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# Eugenics, Medical Education, and the Public Health Service: Another Perspective on the Tuskegee Syphilis Experiment

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**SUMMARY:** The Public Health Service (PHS) Study of Untreated Syphilis in the Male Negro (1932–72) is the most infamous American example of medical research abuse. Commentary on the study has often focused on the reasons for its initiation and for its long duration. Racism, bureaucratic inertia, and the personal motivations of study personnel have been suggested as possible explanations. We develop another explanation by examining the educational and professional linkages shared by three key physicians who launched and directed the study. PHS surgeon general Hugh Cumming initiated Tuskegee, and assistant surgeons general Taliaferro Clark and Raymond A. Vonderlehr presided over the study during its first decade. All three had graduated from the medical school at the University of Virginia, a center of eugenics teaching, where students were trained to think about race as a key factor in both the etiology and the natural history of syphilis. Along with other senior officers in the PHS, they were publicly aligned with the eugenics movement. Tuskegee provided a vehicle for testing a eugenic hypothesis: that racial groups were differentially susceptible to infectious diseases.

**KEYWORDS:** syphilis, eugenics, public health, Tuskegee, race

In the extensive scholarship on the United States Public Health Service investigation of “Untreated Syphilis in the Male Negro”—commonly referred to as the “Tuskegee Study”—the names of Hugh Smith Cumming, Taliaferro Clark, and Raymond Vonderlehr appear repeatedly: they were the Public Health Service (PHS) officers who initiated the study and

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presided over it for its first decade. Examining the careers of these three important officers helps to provide more-complete answers to two of the most persistent questions about the study—namely, “Why was the study created?” and, “Why did it continue for forty years?”<sup>1</sup> These questions have remained to puzzle us despite the avalanche of commentary that has appeared since Tuskegee was exposed in the 1970s and the torrent of attention that followed a 1997 presidential apology.<sup>2</sup> The intellectual background of the study’s founders provides a perspective that shows how their training contributed to the most notorious chapter in U.S. medical research and public health history.

Three critical features link these men. First, they had learned a brand of “racial medicine” that had evolved beyond medical folklore, finding “scientific” validation in eugenic theory. That theory provided a scientific overlay that legitimated long-standing medical and cultural prejudices toward African Americans. It confirmed beliefs that hereditary differences separated the black and white “races,” particularly with regard to responses to disease—and especially to syphilis. Eugenics thus reinforced and updated the “racial medicine” of the nineteenth century, establishing it on firmly modern, scientific grounds. Second, this learning took place at the University of Virginia’s medical school; the resulting personal alliances and interpersonal affinity as alumni of a single institution help to explain a pattern of appointments at the PHS, which became a stronghold of Virginia physicians. Third, during their Public Health Service careers, all three men were associated with the American eugenics movement; the continuing role of these and other PHS officers within the movement provides additional evidence of how eugenic theory may have influenced public health programs. All these factors contributed to the longevity of the Tuskegee study.

The study began while Cumming was surgeon general of the PHS, and was designed as an observation of the natural history of latent syphilis. From 1932 to 1972, the PHS continually assessed the health of some four hundred infected black men while intentionally withholding treatment.

1. David Rothman, “Were Tuskegee and Willowbrook Studies in Nature?” *Hastings Center Rep.*, 1982, 12 (2): 5–7, on p. 5.

2. “Remarks by the President in Apology,” in *Tuskegee’s Truths: Rethinking the Tuskegee Syphilis Study*, ed. Susan M. Reverby (Chapel Hill: University of North Carolina Press, 2000), pp. 574–77, on p. 574. See also *The Tuskegee Timeline* <http://www.cdc.gov/nchstp/od/tuskegee/time.htm>; *The Troubling Legacy of the Tuskegee Syphilis Study*, <http://www.med.virginia.edu/hs-library/historical/apology/>; *Finding Aid to the Documents on Origin and Development of the Tuskegee Syphilis Study, 1973*, <http://www.nlm.nih.gov/hmd/manuscripts/ead/tuskegee.html>.

In 1972 a journalistic exposé led to public scrutiny, congressional investigation, and further revelations.<sup>3</sup> Public Health Service physicians' failure to treat patients within the established standard of care, their misleading descriptions of diagnostic spinal taps as therapeutic procedures, and the eventual withholding of curative penicillin treatments, all amidst the ongoing deception of patients, branded Tuskegee as a startling example of medical malfeasance, securing its infamy.

Early commentary on the Tuskegee syphilis study concentrated on the "pathology of racism" that had allowed it to continue for more than forty years.<sup>4</sup> While this approach has been criticized as being "more concerned with proving charges of racism than attempting to understand what happened,"<sup>5</sup> subsequent research endorses one feature of the early assessment of Tuskegee: race-conscious ideology profoundly influenced the intellectual and organizational origins of the study. That ideology consisted of a racial antipathy re-formed during Reconstruction, and sustained in the twentieth century as science by arguments developed within the framework of eugenic theory.

Viewing Tuskegee in the light of racial theories common to medicine and eugenics reveals the intricate interplay of scientific assumptions, professional training, and cultural biases. Such an examination clarifies one set of predilections that contributed to the Tuskegee study. It also stands in contrast to recent efforts to provide retroactive moral and scientific rationales for the experiment.<sup>6</sup> Charting the intellectual currents of the 1920s

3. See Jean Heller, "U.S. Testers Let Many Die of Syphilis," *Washington Post*, 26 July 1972, p. A1.

4. Allan M. Brandt, "Racism and Research: The Case of the Tuskegee Syphilis Study," *Hastings Center Rep.*, 1978, 8 (6): 21–29, on p. 27.

5. James H. Jones, *Bad Blood: The Tuskegee Syphilis Experiment* (New York: Free Press, 1981), p. 253, n 14.

6. One recent effort to explain Tuskegee contends that "presentism pervades the criticisms of the Tuskegee Study, particularly in regard to the recruitment of the subjects and the alleged withholding of penicillin" (Thomas G. Benedek and Jonathon Erlen, "The Scientific Environment of the Tuskegee Study of Syphilis, 1920–1960," *Perspect. Biol. & Med.*, 1999, 43: 1–30, on p. 24). While that article adds considerably to our understanding of debates about the efficacy of various antisyphilitic therapies, and the attempt to develop a standard of care based on scientific findings, it leaves intact the most serious criticisms of the Tuskegee study. In another article, Robert M. White claims to present a "historically correct, empirically based analysis" of the Tuskegee Study, placing himself among those who approach the study with "more reason than outrage" (Robert M. White, "Unraveling the Tuskegee Study of Untreated Syphilis," *Arch. Internal Med.*, 2000, 160: 585–98, on pp. 585 and 592, respectively). Noting the "complicated line between understanding or contextualizing and providing 'moral shelter,'" historian Susan Reverby concludes that neither article

and 1930s reveals the confluence of medical education, the Public Health Service bureaucracy, and the American eugenics movement, suggesting a new ideological source for Tuskegee. Part of that explanation includes an examination of the function of eugenics—the “science” of racial purity and improvement—in laying the foundation for the Tuskegee study.<sup>7</sup> According to eugenic theory, people of different races inherited not only differences in appearance, moral character, and sexual behavior, but also differential susceptibility to disease. Doctors schooled in eugenic theory included these “racial” distinctions as part of their diagnostic expectation, understanding disease susceptibility and medical outcomes differently for black and white patients. Between approximately 1900 and 1950, this perspective was built into the curriculum at Virginia; to perceive medical therapeutics in eugenic terms would not have seemed strange to doctors trained there. Surveying the contours of eugenic theory further explains the PHS’s attempt to substantiate racial differences in the pathology of latent syphilis.

We begin by highlighting the language and ideas common to both the eugenics and public health movements, and we examine concepts of “racial medicine” as they were applied to syphilis among blacks. We then explore training in public health and eugenics at Virginia’s premier medical school, reviewing the faculty members who built eugenic emphasis into the medical curriculum. We also explain how political planning paved the way for Virginia medical graduates to fill key roles in the United States Public Health Service. By connecting the PHS to the eugenics movement through Virginia, we show the professional embrace of ideas that have fallen from favor today and describe the continuity of involvement in the eugenics movement among the architects of the Tuskegee study.

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“examined the racism of linking syphilis to black people as an ‘intrinsic defect’” (Susan M. Reverby, “More than Fact and Fiction: Cultural Memory and the Tuskegee Syphilis Study,” *Hastings Center Rep.*, 2001, 31 (5): 22–28, on pp. 26–27).

