications tacked on to conclusions, that the eugenics duo tested the limits of scientific norms. But such norms checked their eugenics aims.

Eugenics was merely a potentiator of the nativist movement, which preceded it, and scientific norms were beside the point. Racism wasn't scientific to begin with, so scientific studies wouldn't work as an antidote. In "Race or Politics? Henry Cabot Lodge and the Origins of the Immigration Restriction Movement in the United States," Brian Gratton "critiques the dominant scholarly interpretation, which holds that the movement sprang from a racism that viewed the new immigrants of this period as biologically

³⁵⁸ Charles Benedict Davenport, "Charles Davenport to Harry Laughlin," June 26, 1923, Mss.B.D27 Series IIB Davenport Papers - Box 2, folders 11-34, American Philosophical Society, <https://www.amphilsoc.org/library/search-collections>.

inferior.³⁵⁹ It argues first that activists did not have at hand a biological theory sufficient to this characterization and did not employ one. It argues second that the movement arose as an adroit political response to labor market competition.”³⁶⁰

Gratton ranks Republican electoral strategy far higher than racist xenophobia, arguing that exploiting working-class fears of lower-wage competition would garner their votes. The choice of a literacy test to screen out new immigrants avoided alienating the older immigrants such as Irish and Germans, but also not fully bringing them into the fold of the founding families. Gratton doesn't mention the genealogical pseudoaristocracy. He finds that white supremacism based on notions of biological hierarchy has become a “hegemonic” interpretation of the origin of immigration restriction.³⁶¹

Notions of biological inferiority of nonwhites were surely common among “men of science,” in the nineteenth century, but it wasn't really engrained in the popular consciousness, and people weren't imbibing the views of scientists to form their views. Religious, familial, and provincial concerns prevailed over scientific stabs at understanding race following Darwin and at the time of Galton. William Ripley's *Races of Europe* was not published until 1899, and even he had no coherent biological theory.³⁶² By 1896, Lodge trotted out Gustave Le Bon's theories, which presented an “essentialist view of race,” but still not a biologically based one that would render those deemed inferior incapable of assimilation.³⁶³

³⁵⁹ Brian Gratton, “Race or Politics? Henry Cabot Lodge and the Origins of the Immigration Restriction Movement in the United States,” *Journal of Policy History* 30, no. 1 (2018): 128–57, 128 <https://doi.org/10.1017/S0898030617000410>.

³⁶⁰ Gratton.

³⁶¹ Gratton.

³⁶² Gratton, 131.

³⁶³ Gratton, 145.

Davenport *et al* picked up on Lodge's theme, seeking to provide proof positive that the supposed inferiors were unassimilable or so biologically incapable as to be consigned to an underclass, but he ultimately failed. Race-mixing was a topic that could move the masses, however, and on that Davenport focused. So were crime and mental illness and need for public support. It was on these myths that the political mass movement of eugenics was based, in my view, and not on so-called "scientific racism," which wasn't science, and wasn't recognized as science except for scientific propaganda purposes.

Chapter XIII.

Conclusions

The “science” of eugenics was stillborn not wellborn. It was simply a mass movement set in motion by simple liars, damned liars, and scientific experts like Davenport, but not in their capacity as scientists. Davenport and Morgan had a shared understanding of science, understood equally scientific criticism of eugenics, and both knew that eugenics as science could only be a forward-looking aspiration. It wasn’t even close to a present reality at the time. Davenport maintained a friendship with Morgan but was Janus-faced, showing his scientific front to Morgan, and his racist back to his racist friends in the eugenics movement, who snickered at Morgan’s meticulous standards. Eugenics was never based on anything even resembling a scientific consensus. Rather, it was a government-backed social engineering scheme that was co-opted for nefarious racist, ableist, and classist purposes. In conclusion, it was a weapon for class warfare.