7. Both Brandt (“Racism and Research [n. 4]”) and Jones (*Bad Blood* [n. 5]) note the importance of the “social Darwinist” theory of the 1890s in creating ideologies about blacks and syphilis. Brandt’s later work makes a connection to the eugenics movement but does not connect eugenics and Tuskegee: see Allan M. Brandt, *No Magic Bullet: A Social History of Venereal Disease in the United States Since 1880* (New York: Oxford University Press, 1985), pp. 19–27, 39. Edward Larson, in his survey of eugenics in the American south, mentions eugenic sterilization laws several times in relation to the Virginia precedent in *Buck v. Bell* (1927) but does not otherwise focus on Virginia. He notes dissimilar patterns in other “deep South” states, which, unlike Virginia, show little influence of eugenicists on specifically “racial” laws such as those prohibiting miscegenation. See Edward Larson, *Sex, Race, and Science: Eugenics in the Deep South* (Baltimore: Johns Hopkins University Press, 1995), p. 179 n. 26.

We thus build on Allan Brandt's interpretation of Tuskegee and add depth to James Jones's hallmark analysis. The assumptions about the biomedical significance of race that characterized the Tuskegee study stemmed as much from the presumed morality and value-neutrality of scientific inquiry as they did from the ambient cultural prejudices identified by Brandt. Indeed, the scientific acceptability of eugenics among many in the PHS gave rise to a new, hybrid form of cultural bias. As Jones has noted, the experiment undoubtedly owed its durability to bureaucratic, institutional inertia.<sup>8</sup> Yet the roots of that institutional inertia tapped a deeper source than the resistance to change that characterizes most government bureaucracies. While Jones understood the study as a case of "moral astigmatism that saw these black sufferers simply as 'subjects' in a study, not as human beings,"<sup>9</sup> one feature of that impairment had to do with systematic training that encouraged thinking about syphilis, its victims, and its treatment in eugenic terms. An abundance of that training occurred at Virginia, the same institution that contributed an inordinate number of officers to the PHS, magnifying the inertia that Jones posits. Leaders could replicate themselves by recruiting like-minded colleagues to occupy subordinate positions, thereby continuing both a proud tradition and a similar scientific perspective.

It is not easy to summarize all that eugenics meant to the American public or to the generation of scientists who were influenced by its tenets. As one important study of that movement suggests, a variety of social programs were launched "in the name of eugenics."<sup>10</sup> Early public recognition of the potential for a "science to make men and women better" in 1906 led advocates to demand the restriction of marriage to only those deemed most "fit."<sup>11</sup> By the time the movement's most prominent leaders had died in the early 1940s, supporters of "eugenic" policies had championed neonatal health initiatives and sterilization laws, euthanasia for "defective" newborns, immigration restriction, antimiscegenation laws, and widespread testing for sexually transmitted diseases. General concern for the progress of the "human race" motivated many reformers who claimed the mantle of eugenics; others were consumed by fears

8. Jones, *Bad Blood* (n. 5), p. 130. Jones noted a "clearly discernible bureaucratic pattern" in the promotion of PHS officers involved with the Tuskegee Study, but he did not explore the common educational background among the study's three initial leaders (*ibid.*).

9. *Ibid.*, p. 14.

10. Daniel J. Kevles, *In the Name of Eugenics* (New York: Knopf, 1985).

11. "Science to Make Men and Women Better: Committee Will Investigate Heredity in Man and Ways of Encouraging Multiplication of Good Blood and Discouraging Vicious Blood of Human Family," *Washington Post*, 18 May 1906, p. 2.

of differences—purportedly inherited—separating the black and white “races.” These differences, and how they were understood in the world of medicine, held massive implications for the conduct of both medical research and therapy in America.

## The Language of Eugenics: Syphilis and Racial Medicine

The simultaneous development of public health policies and eugenic theories established strong resonances among science, medicine, public health, and eugenics. Making use of both hereditarian and sanitarian notions, the languages of these disciplines overlapped, echoing and amplifying important themes that emphasized the power of heredity and the authority of scientifically trained experts to control the spread of disease. The use of analogous terms created a common “cultural ethic” within the public health and eugenics movements.<sup>12</sup> Eugenicists and public health advocates asserted that individual rights were secondary to the “common good.” Protecting the larger society justified coercive state intervention. Mandatory vaccinations and eugenic sterilization seemed not only equally advisable, but even legally progressive. Indeed, Justice Oliver Wendell Holmes made this connection explicit in his opinion affirming the constitutionality of eugenic sterilization: “The principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes.”<sup>13</sup>

Francis Galton’s original vision of eugenics—the “science of improving stock”—encompassed “all influences that tend in however remote a degree to give to the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable.”<sup>14</sup> This expansive charge took many forms. In the American context, eugenics represented the marriage of the fledgling field of biostatistics with Mendelian notions of genetic inheritance, making it an arena with clear affinity for public health thinking—the application of quantitative, statistically based medicine to the inborn pathologies of populations. Eugenics is often associated with the movement called “social Darwinism,” a phrase credited to Herbert Spencer.<sup>15</sup> Spencer’s axiom, “To be a good animal is the first requisite to

12. Martin S. Pernick, “Eugenics and Public Health in American History,” *Amer. J. Pub. Health*, 1997, 87: 1767–72.

13. *Buck v. Bell*, 274 U.S. 200 (1927), p. 205. The controlling legal precedent for the compulsory vaccination of school children is *Jacobson v. Massachusetts*, 197 U.S. 11 (1905).

14. Francis Galton, *Inquiries into Human Faculty and Its Development* (London: Macmillan, 1883), p. 17.

15. See Richard Hofstadter, *Social Darwinism and American Thought* (Philadelphia: University of Pennsylvania, 1944).

success in life, and to be a Nation of good animals is the first condition to National prosperity,” was often repeated by prominent eugenicists to support their biologically based social program.<sup>16</sup> Eugenicists invoked “race hygiene” and “racial integrity” in defense of white “racial purity” to stop white “race suicide.” Lower class and darker complexion marked the carriers of degeneracy. The “defective, dependent and delinquent classes,” as well as nonwhites, supposedly inherited the blood taint—a propensity toward moral and medical degeneracy that characterized their station in life.<sup>17</sup>

The programs advocated by both public health and eugenic reformers reflected the striking congruence between public health and eugenic idioms. Like other eugenic taints, the symptoms of syphilis were thought to be the outward manifestation of a predisposition to disease lodged in the germ plasm. According to eugenic thought, the “Negro race” was particularly susceptible to this taint, because of both its characteristic trait of hypersexuality and a constitutional weakness in fighting off the spirochete.

While PHS activity revolved around the triad of quarantine, fumigation, and eradication, the advocates within the eugenics movement spoke of segregation, sterilization, and euthanasia. Quarantining the infectious achieved the same kind of public health goal as eugenically segregating the feeble-minded from “normal” people, or separating the white race from others. Quarantine interrupted disease transmission; institutional segregation interrupted the transmission of supposedly hereditary taints—feeble-mindedness, abnormality, susceptibility to disease—by preventing procreation. Prescott Hall, president of the Immigration Restriction League, made the public health model of “containment” explicit, arguing that borders should be sealed to stop alien immigration.<sup>18</sup> Similarly,

16. Eugenicists quoted Herbert Spencer regularly, e.g., see Harry H. Laughlin, *Eugenical Sterilization in the United States* (Chicago: Municipal Court, 1922), end leaf; *Proceedings of the First National Conference on Race Betterment* (Battle Creek, Mich.: Race Betterment Foundation, 1914), title page.

17. The “three Ds” represented accepted terminology for describing institutionalized populations supported by public funds; see, e.g., publications of the Bureau of the Census such as the *Statistical Directory of State Institutions for the Defective, Dependent and Delinquent Classes* (Washington, D.C.: Government Printing Office, 1919) (data for this publication were compiled by Harry H. Laughlin, superintendent of the Eugenics Record Office in New York).

18. “Just as we isolate bacterial invasions, and starve out the bacteria by limiting the area and amount of their food supply, so we can compel an inferior race to remain in its native habitat, where its own multiplication in a limited area will, as with all organisms, eventually limit its numbers, and therefore its influence” (Prescott Hall, “Immigration Restriction and World Eugenics,” *J. Hered.*, 1919, 10: 125–27, on p. 126).