Some purist scientists saw promise in eugenics, but that can be explained. It had plenty of promise if conceptualized as voluntary, humanitarian medical genetics and nondirective genetic counseling, and peril if conceived as statist, coerced eugenics, if one endorses liberalism (e.g., Rawls) or libertarianism (e.g., Nozick).³⁶⁴ Scientists such as David Heron, from the start, expressed serious concerns that, “the new science of Eugenics” must not degenerate into sloppy sociology that would be “entirely outside the

³⁶⁴ John Rawls, *A Theory of Justice* (Oxford: Clarendon Press, 1972); Robert Nozick, *Anarchy, State and Utopia* (New York: Harper and Row, 1974).

pale of true science.”³⁶⁵ But it did. Scientists like Morgan never hopped on the eugenics bandwagon. And Morgan even hopped off the Animal Breeding Committee, a legitimate scientific group, so he couldn’t fairly be indexed to eugenics propaganda.

Why, then, is there a perception that eugenics was based on a scientific consensus, and on “scientific racism?” Some claims are supportable, but the oxymoronic term “scientific racism” doesn’t even make sense, as racism is arguably essentially irrational, and it certainly isn’t a valid attitude arrived at via the scientific method. Experimental breeding of animals had clearly been scientific since before the nineteenth century.³⁶⁶ To the extent that humans, as animals ourselves, were to have been subjected to a social science version of experimental breeding was a scientific foundation, of sorts, for eugenics. But even arch-eugenicists like Davenport readily admitted that the scientific method had not yet produced more than an inchoate understanding of human genetics, and that experimental evolution of humans was only an idea, though he wanted to get started on it immediately, using data-driven policy to seek out eugenic legislative and voluntary interventions that seemed to correlate with desired sociobiological outcomes.

The hypothesis that sterilization of people deemed at risk to conceive children with traits or disorders strongly influenced by genetics could have been tested experimentally (or quasi-experimentally via eugenic legislation and enforcement), in theory, but it is extremely dubious that such experimentation, even if purely voluntary, could possibly be ethically designed. The eugenics movement was driven by a flawed form of utilitarian ethics at best, and crass bigotry at worst, that infringed on individual reproductive freedom. Davenport showed his contempt for such freedom, and esteem for

³⁶⁵ Heron, *Mendelism and the Problem of Mental Defect*, 4.

³⁶⁶ Robert Trow-Smith, *A History of British Livestock Husbandry 1700-1900*, 1959, <http://archive.org/details/historyofbritish0000robe>.

a powerful government not of the people but by the experts, that would dictate who was fit or unfit to reproduce.

Progressive Era experts generally disdained individual choice, preferring to choose for others what they believed was an optimal, efficient option, and getting government to see to it that their guidance was followed. They sought rule of the many by the few, ostensibly for the many's own good. In Davenport's case, the greatest good for the greatest number of the direct descendants of the Anglo-Saxon "founding families" of America was the constrained domain of his utilitarian calculus.

Davenport was biased towards Mendelian models in part because he had proofs of principle, such as Huntington disease. It is now known that many severe clinical disorders, including nonsyndromic intellectual disability, are essentially Mendelian, as perusal of Online Mendelian Inheritance in Man [omim.org] readily reveals. Thus, it is hard to characterize Davenport's too-bullish Mendelism as preposterous at the time. It is clear, from inspection of pictures, pedigrees, and case reports of Vineland School, that Mendelian genetic diagnoses, in some cases complicated by neurological findings such as ataxia or epilepsy, were abundant in that institutionalized population.³⁶⁷ It's a mixed group with hereditary as well as environmentally caused cases (e.g., meningitis).