Public Health Service officers argued that testing immigrants for mental defects would “prevent contamination of our racial stock.”<sup>19</sup>

Those trained in eugenic ideology could discuss the transmission of syphilis as a “pollution of the bloodline” that ran both horizontally (from person to person and from race to race) and vertically (from parent to child via both infection and genetic susceptibility). Syphilis linked generations, because it was transmitted perinatally—from infected mothers to their children. The rhetoric used to describe this invisible infection was similar to the rhetoric used to describe other “hereditary” transmission, like eye color. Finally, most doctors and eugenicists suspected that syphilis was a “racial poison”: not only was it transmitted from mother to child, but it likely injured the germ plasm in both, redoubling its pathogenic danger.

The attempt to disinfect areas infested with pests or microbes by fumigation mirrors eugenic attempts to make sterile those “infected” with bad heredity: in either instance, transmission to the larger community is blocked. Surgical “sterilization” would “keep the life stream pure” and protect the reproduction of those with sound heredity.<sup>20</sup> Finally, eradication—the attempt to kill the carriers of disease, such as mosquitoes and rats—parallels euthanasia, the more cautiously invoked but nonetheless eugenically sanctioned extermination of the human carriers of hereditary debilities.<sup>21</sup>

Doctors often explained the proliferation of syphilis among blacks through four recurrent assertions about heredity. First, there was a general consensus that physical characteristics, such as body and head morphology, were inherited in clusters linked to racial type.<sup>22</sup> Second, behavioral traits, such as the propensity to be artistic, emotionally volatile, or sexually promiscuous, were also thought to be inherited differently by various

19. Howard A. Knox, “Tests for Mental Defects: How the Public Health Service Prevents Contamination of Our Racial Stock by Turning Back Feeble-Minded Immigrants,” *J. Hered.*, 1914, 5: 122–30, on p. 122.

20. This motto appears on the frontispiece of Harry Laughlin’s treatise *Eugenical Sterilization in the United States* (n. 16).

21. See Martin S. Pernick, *The Black Stork* (New York: Oxford University Press, 1996), particularly “Eliminating the Unfit: Euthanasia and Eugenics,” pp. 81–99. As Pernick notes, support for eugenic euthanasia waxed and waned, but it was a “widely discussed and often advocated measure” in the second decade of the twentieth century (p. 15). See also Ian Robert Dowbiggin, *A Merciful End: The Euthanasia Movement in Modern America* (New York: Oxford University Press, 2003), pp. 17–20, where Dowbiggin describes a “flurry of interest in . . . eugenic euthanasia” occurring around 1900.

22. John S. Haller, Jr., “The Physician versus the Negro: Medical and Anthropological Concepts of Race in the Late Nineteenth Century,” *Bull. Hist. Med.*, 1970, 44: 154–67.

23. Third, differential susceptibility to disease was attributed to racial inheritance.<sup>24</sup> Finally, the different kinds and degrees of pathology that followed disease were related to race.<sup>25</sup> Eugenic researchers attempted to validate these assertions, which sometimes echoed the earlier folklore of racial medicine.

The claim that infectious diseases like syphilis were endemic in blacks because of racial differences was a cultural commonplace among physicians in the late nineteenth and early twentieth centuries. As early as 1873, Dr. Thomas P. Atkinson told the Medical Society of Virginia that “the negro is inferior, mentally, morally and physically, to the white man, and that owing to the peculiar organization and habits of the former, a different mode of treatment of his diseases is indicated.”<sup>26</sup>

By 1921, experts confidently concluded that “in respect to syphilitic infection there exist inherited biologic differences between white and negro patients.”<sup>27</sup> The higher rate of syphilis and gonorrhea among “the negro” was caused by “indiscriminate sexual indulgence” and low regard for personal hygiene, according to one physician,<sup>28</sup> while others insisted that “the negro problem is a part of the greater problem of heredity,”<sup>29</sup> and that “immoral tendency is a matter of inheritance.”<sup>30</sup> As the eugenic explanation for syphilis gained traction it was not uncommon to read, as Virginia eugenics activist Dr. Walter Plecker argued, that the “susceptibility is inherited, passed on from generation to generation in the germ-plasm.”<sup>31</sup>

23. See Charles B. Davenport, *Eugenics Record Office Bulletin*, no. 9: *State Laws Limiting Marriage Selection Examined in Light of Eugenics* (Cold Spring Harbor, N.Y.: Eugenics Record Office, 1913): “There is little doubt that nose-form, lip-form, and even elements of intelligence and self control will be inherited in similar fashion [to hair texture]” (p. 32); the “lack of sex-restraint” is considered hereditary on p. 34.

24. Resistance to yellow fever and poison ivy was seen as common among blacks, along with lack of resistance to tuberculosis and pneumonia: *ibid.*, p. 33.

25. E.g., a noted syphilologist wrote: “aneurysm and aortic insufficiency due to syphilis are commoner among negroes than among whites” (H. H. Hazen, “Syphilis in the American Negro,” *JAMA*, 1914, 63: 463–66, on p. 464).

26. Thomas P. Atkinson, “On the Anatomical, Physiological and Pathological Differences between the White and Black Races,” *Trans. Med. Soc. Virginia*, 1873, 4: 64–71, on p. 66.

27. Ernest L. Zimmerman, “A Comparative Study of Syphilis in Whites and in Negroes,” *Arch. Dermat. & Syphil.*, 1921, 4: 75–88, on p. 88.

28. W. S. Woody, “The Incidence of Heart Disease in the Negro Race,” *Virginia Med. Monthly*, 1924, 50: 784–87, on p. 787.

29. W. A. Plecker, “Eugenics or Race Deterioration—Which?” *Virginia Med. Monthly*, 1925, 52: 282–88, on p. 283.

30. *Ibid.*

31. *Ibid.* Eugenic arguments for “racial” differences in other journals were not limited to black/white distinctions: other writers found that “racial susceptibility and resistance”

Indeed, by 1936, with the publication of the initial findings from the Tuskegee study, Virginia's Taliaferro Clark and Raymond Vonderlehr also concluded that "the cardiovascular system is the most commonly involved in the late syphilitic process and the aorta is the most commonly involved structure in latent syphilis in the adult male Negro."<sup>32</sup> In his 1937 classic, *Shadow on the Land: Syphilis*, Surgeon General Thomas Parran reinforced these assertions: "The Negro is not to blame because his syphilis rate is six times that of the white. . . . It is not his fault that the disease is biologically different in him than in the white. . . . It is through no fault of hers that the colored woman remains infectious two and one-half times as long as the white woman."<sup>33</sup> The blame for disease lay in problematic heredity. These intertwined ideas of heredity, race, syphilis, and public health were commonly taught at the University of Virginia School of Medicine.

## Medical Eugenics at Virginia

While it is well established that the teaching of eugenics was widespread in colleges and universities, there has been very little scholarship on its presence in medical curricula.<sup>34</sup> In a state where "racial medicine" filled the medical journals, the University of Virginia provided fertile ground for developing what was apparently among the earliest medical coursework incorporating eugenic theory.

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explained the disparity in the incidence of diseases such as measles, diphtheria, and scarlet fever among groups described as whites, negroes, Italians, Russian-Polish, and Irish; see Haven Emerson, "Race Incidence of Measles, Diphtheria and Scarlet Fever in New York, 1921-1925," *JAMA*, 1931, 96: 2153. Emerson was a professor of public health at Columbia University and sat on the Advisory Council of the American Eugenics Society from 1923 to 1935, at the same time as Hugh Cumming; see Barry Alan Mehler, "A History of the American Eugenics Society, 1921-1940" (Ph.D. diss., University of Illinois, Urbana-Champaign, 1988), p. 337.

32. Raymond A. Vonderlehr et al., "Untreated Syphilis in the Male Negro: A Comparative Study of Treated and Untreated Cases," *Ven. Dis. Info.*, 1936, 17: 260-65, on p. 265. Clark also attributed a higher susceptibility to tuberculosis to blacks. Only months after the Tuskegee study began, he argued to an audience of the National Tuberculosis Association that an "inherent racial difference" made blacks more likely to contract tuberculosis; see "Race May Be Cause of Negro's Lower Tuberculosis Resistance," *Sci. News Lett.*, 1932, 21: 409.

33. Thomas Parran, *Shadow on the Land: Syphilis* (New York: Reynal & Hitchcock, 1937), p. 175.

34. Hamilton Cravens determined that between 1914 and 1928 the number of colleges offering eugenics courses jumped from 44 to 376, with more than 20,000 students enrolling in these courses; Cravens is quoted in Steven Selden, "Education Policy and Biological Science: Genetics, Eugenics, and the College Textbook, c. 1908-1931," *Teachers College Record*, 1985, 87: 35-51, on p. 42.

Dr. Paul Brandon Barringer taught at the School of Medicine for many years and was chairman of the faculty at Virginia (a position analogous to president) from 1897 to 1903. He was a towering figure throughout the south and a model for medical students at the University of Virginia. Explicitly linking African Americans to the greatest public health problems of his era, Barringer named tuberculosis, syphilis, and typhoid fever as “the three great influencing diseases” attending the demise of “a markedly criminal race.”<sup>35</sup> Similar comments reflected his concern for racial separation as a public health issue. Medical students during the Barringer era learned his attitudes not merely as social views, but as part of their medical education.<sup>36</sup>

Dr. Harvey Ernest Jordan succeeded Barringer as professor of anatomy and eventually became dean of the medical school. Jordan clothed his own racial attitudes in the newly refined language of the science of eugenics. Immediately before moving to Virginia, he had worked with Charles Davenport, dean of the American eugenics movement, at the experimental biology station at Cold Spring Harbor, N.Y. Subsequently, Jordan’s lectures to medical students were accompanied by slides supplied by Davenport’s Eugenics Record Office. Davenport encouraged him to “demonstrate the heredity of such matters as serve to differentiate the two races; such as the alleged difference in resistance to cancer; to tuberculosis; to caries of the teeth; to immunity from fevers; to educability; to sex control.”<sup>37</sup> Jordan corresponded regularly with Davenport, to whom he pledged his support, offering “to be of aid to the Eugenics Record Office and work in harmony with it.”<sup>38</sup>

Jordan belonged to the American Eugenics Society and wrote on eugenics regularly in articles such as “Eugenics: The Rearing of the Human Thoroughbred” and “The Eugenic Bearings of the Efforts for Infant Conservation.” In “The Biological Status and Social Worth of the Mulatto,” he echoed Barringer’s earlier assertions that blacks were part

35. Paul Brandon Barringer, “The Sacrifice of a Race” (Paper presented before A Southern Society for the Consideration of Race Problems in Relation to the Welfare of the South, 10 May 1900), p. 26, Paul Brandon Barringer Papers, Alderman Library, University of Virginia, Charlottesville, Va. (hereafter PBB); discussed in Gregory M. Dorr, “Segregation’s Science: The American Eugenics Movement and Virginia, 1900–1980” (Ph.D. diss., University of Virginia, 2000), p. 110. Barringer’s “Essay on Constitutional Syphilis” is discussed in *ibid.*, pp. 94–97, 672–78.

36. Dorr, “Segregation’s Science” (n. 35), pp. 88–122.

37. Charles Davenport to Harvey Ernest Jordan, 7 August 1913, Charles B. Davenport Papers, American Philosophical Society, Philadelphia, Pa. (hereafter CBD).

38. Jordan to Davenport, 21 November 1911, CBD.

of the “primitive” and “inferior” races whose condition was “naturally handicapped.”<sup>39</sup> Jordan argued to the First International Congress of Eugenics in 1912 that “the future medical curriculum must include a course in sound eugenics”; “physicians,” he said, “could be the most potent factors in spreading, and giving proper direction to, the eugenic propaganda.”<sup>40</sup>

A leader in his field, Jordan published widely used textbooks in both histology and embryology. Each edition of the embryology text contained substantial material on eugenics; the final (1948) edition featured virtually the same treatment of the topic as had the first (1926) edition, and promised “racial improvement through control of the mechanism of heredity.”<sup>41</sup> Despite contrary advances in genetic research, Jordan continued to assert that “eugenics . . . is properly designated as a science” that proceeds “upon the assumption that human characters in general follow Mendelian principles in heredity.”<sup>42</sup> In a text still used in the 1950s, Jordan continued to reference the work of Charles Davenport from more than a quarter-century earlier.<sup>43</sup>

Jordan recruited like-minded scholars to join him at Virginia. Ivey Foreman Lewis, hired in 1915 as chairman of Virginia’s School of Biology, taught a course in eugenics that was required for premedical students and, by 1936, was recommended for all students hoping to enter “public service.” Lewis was also a member of the Eugenics Research Association, serving with other Virginia colleagues on its committee on education for the state. He taught at Virginia until 1953, maintaining his allegiance to the eugenically founded analysis of race throughout his career.<sup>44</sup>

39. Harvey Ernest Jordan, “The Biological Status and Social Worth of the Mulatto,” *Pop. Sci. Monthly*, 1913, 82: 573–82, on pp. 577, 579. See also H. E. Jordan, “Eugenics: The Rearing of the Human Thoroughbred,” *Cleveland Med. J.*, 1912–13, 11: 875–88; idem., “The Eugenic Bearings of the Efforts for Infant Conservation,” *Transactions of the American Association for the Study and Prevention of Infant Mortality*, 1912, 2: 117–18.

40. Harvey Ernest Jordan, “The Place of Eugenics in the Medical Curriculum,” in *Problems in Eugenics: Papers Communicated to the First International Eugenics Congress*, ed. Leonard Darwin (London: Eugenics Education Society, 1913), pp. 396–99, on p. 397.

41. Harvey Ernest Jordan and James Ernest Kindred, *Textbook of Embryology*, 5th ed. (New York: Appleton-Century, 1948), pp. 511–13, on p. 511.

42. *Ibid.*, p. 512.

43. *Ibid.*, p. 514. The books referenced were Charles B. Davenport, *Heredity in Relation to Eugenics* (New York: Holt, 1911); *Scientific Papers of the Second International Congress of Eugenics*, vol. 1, *Eugenics, Genetics and the Family*; vol. 2, *Eugenics in Race and State* (Baltimore: Williams & Wilkins, 1923).

44. For an extended treatment of Lewis, see Gregory M. Dorr, “Assuring America’s Place in the Sun: Ivey Foreman Lewis and the Teaching of Eugenics at the University of Virginia, 1915–1953,” *J. Southern Hist.*, 2000, 66: 257–96.

The physician and physical anthropologist Robert Bennett Bean joined the Virginia medical faculty in 1916. Widely considered one of the fathers of “scientific racism,” Bean published numerous racially focused anthropometric studies and books, including *The Racial Anatomy of the Philippine Islanders* (1910), *The Races of Man* (1932), and *The Peopling of Virginia* (1938). In 1932, he wrote that blacks “have an almost alarming susceptibility to tuberculosis and venereal diseases.”<sup>45</sup>

By 1930, no fewer than seven members of the medical faculty at Virginia were outspoken eugenicists. Each had been tutored in eugenics during his own training, and all integrated eugenics into their professional activities.<sup>46</sup> Medical students at Virginia studied the theories of eugenics under those teachers from the 1910s through the 1950s. Many of these students, like Raymond Vonderlehr, would leave school to work for previous Virginia graduates like Hugh Cumming and Taliaferro Clark. Cumming and Clark graduated in the 1880s before formal training in eugenics was available—but after imbibing Paul Barringer’s protoeugenic nostrums, they learned their eugenics on the job, as participants in the national eugenics movement.

The Virginia connection went beyond fostering intellectual homogeneity: it also positioned students for roles in public health medicine. The link between sectional politics, Virginia, and the PHS is illuminated by focusing briefly on the administration of President Woodrow Wilson, the man who elevated Dr. Hugh Cumming to the highest rank of the PHS.

### Wilsonian Politics: Virginians in the Public Health Service

In 1913, in his fifteenth year as an officer in the Public Health Service, Dr. Hugh S. Cumming watched Woodrow Wilson’s first inaugural parade from his Washington apartment. He marked the event as a good omen for the reentry of Virginians into national government: “The view was superb and Old Virginia walked away with all the first prizes.”<sup>47</sup> Wilson’s ascendancy was to have a major impact on Cumming’s own career, leading to an appointment as surgeon general of the Public Health Service, and the subsequent dominance of Virginians within that agency for years to come. Woodrow Wilson’s administration took place amidst a

45. Robert Bennett Bean, *The Races of Man: Differentiation and Dispersal of Man* (New York: University Society, 1932), p. 53.

46. Extended treatment of eugenicists on Virginia’s faculty can be found in Dorr, “Segregation’s Science” (n. 35), chap. 3.