Despite the taint of eugenics, the Vineland School was also an environmental intervention, a eugenics experiment designed to improve the lives of children and families. Pearl S. Buck, first American woman to win the Nobel Prize for Literature, served on Vineland's Board of Directors, and her daughter, Carol, who lived at Vineland, was later found to have phenylketonuria (PKU), which proved to be an autosomal

³⁶⁷ Henry Herbert Goddard, *Feeble-Mindedness: Its Causes and Consequences* (New York, Macmillan Company, 1914), <http://archive.org/details/feblemindednes00goddgoog>.

recessive biochemical disorder that nevertheless responded well to an environmental intervention, a low-phenylalanine prescription diet.³⁶⁸

Carol's parents, both obligate unaffected carriers of a single mutation in the gene for the enzyme phenylalanine hydroxylase, would have taken a 1 in 4 chance, with each conception, to have had another child with PKU. Many parents will take such information into account when they make voluntary decisions about conceiving children. Coerced eugenic sterilization or prohibition of reproduction by such parents, though blatantly immoral by Kantian ethical standards,³⁶⁹ would nevertheless achieve its preventative ends via ruthless means that damage human dignity.

Davenport's biases went far beyond belief based on proof of principle in particular cases. Conflict of interest explains most of Davenport's most dastardly misdeeds. He was prone to soliciting funding even in his books and research reports. He clung to implausible Mendelian models because he perceived it in his self-interest to do so, and within his freedom of expression rights to serve as a shill for the eugenics enterprise. Davenport was also a class warrior for the American upper crust and nativists, a flatterer who used genealogy to ingratiate himself to elites, puffing up their sense of self while bashing the underclasses.³⁷⁰ Why? They feared those who were oppressed, desperate, and determined to outcompete those who kept oppressing them. This is the essence of class warfare, and demographics matter in a democracy, so Davenport wanted fewer of them, and more of "us" meaning the American WASP constituency.

Davenport was a crafty opportunist who sought U.S. government funds for his Eugenics Record Office to recruit the "right kind" of naval officer during World War I,

³⁶⁸ Finger and Christ, "Pearl S. Buck and Phenylketonuria (PKU)."

³⁶⁹ John Silber, *Kant's Ethics: The Good, Freedom, and the Will* (Boston: Walter de Gruyter, 2012).

³⁷⁰ Allen, "Genetics, Eugenics and Class Struggle."

who would come, of course, from the old Puritan stock of seafaring American families genetically endowed with “thalassophilia.” Davenport’s eugenics army would implement state marital restriction laws, for a fee. Had he admitted publicly that his utopian claims were bunk, and that genetics was far too complex to support any sort of policy yet, dollars for “Davenport’s Dream” would have dried up.

Davenport’s Mendelism was not foolish, however. The long inferable (via twin and pedigree studies) existence of single gene mutations as a cause of intellectual disability was noted by James Watson in his essay, “Genes and Politics,” decrying academic denialism of genetic influence as an impediment to understanding the history of eugenics.³⁷¹ Thus, the biometrician-Mendelian critical debate requires a slight scientific historical re-analysis, but there was no *a priori* scientific rationale that would render Davenport “wrong” and Heron and Pearson “right.” Both were merely speculating and arguing about which model was best. As unseemly as such speculation may have been to purist scientists like Morgan, it didn’t violate the scientific method.

Davenport’s Dream: Twenty-first Century Reflections on Heredity and Eugenics met with much harsh criticism from historians of eugenics who accused authors of “rehabilitating” Davenport’s reputation.³⁷² Nathaniel Comfort wrote:

From all this, I draw two conclusions. First, after decades of knee-jerk stigmatization of eugenics, some biomedical opinion leaders are emboldened to discuss human improvement openly once again. And second, for that reason, the optimistic belief, still fashionable among historians of genetics, that “eugenics” has outlived its usefulness as a term of scholarly discussion is mistaken.³⁷³

³⁷¹ Witkowski, Inglis, and Davenport, *Davenport’s Dream*, 29-31.

³⁷² Witkowski, Inglis, and Davenport.