47. Hugh Smith Cumming to Mother, 18 March 1913, Hugh Smith Cumming Papers, Alderman Library, University of Virginia, Charlottesville, Va. (hereafter HSC).

rising Progressive Era ethos that championed the rational management of society by scientifically trained, bureaucratic experts. Demonstrating his commitment to progress as governor of New Jersey in 1911, Wilson had taken the noteworthy step of signing one of America's early eugenic sterilization acts into law.<sup>48</sup>

The PHS hierarchy in the 1920s, like the president and the surgeon general, all had ties to Virginia and its state university. These connections assured a continuity of personnel trained within a similar institutional and social culture, and ensured a commonality of belief about African Americans, sexually transmitted disease, and public health. At the beginning of his second term, Wilson named fellow-Virginian Carter Glass secretary of the treasury. In that post Glass controlled the Public Health Service, where Dr. Rupert Blue presided as surgeon general. Searching for a new administrator in 1920, Glass "was determined to appoint a Virginian" to follow Blue, who had attended college at Virginia but was a native of North Carolina; following the recommendation of both Blue and Glass, Wilson appointed Cumming as his new Surgeon General.<sup>49</sup>

Cumming's appointment established a trend of elevating southerners generally, and Virginians particularly, within the PHS. Links between the PHS and the University of Virginia's medical school imbued PHS officers in the Division of Venereal Diseases with a professional outlook born of a common institutional heritage. The character of Virginia's medical training and its long-standing emphasis on issues of public health provide insight into how that perspective was formed.

The University of Virginia School of Medicine adopted a public health emphasis early in its history. James Lawrence Cabell, the third physician to hold a professorship of medicine at Thomas Jefferson's university, was responsible for founding the Virginia Board of Health in 1872; he enlisted as a charter member of the American Public Health Association in 1878, and was its president in 1879.<sup>50</sup> That same year he became the first executive of the National Board of Health, a short-lived federal agency founded in the wake of a yellow fever outbreak.<sup>51</sup> Cabell taught Paul Brandon Barringer, who took his Virginia medical degree in 1877

48. "Gov. Wilson Signs Sterilization Bill," *New York Trib.*, 4 May 1911, p. 1. See also James W. Trent, *Inventing the Feeble Mind: A History of Mental Retardation in the United States* (Berkeley: University of California Press, 1994), pp. 137, 173.

49. Hugh Smith Cumming, *Memoir*, pp. 24–32, on p. 24, HSC.

50. See Dorr, "Segregation's Science" (n. 35), pp. 72–73.

51. John Duffy, *The Sanitarians: A History of American Public Health* (Urbana: University of Illinois Press, 1990), p. 168.

and replaced Cabell on the Virginia faculty in 1883. Barringer served as president of the Virginia Board of Health during the cholera outbreak of 1893, and also emphasized the importance of public health to Virginia medical school students.<sup>52</sup>

The Public Health Service eventually enlisted many graduates of the University of Virginia. Barringer's students included two future surgeons general, an assistant surgeon general, and a number of other PHS physicians.<sup>53</sup> Even before Rupert Blue's appointment as surgeon general in 1912, Virginia "furnished a great number of personnel" for the Marine Hospital in Staten Island, New York.<sup>54</sup> The Virginia presence continued for many years, prompting one PHS doctor to write in 1931 that "a large percentage of the men who have and are doing the best work under the Service control are also Virginia graduates."<sup>55</sup> A study of service rosters indicated that 10 percent of the PHS between 1918 and 1938 claimed Virginia birth, and at least 13 percent were University of Virginia alumni. By 1923 the number of Virginians in the service equaled at least 16 percent of the commissioned corps.<sup>56</sup> The size of the Virginia presence is all the more noteworthy in light of the relatively small number of physicians who graduated from Virginia in those years.<sup>57</sup>

By the mid-1920s, young Virginia graduates permeated the ranks of the PHS. Twenty years later, these physicians had matured, and many took leadership roles alongside other Virginia alumni. By the 1940s the

52. The cholera crisis fueled Barringer's interest in public health; see "Cholera and Its Prevention: A Circular by the State Board of Health" (Richmond, 1893), PBB. See also Dorr, "Segregation's Science" (n. 35), pp. 98, 119.

53. Between 1889 and 1893, Rupert Blue, Taliaferro Clark, and Hugh Cumming all studied under Barringer: see University of Virginia, *Catalogue and Announcements* (Richmond: Wadley, 1889–90).

54. Cumming, *Memoir*, p. 24, HSC (n. 49). During the years of greatest growth in the PHS, Edwin Alderman, a boyhood friend of Woodrow Wilson, was president of the University of Virginia. Following Wilson's death he was chosen to eulogize Wilson before Congress: see *Life*, 1 January 1925, p. 14.

55. George B. Young to Lewis C. Williams, 13 January 1931, President's Papers, Alderman Library, Charlottesville, Va.

56. The PHS rosters indicated place of birth and year of commission; Virginia alumni directories listed year of graduation, degree received, and profession—USPHS for these men. The percentage of Virginia natives is based upon a comparison of every officer listed as a Virginia native with alumni directories and student directories (not all directories have survived). Between 1918 and 1943, at least 74 percent of all Virginians in the PHS had graduated from the University of Virginia.

57. In 1920 Virginia conferred only 28 M.D. degrees; by 1930 the number was 53. (These numbers are derived from published lists of graduates in the University of Virginia's *Catalogue and Announcements* for the appropriate years.)

Virginia presence at the PHS was nearly a legend.<sup>58</sup> The trend that had begun during the tenure of Surgeon General Rupert Blue developed into a dynasty under Hugh Cumming. By the time of his retirement the syphilis study was under way, and officers trained in the racial vision that justified it would survive his service by decades. For a significant portion of the Tuskegee study's duration, these men wielded enormous power within the PHS. As a consequence, their attitudes toward race, disease, morality, and medicine shaped PHS policy, including the ongoing protocols of the Tuskegee study. Not only did the leaders of the study share an ideological affinity related to their training in racial medicine, that affinity was demonstrated by continuing involvement in the organized work of the eugenics movement.

### The Public Health Service and the Organized Eugenics Movement

Alarm over the supposedly hereditary roots of health “defects” was evident among public health professionals even before the term “genetics” was coined in 1906. In the midst of advocacy for a federal department of public health, Congress considered legislation as early as 1897 calling for the collection of statistics related to marriages “liable to produce physically and mentally defective offspring; and any information leading to race improvement through better marriage selection.”<sup>59</sup> While this bill did not become law, the impetus to think of public health problems in terms of heredity persisted in other forms.

The appointment of Hugh Cumming to head the PHS in 1920 situated him to continue a trend that Rupert Blue had initiated for the agency and its officers: active involvement in the American eugenics movement. For the first forty years of the twentieth century, the highest officials in the U.S. Public Health Service and other public health leaders were among the most enthusiastic supporters of the claim that every social ill—from crime, poverty, and syphilis to mental disorder—could be cured by “ge-

58. As late as 1942, the presence of Virginians in the Public Health Service was noteworthy to those who founded the Centers for Disease Control in Atlanta. The placement of that agency in Georgia prompted PHS engineer Mark Hollis, a Georgian, to boast: “Let this be the first time Georgia ever got anything over on Virginia” (Elizabeth W. Etheridge, *Sentinel for Health: A History of the Centers for Disease Control* [Berkeley: University of California Press, 1992], p. 4).

59. “A Bill to Establish a Department of Public Health and to Define Its Duties,” *Amer. J. Pub. Health & Nation's Health*, 1897, 28: 1191–94, on p. 1194.

netic” interventions.<sup>60</sup> Prominent geneticists, embracing the eugenic ideal of a disease-free world, urged public health workers to become “eugenically minded.”<sup>61</sup> Long after American geneticists had challenged the use of eugenic theory to justify compulsory sterilization, some public health stalwarts continued to applaud that practice.<sup>62</sup>

Physicians who were active participants in and vigorous advocates of the eugenics movement filled the Public Health Service ranks. As genetic knowledge evolved, many specialists in that field gradually drifted away from eugenics, but a generation would pass before eugenics would become “a term of opprobrium among scientists” more generally.<sup>63</sup> It is not surprising, then, that it would take some time for PHS officials to respond to new genetic understanding and eschew outmoded eugenic policies.

The PHS had 135 commissioned officers by 1913, the majority of whom participated in the medical inspection of passengers who landed at Ellis Island.<sup>64</sup> George Stoner, who directed the immigrant inspection service, was listed on the American Breeders Association “Committee on Eugenics” in 1910.<sup>65</sup> Another officer explained how PHS medical examinations prevented a “large amount of bad breeding” by keeping out defective aliens.<sup>66</sup> PHS assistant surgeon W. C. Rucker asserted vigorously

60. For example, Johns Hopkins University medical dean and public health pioneer William Welch and his colleague Llewellys Barker were members of the first Scientific Board of Directors of the Eugenics Record Office: see Harry H. Laughlin, *Eugenics Record Office Report*, no. 1 (Cold Spring Harbor, N.Y.: Eugenics Record Office, 1913), flyleaf.

61. H. S. Jennings, “Public Health and Race Progress—Are They Compatible?” *Science*, 1927, 66: 45–50, on p. 47.

62. In the pages of the flagship journal for public health professionals, one physician predicted that the ending of parenthood among Germany’s “unfit” would be carried out in the Nazi Reich in a “legally and scientifically fair way” via a eugenic sterilization law that would provide a model for American emulation (W. W. Peter, “Germany’s Sterilization Program,” *Amer. J. Pub. Health & Nation’s Health*, 1934, 24: 187–91, on p. 187).

63. Diane B. Paul, *Controlling Human Heredity: 1865 to the Present* (Atlantic Highlands, N.J.: Humanities Press, 1995), p. 124. See also L. C. Dunn, “Cross Currents in the History of Human Genetics,” *Amer. J. Hum. Genet.*, 1962, 14: 1–13, on pp. 3–4 (noting how in the early years of the twentieth century, genetics and eugenics were often taught by the same people).

64. On the PHS Ellis Island contingent, see Alfred C. Reed, “United States Public Health Service,” *Pop. Sci. Monthly*, 1913, 82: 367–68. On the role of the PHS in immigrant inspection, see L. E. Cofer (Assistant Surgeon General, PHS), “Eugenics and Immigration: Large Amount of Bad Breeding Prevented by Medical Examination of Aliens at Ports of Entry,” *J. Hered.*, 1915, 6: 170–74, on p. 170; Cofer notes that ninety-four officers were detailed to Ellis Island by 1915. On Ellis Island inspections more generally, see Alan M. Kraut, *Silent Travelers: Germs, Genes, and the “Immigrant Menace”* (New York: Basic Books, 1994).

65. “Meeting of the Eugenics Section,” *Amer. Breeders Mag.*, 1910, 1: 305.

66. Cofer, “Eugenics and Immigration” (n. 64), p. 170.

that “eugenics is a science. It is a fact, not a fad.”<sup>67</sup> Statements of the PHS hierarchy were used to argue that the restriction of immigration to the United States would contain serious epidemic diseases among the eugenically inferior ethnic groups of Asia and Europe.<sup>68</sup> At gatherings of eugenic enthusiasts, PHS officers argued for restrictive immigration and for the proposition that syphilis was a hereditary disease.<sup>69</sup> The writing of eugenic activists echoed concerns about the impact of inheritance on infectious diseases,<sup>70</sup> and described the function of “indirect heredity,” the predisposition to contract infectious diseases.<sup>71</sup>

In America’s eugenic heyday, the popular press reported on PHS officials’ promotion of the eugenic message. When Surgeon General Rupert Blue conducted a “eugenic examination” and issued the first eugenic marriage certificate on behalf of the PHS in 1913, the event was page-one news in the *New York Times*.<sup>72</sup> In 1915 the PHS borrowed charts from the eugenically oriented National Committee on Mental Hygiene and used them in an exhibit at the Panama Pacific International Exposition to explain the links between alcoholism, syphilis, mental deficiency, immigration, and eugenics.<sup>73</sup>

Senior officers of the PHS assumed leadership roles in eugenic organizations and supported immigration restriction on biological grounds. Rupert Blue and assistant surgeon general W. C. Rucker joined Stanford University president David Starr Jordan as officers of the American Breeders Association Eugenics Committee in 1914. Blue also served alongside Charles Davenport that year, representing the American Genetic Asso-

67. W. C. Rucker (Assistant Surgeon General, PHS), “More Eugenic Laws,” *J. Hered.*, 1915, 6: 219–26, on p. 219. Rucker demonstrated that even among convinced boosters of eugenics, there was heterogeneity of opinion on the inheritance of infectious diseases. He argued that venereal disease had “nothing whatever to do with eugenics,” and that “venereal diseases are not hereditary” (p. 223). In another forum, Rucker advocated for more public health attention not only to diseases caused by “vegetable and animal parasites” but also that “greater body of destructive agencies, human parasites” (W. C. Rucker, “A Program of Public Health for Cities,” *Amer. J. Pub. Health*, 1917, 7: 225–34, on p. 228).

68. Robert De C. Ward, “The Immigration Problem Today,” *J. Hered.*, 1920, 11: 323–28, on p. 323.

69. W. C. Billings (Surgeon, Ellis Island, N.Y.), “The Medical Application of the Immigration Law,” in *Eugenics in Race and State* (n. 43), pp. 397–401; Daisy M. O. Robinson (PHS), “Heredity and Venereal Diseases,” *ibid.*, pp. 318–21.

70. Roswell Johnson, “Eugenic Aspect of Sexual Morality,” *J. Hered.*, 1917, 8: 121–22.

71. Paul Popenoe, “Heredity and Tuberculosis,” *J. Hered.*, 1923, 14: 112–13, on p. 113.

72. “Gets Eugenic Certificate,” *New York Times*, 22 October 1913, p. 1.

73. W. C. Rucker and C. C. Pierce, *United States Public Health Service Exhibit at the Panama Pacific International Exhibition, San Francisco, 1915* (Washington, D.C.: Government Printing Office, 1916), p. 29.

ciation as U.S. liaison to provide advice on the upcoming International Congress of Eugenics.<sup>74</sup> Blue's involvement with eugenicists continued until the end of his term as surgeon general, and he was credited by the physical anthropologist and eugenics devotee Aleš Hrdlička with facilitating anthropometric investigations of "the various nationalities of immigrants" who were examined by Public Health officers working with the Bureau of Immigration.<sup>75</sup>

Public Health Service officers endorsed the eugenically focused mental testing program at Ellis Island,<sup>76</sup> met repeatedly with representatives of the American Eugenics Association, and made public presentations on the "eugenic aspects of immigration."<sup>77</sup> Officers of the PHS took a high profile in the Eugenics Committee of the American Genetics Association, which planned to initiate local societies of eugenics and nurture a "eugenic conscience" in American citizens.

Charles Davenport, who served during World War I in the Sanitary Corps, was invited in 1920 by the Public Health Service Venereal Disease (VD) Division to become a special consultant to the PHS and conduct a course on "Heredity and Eugenics" as part of venereal-disease-control training.<sup>78</sup> The VD division was the "prestige unit" of the PHS in the 1920s: it was the proving ground—a kind of "boot camp"—for officers who would command the PHS in future years, and the invitation to Davenport implied great respect for his work in eugenics.<sup>79</sup> Davenport presented a lecture titled "Heredity in Man," and the course attracted more than two hundred PHS participants.<sup>80</sup>

74. See "The Eugenics Committee" and "International Eugenics Committee," *J. Hered.*, 1914, 5: 340.

75. Aleš Hrdlička, *Physical Anthropology* (Philadelphia: Wistar Institute, 1919), p. 127.

76. Howard Knox (Assistant Surgeon, USPHS), "Tests for Mental Defects: How the Public Health Service Prevents Contamination of Our Racial Stock by Turning Back Feeble Minded Immigrants," *J. Hered.*, 1914, 5: 122–30, on p. 122.

77. "Second Report of the Committee on Immigration of the Eugenics Section of the American Eugenics Association," *J. Hered.*, 1914, 5: 297–300, on p. 299.

78. A virtual *Who's Who* of academic eugenicists were invited to participate in the course, including Edward Grant Conklin of Princeton, Roswell Johnson of the University of Pittsburgh, and Leta Hollingsworth of Columbia University, as well as W. E. D. Stokes, author of *The Right to Be Well Born: Horse Breeding in Its Relation to Eugenics* (New York: O'Brien, 1917). See C. C. Pierce (Assistant Surgeon General, Venereal Disease Division, USPHS) to Davenport, 4 October 1920, CBD.

79. Etheridge, *Sentinel for Health* (n. 58), p. 20.

80. Davenport to Pierce, 18 October 1920; Pierce to Davenport, 9 November 1920 (tabulation of registrants for VD conference), CBD.