³⁷³ Nathaniel C. Comfort, “Jan A. Witkowski, John R. Inglis (Editors). *Davenport’s Dream: Twenty-first Century Reflections on Heredity and Eugenics*. Xi + 298 Pp., Illus., Apps., Bibl., Index. Cold Spring Harbor, N.Y.: Cold Spring Harbor Laboratory Press, 2008. \$55 (Cloth),” *Isis* 100, no. 1 (2009): 191–92, <https://doi.org/10.1086/599687>.

I agree with both points made by Comfort, who termed James Watson “arguably the Charles Davenport of the late twentieth century,”³⁷⁴ but in a different sense than he intended.

It is true that “knee-jerk stigmatization of eugenics” was the aim and result of anti-eugenic historiography in the pre-genomic era. It is also true that eugenics remains a useful term of scholarly discussion in the post-genomic era, but only if it is precisely defined. Does it encompass medical genetic technology to avert the birth of a child with a genetic syndrome, or gene therapy to correct the effects of a genetic mutation? Does the term “eugenics” (well-born) have meaning if no coercion is involved? Would anti-eugenics advocates coerce to prevent the prevention of a birth of a child with a severe genetic disorder? Anti-eugenic extremism was official state policy in the late Stalinist Soviet Union, and that history should moderate the new anti-eugenic scholarship.

Davenport had some utopian views, hence the title “Davenport’s Dream,” but I see him as a sly mercenary scientist who knew the scientific method well, seeking not truth for its own sake, but scientism as a soldier of fortune in the service of selfish people who didn’t want to share America’s prosperity with immigrants, and who didn’t want to spend funds inefficiently on those deemed detractors of economic efficiency. There was a strong strain of Social Darwinism in them, favoring the “strong” and urging fecundity among the members of their exclusive social class so they could be stronger and secure their status. But their weakness was that they failed to see how strong adversity made their immigrant adversaries, who were having children and cooperating as families and workers. Socialism was a terrifying menace to Davenport and his social set.

³⁷⁴ Comfort, 191.

The scientific method actually kept Davenport's Dream from becoming even more of a nightmare. It is implausible to think Davenport could have been pleased with the result of his "Race-mixing in Jamaica" study. The best evidence he could muster to support anti-miscegenation policy was that race mixing might possibly eventually lead to upper-lower limb disproportion, making it a bit harder for people to bend over to pick things up, a laughable concern.

Davenport was clearly grasping for something alarming to report back to the Carnegie Institution, his funding agency, after hyping the so-called F1 cross generation as a window of opportunity to capture evidence that anti-miscegenation policy was justified. The scientific method forced Davenport and Steggerda to acknowledge that they really couldn't find convincing evidence of "racial degeneration." On the contrary, it seemed benign for parents to have mixed-race children.³⁷⁵

Science wasn't to blame for eugenics, and eugenics wasn't to blame for nativist racism in the late 19th century, after the end of Reconstruction Era egalitarian rhetoric and the onset of Southern Redemption and North-South Reconciliation in America, in which class warfare became a common cause among the non-radical elite across the United States. Hard-core geneticists pointed out the flaws of eugenics right from the start, but scientific criticism couldn't reverse a non-scientific political movement. It could only keep the "experts" in check.

Scientific experts acknowledged the flaws but persisted in misleading the public, adding their expertise to the "simple liars and damned liars" whose main goal was to vilify immigrants to protect the presumably proprietary interests of the Anglo-Saxon entrepreneurial and technocratic ruling class. Anti-immigrant sentiment wasn't exclusive

³⁷⁵ Castle, "Race Mixture and Physical Dysharmonies."

to the United States, and it varied by local circumstances and over time. Anti-Asian sentiment, in particular, was rife throughout the Americas. Some, such as the Chinese, were singled out for restriction while Japanese continued to immigrate to the United States.