That Davenport was the chosen authority to lecture the PHS VD Division is telling in light of both his private and public opinions on eugenics, race, and sexually transmitted disease. As early as 1912, he had joined the voices of those who saw a hereditary basis for infectious diseases, arguing that “even tuberculosis, syphilis, and the plague are the product of a specific germ acting on susceptible protoplasm and it is this susceptibility that is the inheritable factor.”<sup>81</sup> Davenport was a recognized authority on the potential effects of “race mixing,” and he advised an official of the American Social Hygiene Association—an organization specifically focused on eradicating “social diseases” like syphilis—to avoid combining “whites and negroes” in statistics on sexually transmitted diseases, “for obvious reasons.”<sup>82</sup> To Davenport and other eugenicists, racial difference was considered “quite certainly genetic.”<sup>83</sup>

As the foregoing discussion illustrates, the doctors who would launch Tuskegee not only rose through the ranks in an agency steeped in the language of heredity, but developed alongside senior colleagues who embraced the value of eugenic explanation, and were proud to do so publicly. Cumming, Clark, and Vonderlehr were active in and lent official support to eugenic organizations. They honored and respected the most prominent eugenic propagandists, and regarded them as experts in the field of venereal-disease eradication. The careers of these doctors demonstrate how eugenics informed the Tuskegee study.

## The Tuskegee Study Physicians and Eugenics

Hugh Cumming became a member of the American Eugenics Society and served on its advisory council in 1923.<sup>84</sup> In articles written to educate the public, he explained the importance of heredity and eugenics to the field of preventive medicine.<sup>85</sup> He served as a delegate to the second Pan-American conference on eugenics in 1934.<sup>86</sup> He also initiated a study of the relationship between immigration and the incidence of insanity in the United States, to determine whether America’s racial stock was being com-

81. Charles B. Davenport, *Eugenics Record Office Bulletin*, no. 6: *The Trait Book* (Cold Spring Harbor, N.Y.: Eugenics Record Office, 1912), p. 2.

82. Davenport to Robbins Russel (American Social Hygiene Association), 28 June 1919, CBD.

83. “Race Crossing in Jamaica,” *Eugen. News*, 1929, 14: 119–20, on p. 120.

84. Mehler, “History of the American Eugenics Society” (n. 31), p. 328.

85. E.g., Hugh S. Cumming, “The Progress of Medicine,” *Washington Post*, 8 January 1928, p. SMI.

86. “Envoy of Ecuador Is Host at Dinner,” *Washington Post*, 5 October 1934, p. 15.

promised.<sup>87</sup> Clearly, his was more than a passing flirtation with eugenics, and he would promote PHS doctors with even deeper eugenic interests.

Cumming selected his fellow Virginia alumnus Taliaferro Clark to establish a working relationship with the Rosenwald Fund, which provided funding for syphilis pilot studies in 1929–32.<sup>88</sup> In cooperation with PHS colleague Charles W. Stiles, Clark assisted the Committee on the Provision for the Feeble-minded in 1916, planning a eugenic survey of Indiana. That project placed Clark alongside Eugenics Record Office field researcher Arthur Estabrook in an attempt to tally the number of “feeble-minded” residents in Indiana as a prelude to eugenic legislation.<sup>89</sup>

Clark’s report on rural school sanitation analyzed both the physical and mental status of children in one Indiana county and was characterized by an unmistakably hereditarian tone. Using common anthropometric measures of head shape and size, Clark analyzed physical features of children by “race” or ethnic background.<sup>90</sup> His report also linked “feeble-mindedness” and “immorality” with their causes, including “defective heredity” and “syphilis.”<sup>91</sup> His data provided a basis for Estabrook’s later work in Indiana.<sup>92</sup> Clark repeated standard eugenic rhetoric in his survey of Indiana schoolchildren for the USPHS: calling children who scored poorly on standardized tests “constitutionally inferior” and “a menace to the community,” he generated data that would later be used by Indiana officials to justify the sterilization of children.<sup>93</sup>

87. See Cumming’s entry in *National Cyclopaedia of American Biography* (New York: White, 1938), pp. 279–82.

88. Cumming, *Memoir*, p. 406, HSC (n. 49).

89. See “News and Notes,” *Eugen. News*, 1916, 1: 18–19, on p. 19. For further reports on PHS involvement in Indiana survey work, see “Indiana Work in Mental Hygiene,” *ibid.*, pp. 81–82; “Indiana Survey,” *ibid.*, 1917, 2: 21; “Federal Mental Surveys,” *ibid.*, p. 39.

90. Taliaferro Clark, George Collins, and W. L. Treadway, *Public Health Bulletin*, no. 77: *Rural School Sanitation: Including Physical and Mental Status of School Children in Porter County, Indiana* (Washington, D.C.: Government Printing Office, 1916), esp. “Racial Differences in Physical Development,” pp. 70–74.

91. *Ibid.*, p. 102.

92. Estabrook’s research was collected in a series entitled *Mental Defectives in Indiana*, reports by the Indiana Committee on Mental Defectives that were issued in 1916, 1918, 1919, and 1922. Copies are available in the Harry Hamilton Laughlin Collection, Pickler Memorial Library, Truman State University, Kirksville, Mo.

93. See Taliaferro Clark, “The School as a Factor in the Mental Hygiene of Rural Communities,” *Proceedings of the National Conference on Charities and Corrections, 43rd Annual Meeting* (Chicago: Hildmann, 1916), pp. 215, 219–20. For a further exploration of the nexus between public health, organized eugenics, and “mental defectives” in Indiana, see “Abnormal and Normal,” *Survey*, 1916, 37: 150.

Clark was an expert in the diagnosis of trachoma, an eye disease that received particular attention during the medical inspection of immigrants. It was, he said, uncommon in “native-born Americans” but common in a growing number of southern European migrants—an “alien population” of different “character” landing at American ports at the turn of the twentieth century.<sup>94</sup> Clark directed medical examinations at the port of Philadelphia and later engaged in immigration quarantine and mental testing at New York’s Ellis Island between 1926 and 1929, following the implementation of the restrictive Immigration Act of 1924. This law, which owed some part of its success to lobbying by eugenicists, set strict quotas on the number of immigrants allowed to enter America, limits based upon tests purporting to show “racial” differences in intelligence between northwestern (superior) and southeastern (inferior) Europeans.<sup>95</sup>

In 1930, Clark officially took the helm of the PHS Division of Venereal Disease and was instrumental in the establishment of the Tuskegee study. He thus moved from a position testing eugenic qualities of schoolchildren, to one that enforced eugenic policy on immigrants, to one that reflected eugenic theory concerning venereal disease among blacks.

Like Cumming, Clark chose subordinates with similar experiences and views. He picked Virginia medical graduate Raymond A. Vonderlehr to lead the PHS Tuskegee study team in 1932.<sup>96</sup> Vonderlehr had studied cardiovascular syphilis—a pathology that was thought to afflict blacks most and was often ascribed to hereditary, racial susceptibility. Throughout his administration of the Tuskegee study he emphasized findings of increased cardiovascular syphilis, despite the fact that independent cardiologists seriously questioned his diagnoses.<sup>97</sup> While the certainty that syphilis infected both races prohibited physicians like Vonderlehr from claiming

94. T. Clark and J. W. Schereschewsky, *Trachoma: Its Character and Effects* (Washington, D.C.: Government Printing Office, 1907), p. 3.

95. Jones, *Bad Blood* (n. 5), p. 54. For the eugenic basis of the Committee on Provision for the Feeble-minded, see Trent, *Inventing the Feeble Mind* (n. 48), pp. 175–79. For the eugenic basis of anti-immigration political lobbying and legislation, see John Higham, *Strangers in the Land: Patterns of American Nativism, 1860–1925*, 2nd ed. (New Brunswick, N.J.: Rutgers University Press, 1994), pp. 150–53, 312–24.

96. Vonderlehr completed his first two years of medical study at Washington University in St. Louis, where he studied under Dr. R. J. Terry and Dr. C. H. Danforth. Terry and Danforth were early proponents of eugenics: see “Eugenics Conference,” *Eugen. News*, 1916, 1: 48–50, on p. 49; Harry H. Laughlin, *Exhibit Book—Second International Exhibition of Eugenics* (Baltimore: Williams & Wilkins, 1923), p. 56.

97. See Vonderlehr et al., “Untreated Syphilis” (n. 32). Physicians from the American Heart Association criticized the findings; see Jones, *Bad Blood* (n. 5), pp. 121 (Vonderlehr’s bias), 139–40 (criticism).

that it was inherently a “black” disease, establishing racial differences in the resulting pathology allowed them to do the next best thing.