Eugenics was discussed in utopian terms at first by Galton and others. Adam Rutherford's recent book on the history of eugenics is entitled, *Control*.³⁷⁶ Throughout the entire book, Rutherford variously mentions: birth control, population control, the Feeble-Minded Control Bill, Board of Control for Lunacy and Mental Deficiency, "women we cannot control," control over the causes of disease, and "quality control" over human reproduction, an idea as ancient as the allegedly utopian city-state of Plato's *Republic*. Plato was concerned with declining birth rates, according to Rutherford. So, too, were eugenicists of late nineteenth and early twentieth centuries. The perception, by middle and upper classes, that societies had gotten far too out of control, in dire jeopardy, and in need of drastic reform, was the driving force behind a slew of reforms, with the eugenics movement being a modest contributor to the overall Progressive vector of change.

In the United States, the elaboration of eugenics theory by Galton happened to coincide temporally with the Civil War. During Reconstruction, eugenics was little known, but would seem to have had little political utility in a nation focused on Union, even if Mendel's laws had been appreciated at the time. American economy boomed in the free-labor republic after the Civil War. The federal government was stronger than ever. State and local governments courted ethnic voter blocs to consolidate political

³⁷⁶ Adam Rutherford, *Control: The Dark History and Troubling Present of Eugenics*, First American edition. (New York, NY: W.W. Norton & Company, 2023).

patronage power systems. American population was considered too sparse. The country felt a need for immigrants to support its economic growth and consolidate gains made in the West in pursuit of Manifest Destiny. As Richard White emphasized in his Chapter 4, “Home,” settlers swept from East to West to claim homesteads. Americans were colonists no more. It was settled. This was their home.

By the end of Reconstruction, and advent of Restoration, and from the Panic of 1873 to panicked efforts to restrict immigration, including the Chinese Exclusion Act of 1882, Americans of European ancestry sought to make clear that this was their country. They were the heirs of the Founders who, in 1876, celebrated the Centennial of American Independence. They had staked their claims to the land, evacuating and containing Native Americans, and setting up systems of control over Americans of African ancestry.

Nativists felt that political control over America was their birthright. They had a good thing going, and they weren’t about to be overrun by immigrants as they had just run over Native Americans, whose removal was crassly rationalized by the fact that most had chosen the wrong side in the American Revolution and War of 1812, other wars against trans-Appalachian settlement, and finally, the Western Frontier of the Civil War and the wars against settlers West of the Mississippi River.

After the *Winning of the West* (1889), as chronicled by Theodore Roosevelt, nativist Americans were not about to lose it to others as they “won” it from Native Americans. Burgeoning cities required food produced in the heartland. Immigration of the right sort was permissible, but not if it meant importing European radicalism with it, and especially not from so-called unassimilable immigrants of Southern and Eastern Europe. A family feud among upwardly mobile lower, solid middle, and upper classes

exclusively of Northwestern European extraction formed the boundary of tolerable political debate, the focus of which was how best to divvy up American prosperity and contain an underclass of all the other Americans who were already here, and who were entitled to a modicum of legal protection, if they kept to their social stations.

One group that didn't keep to its station was women of Northwest European ancestry. Prosperity and security within homesteads provided release from existential toil. Children of both sexes went to school. Education and opportunity altered the balance of traditional sex roles. After all the wars and skirmishes to clear the land for homesteads to support large families, fertility rates declined. "An average woman bore 7.04 children in 1800 but only 3.56 in 1900."³⁷⁷ Meanwhile, immigrants streamed in, and once settled, they, along with established Catholics and African-Americans, produced children at greater rates than the "native stock," as they termed themselves. This felt out of control for the generally white Anglo-Saxon Protestant set, and their fears led to backlashes against others as well as their own women who were perceived to imperil the established demographic order. The democratic republic had a flaw, the nativists believed, which was that they could lose their political power if others produced enough citizens to outvote them.