The work at Tuskegee was structured to compare an all-black cohort to the only other study of untreated syphilis reported in the medical literature: the all-white cohort analyzed in Norway in 1910.<sup>98</sup> Parallels between the two studies were explicit, and Norwegian investigators were invited to view firsthand the “remarkable socioeconomic and racial differences between the rural Alabama Negro farmers and the fair skinned Norwegians” who were examined in the earlier study.<sup>99</sup> The conclusion—that blacks contracted syphilis differently from whites, passed it on in a more robust form, and expressed it physiologically in cardiovascular and cerebral lesions—rang true to the doctors who ran the Tuskegee study. The differences were purportedly racial, and could be understood and explained in the context of the wide-ranging images available in the language of eugenics, which insisted upon racial distinctions of hereditary origin.

The impulse to produce a “black counterpart” to the then well-known Oslo study, which tracked untreated syphilis in whites retrospectively, highlights the preconception that racial differences existed. The importance of supporting prevailing opinion about these racial differences was not lost on Clark or other members of the PHS, who claimed that “this study [Tuskegee] will emphasize these differences.”<sup>100</sup> Moreover, Vonderlehr, Clark’s successor as Tuskegee field researcher, suggested that “similar studies of untreated syphilis in other racial groups,” most notably Native Americans, “might be arranged.”<sup>101</sup> One goal of Vonderlehr’s work was to prove the biological basis of racial difference by documenting race-linked pathology, consistent with prevailing eugenic theory.

Vonderlehr’s formal connections with the eugenics movement remained intact at least until the eve of World War II. In the summer of 1941, Charles Davenport invited him to chair a discussion on venereal

98. For a retrospective review of the Norwegian study, see E. Gurney Clark and Neils Danbolt, “The Oslo Study of the Natural History of Untreated Syphilis,” *J. Chron. Dis.*, 1955, 2: 311–44.

99. Stanley Schuman et al., “Untreated Syphilis in the Male Negro,” *J. Chron. Dis.*, 1955, 2: 543–58, on p. 544.

100. Oliver C. Wenger to Clark, 3 October, 1932, quoted in Jones, *Bad Blood* (n. 5), p. 106. Jones acknowledged how important it was to have Joseph Earle Moore of Johns Hopkins, a leading syphilologist, remark that “syphilis in the negro is in many respects almost a different disease from syphilis in the white” (ibid).

101. Vonderlehr quoted in Susan L. Smith, *Sick and Tired of Being Sick and Tired: Black Women’s Health Activism in America, 1890–1950* (Philadelphia: University of Pennsylvania Press, 1995), p. 109.

disease at the ill-fated Fourth National Conference on Race Betterment, originally scheduled for June 1942. The organizing committees for that eugenics conference included both Davenport as general chairman and his by-then-retired colleague from the Eugenics Record Office, Harry H. Laughlin. Eugenicist John H. Kellogg, founder of the Race Betterment Foundation of Battle Creek, Michigan, also graced the letterhead designed for the conference. The bombing of Pearl Harbor in December 1941 put an end to plans for the meeting, however, and the deaths of Davenport, Laughlin, and Kellogg by the end of the war dashed any hopes of reviving it.<sup>102</sup>

Like that of Cumming and Clark before him, Vonderlehr's work reflected his belief in the racial features of disease—not merely as a part of medical folklore, but as legitimate subjects of study within the scientific purview of eugenics. After his involvement in Tuskegee ended, Vonderlehr suggested a study of untreated cardiovascular syphilis in Chicago in 1939 that would parallel the study under way at Tuskegee. As at Tuskegee, there was an “acute awareness of race” in Chicago's syphilis-eradication efforts.<sup>103</sup>

## Conclusion

That Hugh S. Cumming, Taliaferro Clark, and Raymond A. Vonderlehr shared similar cultural, intellectual, and institutional backgrounds is beyond dispute. Equally undeniable is the vanguard role they played in originating, organizing, and overseeing the Tuskegee Study of Untreated Syphilis in the Negro Male. Understanding the motives that led these men to create an experiment that abused the very individuals it claimed to help is a complex task, one that is partially fulfilled by examining the ideas and institutions that shaped their views of medicine and public health

102. For correspondence concerning plans for the Fourth National Conference on Race Betterment, see letters from Davenport to Adolf Meyer, 2 and 23 December 1941, Correspondence with Charles B. Davenport, General Organizer, 1941, Folder 1–2, Unit II/249, Adolf Meyer Collection, Alan Mason Chesney Medical Archives of The Johns Hopkins Medical Institutions, Baltimore, Md. For additional correspondence showing Vonderlehr's plans to chair the roundtable discussion on venereal disease, see Davenport to Morris Steggerda, 1 November 1941, Steggerda Collection, Armed Forces Institute of Pathology, Walter Reed Hospital, Washington, D.C. For the demise of the Race Betterment Conferences, see Richard Schwarz, *John Harvey Kellogg, M.D.* (Nashville: Southern Publishing Association, 1970), p. 223.

103. Suzanne Poirier, *Chicago's War on Syphilis, 1937–1940* (Urbana: University of Illinois Press, 1995), pp. 137–41.

work. The education of Cumming and Clark predated formal instruction in eugenics, but they were socialized to understand medicine in racial terms; their subsequent professional involvement in the eugenics movement allowed them to substantiate biological differences that comported with their understanding of the role of race in the incidence and spread of disease. Vonderlehr and many of those who followed him at the PHS received formal instruction in eugenics at Virginia, which provided a scientific grounding for their perception of race, heredity, and disease.

While we have linked Tuskegee physicians to the eugenics movement through their training and their participation in eugenics organizations, we have not concentrated on documents in which they talk of the study using the term “eugenics.” But the records that have been identified support our view that even as the Tuskegee study was beginning, Public Health Service physicians like Taliaferro Clark were sensitive to the need to avoid too often brandishing that term specifically, or officially embracing eugenic ideology.<sup>104</sup> There are several reasons for this reticence. First, the very word “eugenics” remained controversial in many circles, not only in the first quarter of the century but for many years thereafter. When the Tuskegee study began in the 1930s, the eugenics movement had already suffered public embarrassment because of the race and class biases of its most extreme advocates;<sup>105</sup> it would have been particularly impolitic for study doctors overtly to characterize a federal study as “eugenic.” More importantly, it is unnecessary that we link open discussion of eugenic theory and use of the term “eugenics” to the Tuskegee doctors: it is enough to demonstrate that assumptions about race, heredity, and disease common to eugenic thought provided an unspoken ideological premise at the study’s beginning, and lent an additional reason for the continuing involvement of many physicians who participated.

Our treatment of the racial politics of the early twentieth century and the features of medical education that fed those politics forces a reexamination of men called “racial liberals” by James Jones and others. It is certainly true that the black lay and professional communities did not view those who were engaged in the PHS as their adversaries. In fact, when Surgeon General Hugh Cumming spoke at the conference capping National Negro Health Week in 1933, he was introduced without a hint of irony as one of the “earliest friends” of that event; the same gathering heard Assistant Surgeon General Taliaferro Clark announce the completion of

104. Amy L. Fairchild, *Science at the Borders: Immigrant Medical Inspection and the Shaping of the Industrial Labor Force* (Baltimore: Johns Hopkins University Press, 2003), p. 169.

105. See, e.g., Clarence Darrow, “The Eugenics Cult,” *Amer. Mercury*, 1926, 8: 129–37.

the syphilis pilot study made with the assistance of the Julius Rosenwald Fund that would soon be transformed into the Tuskegee study.<sup>106</sup>

It is a critical conclusion of this paper that the passionate sentiments about race that emerged in the virulent pronouncements of doctors like Paul Barringer were transformed by his Virginian protégés. The rough-edged race-baiting of Barringer was displaced in his academic offspring by the more polite but ultimately no less toxic language of eugenics. Eugenics provided a vocabulary for casting ancient prejudices in a scientific voice, thereby sanitizing bigotry and bolstering a medical tradition in which the maladies of black patients were linked to racial differences. In the intellectual and professional development of the men who initiated the Tuskegee study, the accepted conclusions of racial medicine gave way to eugenic rationales that were necessary antecedents to their “objective” and “scientific” study of disease. As a result, the racial biases “proven” by eugenics became the foundation blocks upon which they constructed their study. Any complete consideration of Tuskegee must take into account this ideological framework within which the study’s architects operated.



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106. *National Negro Health News*, 1933, 1: 2–3 (reprint, Westport, Conn.: Negro Universities Press, 1970).