Whether their fears were founded or not is an open question. The United States of America was never an ancestrally homogenous nation. There was no established religion. American ideals have broad appeal. Factions tend to cancel each other out at the ballot box. However, according to recent U.S. Census projections, nativists weren't delusional in their prediction that America would increasingly become an ethnically mixed nation, with growing numbers of mixed-race individuals, and that eventually, even despite the

³⁷⁷ White, *The Republic for Which It Stands*, 167.

exclusionary efforts of nativists then and now, non-Hispanic whites will likely become a relative minority.³⁷⁸ One could easily make the case, however, that dire forecasts for racial and civilizational decline because of this were frankly delusional.

On the other hand, nativist fears that the American culture of white supremacy that prevailed in the 1920s would be decisively dismantled have substantially been realized. The eugenics movement was marshalled as propaganda to effect reclamation of demographic and political control. Eugenics, by contrast, once cleaved from the confusion of its political movement, reduces simply to the straightforward science of genetics on which medical advances for voluntary use within the context of the provider-patient relationship rests. The need for the utmost deontological vigilance remains, but genetics itself is morally inoffensive if not used as means to political ends in disrespect of the dutifully considered best interests and autonomous choices of persons.

Davenport's celebrity in the eugenics movement prompts reflection on the hubris of experts at best, on their ulterior motives at worst, on the need for ample public discussion, emphasis on the welfare of the most vulnerable, and wise legislation made after adequate deliberation. Let no one lead us simply by dictating what following the science means; we must critically appraise it ourselves. *Nullius in verba* - take no one's word – the motto of the Royal Society, served the critics of eugenics well.³⁷⁹

Like Rosenberg, I have been unable to find evidence that Davenport expressed any guilt for his advocacy of eugenics. He clearly became more sensible of criticism and shifting sentiment of the public, and bore witness to the divestment of the Carnegie

³⁷⁸ US Census Bureau, "Demographic Turning Points for the United States: Population Projections for 2020 to 2060," Census.gov, February 2020, <https://www.census.gov/library/publications/2020/demo/p25-1144.html>.

³⁷⁹ Lehman, "Nullius in Verba."

Institution from Cold Spring Harbor in 1940. Rosenberg termed Davenport a “statesman administrator, the ambassador to the laity from the work of science.” I deem Davenport a public health expert, in the technocratic sense, meaning one who uses technical terms and knowledge to influence policy-makers who have power to enforce adherence to laws or guidelines. He was also a scientist, though, but not like Morgan. He was uninterested in seeking truth solely for its own sake, apart from its policy implication, in Peirce’s conception of the role of a true scientific philosopher.

The expert, like the scientist, can act as an “ambassador to the laity,” aiming to persuade, but unlike the scientist, the public health expert may act, or appear to act, as an agent of government or institutional governance. Thus, the expert can persuade people to follow guidelines ostensibly based on science from a powerful platform, backed by the police power of the state. An expert’s categorization of a class of people as unfit to reproduce can create justification for exercise of state power to prevent such people from legally marrying or coerce them to undergo involuntary sterilization without due legal and ethical process. This is Davenport’s legacy as an expert, one that he shares with a cast of thousands of other experts, self-appointed or government-designated.

As for Morgan and others who stuck to the scientific method and freely admitted that scientists were collectively far too ignorant of human genetics to possibly inform public policy, perhaps they could have been more vocal and political. However, it certainly seemed to be a lost cause, given the prevailing politics. The critics were effective enough to make themselves heard, but few would truly listen and accept the implications of the criticism. The wisdom of Jonathan Swift, that “Reasoning will never

make a Man correct an ill Opinion, which by Reasoning he never acquired,”³⁸⁰ explains why such criticism was ineffective at thwarting the eugenics movement.

³⁸⁰ Jonathan Swift, *A letter to a young gentleman, lately enter'd into holy orders. By a person of quality. It is certainly known, that the following treatise was writ in Ireland by ... Dr. Swift, ...* 1721, 1721, http://archive.org/details/bim_eighteenth-century_a-letter-to-a-young-gent_swift-jonathan_1721,26.

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